

**Kyiv National University of Trade and Economics**

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## **FINAL QUALIFYING PAPER**

**on the topic:**

# **Integration of Ukraine's payment services market into the global financial space**

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## INTRODUCTION

**The actuality of the theme:** The modern world is characterized by new, rapidly developing, high-tech processes affecting all spheres of our life under the conditions of Ukraine's integration into the world economic space, institutions that provide payment services depend on their pricing and opportunities to move from using traditional mechanisms and procedures of customer service to the introduction of innovative technologies, modern electronic payment services, expanding the range of offered products and communication strategies for their promotion. Globalization of the world economy today requires simplification of access to payment service from any point of the earth. Therefore, the theme of the financial institutions of foreign countries for the provision of payment services is an achieve for the search of successful aspects in the international experience of providing payment services to further implement them in the domestic space and that is why it requires thorough and studying, elaboration of relevant as the technologies, methodical recommendations, and fundamentally new approaches to their treatment.

The work is used by the legal and normative base of the European Union and Ukraine, periodic literature of Ukrainian publishers, textbooks, reports, and researches of international companies and other sources. For a more complete disclosure of this topic, the sources of such authors as Avanesova I. A. [6], Volosovich S. V. [49], Vovchak F. D. [50], Arbuzov S. G. [4], Burkovska A. V. [7], Purih S. O. [33], Sviatnenko A. [43], Prykhodko V. P. [37].

**The purpose of final qualifying work** is disclosure of theoretical principles, development of methodological approaches and practical recommendations on integration of the payment services market in the global financial space. To achieve this goal, the following tasks are solved:

1. Research of the theoretical foundation of payment services issues;
2. The payment service entity definition;

3. Research of normative legal principles of regulation of payment services process in the European Union;
4. Research of the process of adapting the Ukrainian legislation to European standards in the field of payment services regulation;
5. Research of shortcomings of interaction of structural communications of subjects of the payment market;
6. Analysis of practical aspects of providing payment services in Ukraine;
7. Analysis of quantitative indicators of payment market segments;
8. Recommendations for the implementation of international experience in the functioning of the payment market;
9. Development of an algorithm for unification of payment services.

**The object of final qualifying work** is the process of functioning of the payment services market in Ukraine.

**The subject of final qualifying work** is the unification of payment services in Ukraine.

**The following methods of research are used in the course work:** generalization and systematization of scientific developments of domestic and foreign scientists-economists and normative-legal base.

**The information base** of the study is legislative and regulatory acts on regulation of banks' activities and payment activities; official data of the National Bank of Ukraine; monographic research and scientific publications on the problem under study.

**The scientific novelty** of the obtained results is the following:

1. For the first time the algorithm of unification of payment services in the conditions of the financial market was developed;
2. For the first time formalized the stages of evolution of Ukrainian legislation in the field of payment services have been formalized.

**The practical significance of the results obtained.** Practical recommendations for the unification and systematization of payment services and the payment market

can be useful for banks and non-bank customers of payment services. Financial institutions can use these supply and demand guidelines in their operations.

**Master's personal contribution.** Graduation is a self-completed study by the author.

**Publications.** Some results of the study were reflected in a scientific article: Martynenko A. International experience of interaction in the payment market entities // Financial and credit systems: problems of theory and practice: All-Ukrainian. stud. conf. of science / resp. ed. N.P. Shulga. - K.: Kyiv. Nat. Trad. - Econom. Univ., 2020. - 462 p. (P.: 444-447).

Also some results were published in the abstracts of the report at the All-Ukrainian Student Conference: Martynenko A. International experience of interaction in the payment market entities // Financial and credit systems: problems of theory and practice: All-Ukrainian. stud. conf. of science (Kyiv, March 16, 2020): thesis add. / resp. ed. N.P. Shulga – K.: KNUTE. – 382 p. (P.: 366-368)

**Structure of work.** The work consists of 3 parts, introductions, conclusions, a list of used sources and applications. The volume of work is 55 pages. The paper presents 6 tables, 14 figures, 12 appendices and used 51 scientific sources.

## PART 1

### **THEORETICAL FOUNDATIONS OF THE PAYMENT SERVICES MARKET**

The payment market is an important part of the economic and financial system of the country. No less important is the concept of "payment service", because it defines the vector of development, and integrates Ukraine into the global financial space. It provides business entities with the implementation of any cash transactions and payments undertakings appearing in the process of economic activity. The efficient functioning of the payment banks market contributes to the effective functioning of the financial sector improvement monetary-credit relations, implementation of Interstate settlements. Developed and stable market of payment services is a guarantee of stable functioning of the finance system and the economy as a whole and integration into the global financial space.

The current state of the payment services market is the result of long-term development as well as complex legal and economic transformations. Researches of different aspects of this market attract. The attention of many domestic and foreign scientists and practitioners, which are explained by the expansion of the spectrum, updating and modernization of banking.

Exploring theoretical aspects, we analyzed the output of payment service, which provides legislation of Ukraine and which tells us that the payment service is an activity to ensure the fulfillment of payment transactions using a special payment instrument made by payment service providers [25]. Avanesova I. A. in the textbook «Financial Services» defines that the «payment service is the activity of the financial institution to ensure the payment on behalf of another person – the initiator of money transfer, or on its behalf» [6]. At the heart of our work, we will start from this definition. We also consider it important to note that such a payment system is a legally defined set of payment instruments, rules, rules and mechanisms for providing and using payment services [6].

For comparative performance, we investigated articles by various scholars, including Volosovich S. V. in his article cites definitions that «payment services – is the activity of the ferments of implementing tran's stocks to the benefit of consumers

[49] and proves that the city provision of payment services is to ensure customers needs to pay for goods, services and works received» [49]. In our opinion, it is possible to add that the aim is to ensure the need for reciprocal payments between physical, legal and natural persons and legal entities.

Analyzed the legislation of Ukraine, the following - payment of money transfer is a compulsory function, which should carry out a billing system. The Law of Ukraine "On payment systems and money transfer in Ukraine" exclusively to the activities of banks, «The opening of accounts of the payment system, issue of electronic payment means (payment cards) and issue of electronic money». [23] When making payments use different payment instruments – a means of a certain form on a paper, electronic or other storage media used to initiate transfers. [23]

But it is worth mentioning that the National Bank presented the draft Law of Ukraine "On Payment Services" (PSD2). The current law on payment systems and funds transfer in Ukraine, which was adopted in 2001, is morally outdated and does not meet today's requirements. This document is based on modern requirements and will take into account the norms of European regulatory acts, including the Second Payment Directive (PSD2), the Electronic Money Directive (EMD), as well as precautionary principles aimed at avoiding the problems encountered in the EU.

We fully agree with the views of Vovchak, F. D. in the tutorial "Payment Systems" where the scientist allocates that the payment system is [50]: «payment organization (legal entity, which determines the rules of the payment system), the participant of the payment system (which provides the services for transfer on the basis of the agreement with the payment organization), the settlement bank and the operators of payment infrastructure (legal entities that carry out processing, clearing, acquiring and other technical services related to the organization of money transfers)».

Arbuzov S. G. In the «Banking Encyclopedia» provides the classification of payment documents and as the main select the following: payment order, payment request-order, payment check, payment request, memorial warrant [4].

Burkovska A. v. In his work defines «the form of international payment instruments differ in the degree of banking participation in their conduct [7]:

- The minimum participation of banks during bank transfers (fulfillment of the payment order of the client);
- Higher-at collection (control over a transfer, shipment of shipping documents, and issuing them to the payer according to principal's instructions);
- The maximum participation of banks at the letter of credit (providing beneficiary payment obligation, which is realized when performing the latest basic conditions, contained in the letter of credit)».

Purih S. O. the textbook "Payment Systems" highlights the stages of formation of payment systems and the date of forming of a payment card as an official payment instrument [33].

Sviatnenko A. In the article "National peculiarities of money transfers" allocates, that «the payment of money transfers is a network of service points (as a rule, bank and post offices), which carries out money transfers and payments, are convenient because they do not need to open a bank account (neither the sender nor the recipient of funds)».

[43]

Analyzed European experience in the provision of payment services and under the "Four Freedoms" in the field of payments, the principles of freedom to provide services and the value of the movement of capital and payments [13]. Within the framework of the national program to adapt the legislation of Ukraine to the European Union legislation, taking into account the above-mentioned principles and developed domestic legislation to introduce a successful functioning of the country's financial system.

According to the Directive of 2015/2366/EU [9], payment services are deemed not only to make cash payments through banks, but also to make money transfers through various payment agents, as well as payment operations through a network of telecommunication and operators of information technology systems, issue of payment means and other activities related to payments.

Among the important existing EU legal acts in the payment sphere are the following [34]:



- Directive 2009/110/EC of the European Parliament and the Council on the establishment and implementation of activities by the institutions — issuers of electronic money and prudential supervision;
- Regulation (EC) No 924/2009 of the European Parliament and the Council on cross-border payments within the community;
- Regulation (EC) No 260/2012 of the European Parliament and the Council on the creation of technical and business requirements for credit transfers and direct debit transfers in euro;
- Directive 2015/2366/EU on payment services in the domestic market;

Examined the directives in PSD2. The directive is supplemented by regulations on interbank fees for payment transactions made with the help of payment cards.

The directive establishes the rules regarding [38]:

- Strict security of electronic payments and the protection of consumers financial data, guaranteeing secure authentication and reducing the risk of fraud;
- Transparency of terms and requirements for payment of services.

Quite progressive, in our opinion, is the concept of the Open banking [12], which is based on two documents: PSD2 and Open banking remedy, a list of proposals by the British Department of Protection of Competition, focused on create a transparent bank servicing system.

In a document describing the reform regarding market of payment banking services, the main point put into operation the general data Protection Regulation (GRPD) [1], which carries a set of data protection rules for all companies that operate in the EU wherever they are the discrepancy between these rules may be worth up to 20 mln. euro, however, now users have greater control over their data and business benefits from activities in the field with equal conditions.

In the context of the European integration processes in Ukraine in accordance with the gradual implementation of norms and provisions of the comprehensive program for the development of the financial sector of Ukraine till 2020, the approved of the Board of the National Bank of Ukraine dated 18.06.2015 No 391 [8]. The liberalization of financial markets and acquisition of the internal market regime with

the EU in the sphere of finance, including payment services, is envisaged. This is confirmed by article 133 of the Association Agreement between Ukraine and the European Union [40], according to which the parties acknowledge the importance of approximation of the current Ukrainian legislation with EU legislation.

Integration of the Ukrainian market of banking and other financial services requires consideration of the provisions not only of EU acts but also for documents of international organizations, which determine the rules and recommendations that promote effective interaction between banking systems in different countries. Such international legal documents by Prykhodko V. P. perfectly rightly brought to the conceptual factors of the formation of the norms of the bank law [37]. Moreover, in our opinion, they cause more difficulties in the process of adapting Ukrainian legislation than the implementation of the EU directives.

"The legislation of Ukraine does not allow the implementation of bank transactions providers third-party services, as well as access to banking secrets. Customer identification and verification should be done exclusively by a bank employee. The bank should also be financially monitored independently. Therefore, the principles of open banking cannot be used in Ukraine".

In June 2017 the Verkhovna Rada of Ukraine dismissed the bill "on amending certain legislative acts of Ukraine on regulating the funds transfer" № 5361-D [44], which, in particular, identified and delimited the rights and obligations of banks, payment institutions, transfer service providers, internet payment providers, and also provided the concept of payment infrastructure in accordance with the norms of Directive 2015/2366/EU.

In 2020, the NBU issued a draft Law of Ukraine on "Payment Services".

The new regulation of the payment market provides for the following key changes in the payment services market[30]:

1. A list of nine payment services will be identified, seven of which are financial payment services and two non-financial;
2. A number of financial institutions will automatically be entitled to provide certain payment services on the basis of a basic license to provide financial services.

In addition, introducing the world's leading experience, it is planned to introduce the possibility of creating and operating small payment institutions with a simplified registration procedure with the National Bank of Ukraine;

3. Payment service providers will be able to perform payment transactions without the need to create and register payment systems. At the same time, requirements will be set for payment system operators (currently payment system payment organizations) in order to ensure equal, proportionate and non-discriminatory access to any authorized payment service providers to these payment systems;

4. Issuers of electronic money will be able to be not only banks, but also other participants in the payment market who have received the appropriate license.

5. Clear conditions for the work of "open banking" in the payment infrastructure of Ukraine will appear;

6. The list of accounts for payment transactions and the procedure for their opening will be determined;

7. Increased attention will be paid to the protection of users' rights;

8. The requirements for ensuring the security of payment transactions will increase, including the need for payment service providers to use enhanced user authentication in certain cases.

With the National Bank of Ukraine initiatives, the most necessary steps are already implemented for the development of Ukraine's economy and increased cashless payments. Among them: the transition of the SEP to the latest standard SWIFT-payments ISO20022 [42], electronic digital signatures, electronic sighting of documents, cancellation of seals and stamps, remote identification of banking and Mobile [21], the transition to the IBAN account form [5]. The regulator discusses the creation of a so-called "sandbox"-a special legal regime for the group of companies or territories where it will be possible to work out financial technologies in practice [32].

From July 1, 2020, the National Bank took over the functions of the regulator of the market of non-banking financial services: insurance, leasing, factoring companies, credit unions, pawnshops and other financial companies. "Split" will ensure the security of Ukrainians as consumers of financial services. After all, it will allow to

establish clear requirements for non-bank financial institutions, as well as to build systematic control over their compliance. Ultimately, this can ensure a fully transparent and sound financial sector. It is the consolidated model of supervision of the non-banking financial market, when there are only two regulators - the NBU and the NSSMC, that will complete the reform of the financial sector, which was launched in 2014.

Also analyzed global figures and in 2018, revenues from global payments increased to 1.9 trillion USD, which is the best year of growth over the past five years, and the projected growth to 2022 is 2.9 trillion. U.S. dollars [14].

Despite the rapid revolutions of digitalization of all spheres of life, traditional payment methods still play an important role in most countries. Paper checks, although rapidly declining in numbers, are still a popular choice for larger consumer or corporate payments in several jurisdictions, such as the United States (136% of GDP) and Korea (290% of GDP) [31]. Similarly, cash still enjoys and its turnover continues to grow in many jurisdictions. Cash in circulation is significantly different between member-states CPMI. The fate of cash ranges from 1% of Sweden's GDP to 20% of GDP in Japan and is more than 5% of GDP in two-thirds of CPMI countries.

Having analyzed the modern trends in digital space, we have allocated based on the research of authors, which will link further on the text the following directions for improving the methodological foundations for providing payment services to institutions and services at the global level, the introduction of which in symbiosis and observance of all rules can help to increase the competitiveness and opportunities to gain considerably higher profits.

1. Artificial intelligence, robotization and automation of processes [47]. This direction will allow us to detect deviations in the work of huge data arrays, predict the probability of occurrence of events, differentiate products, make decisions based on the analysis of the data arrays, rather than on the experience of generations. However, the most important thing in this area is not the algorithms, and data arrays, which allows you to attract new users who generate new data, which in turn improve the product. That brings us to the next trend;

2. Big Data [47]. Briefly, you can explain for example Apple and Google have launched Apple Pay and Google pay, thereby gaining access to the financial data of its users and increasing their earnings at times. Gradually exploring the habits of their clients and at the right moment make a reminder that they have a certain product or service that will help them at this point, for example, send money to relatives abroad. It is important to know exactly what your client wants and how he lives every day.

3. Data protection [39]. We would like to draw more attention to this trend.

Cybersecurity is a serious problem, and it won't be solved by itself. Despite preventive measures and authentication, unlawful and unauthorized activities will not cease. However, opportunities that make the network more vulnerable can also increase their level of protection. Financial institutions may use modern tools for data analysis and other technologies to detect anomalies in applications designed to ensure the safety and prevention of unfair actions by involving both structured and unstructured sources. This will help them determine the growing risks of external and internal security and take appropriate measures more quickly and the miniaturization technology, which led to the proliferation of smartphones, also made possible the use of biometric security in practice [39].

In addition to the highlighted trends, it stretches the issue of development of payment systems of the fourth generation, which will conduct its activity based on blockchain-technologies, in which we see a breakthrough for payment services.

At the beginning of April 2019, an international Trusted Blockchain Application Association (INABA) was introduced in Europe [50], which included more than 100 companies, including large payment and technological SWIFT, IBM and Ripple. It is assumed that the new organization aims to promote the technology distributed to the Register in the EU. It is noted that INABA purpose is to interact with blockchain-based solution developers and users to popularize this innovation and to increase its adoption in various spheres of the economy. In the course of its, work INABA is going to build an ecosystem within which private and public companies will cooperate, as well as regulators and legislators. Also, special standards will be created for applications that will be developed based on blockchain technology.

The establishment of this association becomes a green light to all market players payments and providing integration domestic market into the global financing space. Staying on a spare bench, you can lose a lot. Now it's time for testing, planning, and learning because of the extremely wide range of opportunities and potential technology partners, one of the most challenging tasks is to understand the true essence of blockchain technology and begin to develop an action plan to implement it in the activities of the organization.

By systematic submitting problems and giving them directions for improvement, we concluded that traditional institutions should direct efforts to work with large arrays of data, to use them for their processing, and at every stage to remember what they are responsible for storing the data they work with. Formulated the opinion that the companies that already use the latest technologies should keep the bar and develop them further and try to maintain and understand the wave of blockchain technology. Of course, this significantly heats the payment market and payment services enhances competition, but during these the processes of payment services become cheaper, more convenient, mobile and, most importantly, differentiated and necessary at this time and this point, that is, in any case, wins the consumer, whose life in the last decade in various ways try to make it easier through digital technology.

Having studied the theoretical principles, in the following parts we will study regulations as the basis of the payment services market, analyze the target market segments of the payment service providers, analyze the international experience of providing private services to determine the vector of integration into the global financial space.

## PART 2

### PRACTICE OF THE PROCESS OF FUNCTIONING OF THE PAYMENT SERVICES MARKET IN UKRAINE FOR 2015-2019

#### 2.1. Analysis of legal acts for providing payment services in the context of international requirements.

The main goal of the strategic development of the financial system of Ukraine is to create a reliable, efficient and profitable banking and financial system that would best meet the requirements and expectations of customers, investors and would be resistant to crises. Modern payment systems are an important part economic and financial and credit infrastructure countries. Efficient and secure payment services very important for integration into the global financial space.

For the last 10 years the market of payment systems, in particular the infrastructure of the electronic payment market funds in Ukraine, developed rapidly and overtook the level of distribution of a country with a similar level development. Ukrainian owners of bank payments Cards are increasingly moving from cash withdrawals to ATMs for non-cash payment for goods and services, which corresponds to the experience of countries with developed card markets. In this context of functioning payment industry in Ukraine, its regulation and possible changes in legislative and regulatory initiatives deserve special attention [1].

To analyze this issue, in this section we will determine the evolution of domestic legislation, analyze its changes, analyze European legislation and its specific features.

Firstly, in accordance with Article 7 of the Law of Ukraine "On the National Bank of Ukraine", the National Bank regulates the activities of payment systems and payment services in Ukraine, creates and ensures continuous, reliable and efficient operation, development of payment systems created by it.

The legislation of Ukraine provides for the operation of domestic and international payment systems in Ukraine:

- Domestic payment system - a payment system in which the payment organization is a resident and which carries out its activities and ensures the transfer of funds exclusively within Ukraine.
- International payment system - a payment system in which the payment organization can be both resident and non-resident and which operates in two or more countries and provides transfers of funds within this payment system, including from one country to another.

According to Article 9 of the Law of Ukraine "On Payment Systems and Funds Transfer in Ukraine", payment system organizations, payment system participants and payment infrastructure service operators have the right to operate in Ukraine only after their registration by entering information about them in the Register. The procedure for such registration is determined by the Regulation on the procedure for registration of payment systems, participants in payment systems and payment infrastructure service operators, approved by the resolution of the Board of the National Bank of Ukraine dated 04.02.2014 № 43 [2].

The National Bank presented the draft Law of Ukraine "On Payment Services", which will regulate the activities of the Ukrainian market of payments and money transfers.

*Table 2.1*

The evolution of the legislation of payment services,  
built by the author on the base to [17]

<b>Period</b>	<b>Characteristic</b>	<b>Legislation</b>
Incipience	Adoption of the first law, which defines for the first time the concepts of "payment service" and "payment system". Harmonization of legislation with other legislative acts.	Law "On payment systems and funds transfer in Ukraine" Resolution on transactions using electronic means of payment Law "On Postal Services" Law "On Banks and Banking"
Elaboration	The National Bank is drafting a law that will regulate the activities of the Ukrainian market of payments and money transfers. Integrates PSD2.	Draft Law "On Payment Services", Law "On Banks and Banking"
Implementation	Adoption of the law, harmonization of legislation, control over implementation, presentation of recommendations on implementation.	Law "On Payment Services", Law "On Banks and Banking"



This document is based on modern requirements and will take into account the norms of European regulatory acts, including the Second Payment Directive (PSD2), the Electronic Money Directive (EMD), as well as precautionary principles aimed at avoiding the problems encountered in the EU [30].

The new regulation of the payment market provides for the following key changes in the payment services market:

- a list of nine payment services will be identified, seven of which are financial payment services and two non-financial;
- a number of financial institutions will automatically be entitled to provide certain payment services on the basis of a basic license to provide financial services. In addition, introducing the world's leading experience, it is planned to introduce the possibility of creating and operating small payment institutions with a simplified registration procedure with the National Bank of Ukraine;
- payment service providers will be able to perform payment transactions without the need to create and register payment systems. At the same time, requirements will be set for payment system operators (currently payment system payment organizations) in order to ensure equal, proportionate and non-discriminatory access to any authorized payment service providers to these payment systems;
- Issuers of electronic money will be able to be not only banks, but also other participants in the payment market who have received the appropriate license.
- clear conditions for the work of "open banking" in the payment infrastructure of Ukraine will appear;
- the list of accounts for payment transactions and the procedure for their opening will be determined;
- increased attention will be paid to the protection of users' rights;
- requirements for ensuring the security of payment transactions will increase, including the need for payment service providers to use enhanced user authentication in certain cases.

The financial market, as a constant, is always under the close attention of all its participants. The market, serving almost all spheres of life, needs special rules and effective concepts of development. It is worth mentioning SPLIT, which from July 1, 2020, the National Bank took over the functions of the regulator of the market of non-banking financial services: insurance, leasing, factoring companies, credit unions, pawnshops and other financial companies.

Split will ensure transparency, reliability and efficiency of the non-banking financial market. Financial markets are connected vessels. Much has been done to make one part of the financial market, the banking sector, transparent and stable. But the other remains in partial shade. Therefore, now it is impossible to guarantee financial stability, increase the investment attractiveness of the financial sector in general, or protect consumer rights. This steps proving improvement payment services and integration financial market into the global financial space.

"Split" will ensure the security of Ukrainians as consumers of financial services. After all, it will allow to establish clear requirements for non-bank financial institutions, as well as to build systematic control over their observance [30].

It is the consolidated model of supervision of the non-banking financial market, when there are only two regulators - the NBU and the NSSMC, that will complete the reform of the financial sector, which was launched in 2014.

After the "split", the market will be offered a more effective approach to regulation, which at the same time will avoid excessive control by the regulator. Requirements for financial institutions will depend on the risk to consumers and the company's impact on the market. For example, if a company does not attract funds from customers, its activities are less risky, and therefore there should be fewer requirements for it, and the requirements themselves should be simpler.

At the same time, any company on the market will have three basic requirements - the availability and adequacy of equity, transparent ownership structure and compliance with legislation on financial monitoring. This will provide a level playing field for companies.

According to the draft Law of Ukraine on "Payment Services" (PSD2) ": payment service - the action of a payment service provider to perform payment operations [30].

Secondly, among the important existing EU legal acts in the payment sphere are the following [34]:

- Directive 2009/110/EC of the European Parliament and the Council on the establishment and implementation of activities by the institutions — issuers of electronic money and prudential supervision;
- Regulation (EC) No 924/2009 of the European Parliament and the Council on cross-border payments within the community;
- Regulation (EC) No 260/2012 of the European Parliament and the Council on the creation of technical and business requirements for credit transfers and direct debit transfers in euro;
- Directive 2015/2366/EU on payment services in the domestic market;

Examined the directives in PSD2. The directive is supplemented by regulations on interbank fees for payment transactions made with the help of payment cards.

Directive (EU) 2015/2366 (Payment Service Directive 2 — PSD 2) provides the legal foundation for the further development of a better integrated internal market for electronic payments within the EU. It puts in place comprehensive rules for payment services, with the goal of making international payments (within the EU) as easy, efficient and secure as payments within a single country. It seeks to open up payment markets to new entrants leading to more competition, greater choice and better prices for consumers. It also provides the necessary legal platform for the Single Euro Payments Area (SEPA). It repealed Directive 2007/64/EC (PSD) from 13 January 2018.

The directive seeks to improve the existing EU rules for electronic payments. It takes into account emerging and innovative payment services, such as internet and mobile payments.

The directive sets out rules concerning:

- strict security requirements for electronic payments and the protection of consumers' financial data, guaranteeing safe authentication and reducing the risk of fraud;
- the transparency of conditions and information requirements for payment services;
- the rights and obligations of users and providers of payment services.
- The directive is complemented by Regulation (EU) 2015/751 which puts a cap on interchange fees charged between banks for card-based transactions. This is expected to drive down the costs for merchants in accepting consumer debit and credit cards.

The directive establishes a clear and comprehensive set of rules that will apply to existing and new providers of innovative payment services. These rules seek to ensure that these players can compete on equal terms, leading to greater efficiency, choice and transparency of payment services, while strengthening consumers' trust in a harmonized payments market. In order to integrate the Ukrainian payment market into the global financial space, it is necessary to pay attention to these requirements.

The directive also aims to open up the EU payment market to companies offering consumer- or business-oriented payment services based on access to information about the payment account, particularly [9]:

1. account information services which allow a payment service user to have an overview of their financial situation at any time, allowing users to better manage their personal finances;
2. payment initiation services which are services to initiate an order at the request of the payment service user with respect to a payment account held at another payment service provider.

The directive does not substantially change the conditions for granting authorisation as payment institutions, although payment institutions offering payment initiation services or account information services will be required to have professional indemnity insurance as a condition of authorisation or respectively.

Accurately compare the very definition of "payment service" with European legislation, because in the process of European integration and implementation of the financial system of Ukraine in the global financial space is important.

Appendix A table A.1 presents a comparative analysis of the definition. Items set out in the draft Law of Ukraine and in the EU Directive. As can be seen from appendix A, the definitions are similar, but still have some differences. The EU directive does not divide payment services into "financial" and "non-financial". 7 item defining the service of issuing and executing payment transactions with electronic money, including the opening and maintenance of electronic wallets - is not defined in the EU Directive, but is in the draft Law of Ukraine. However, in our opinion, the draft Law of Ukraine more widely reveals the concept of "payment service", which gives it a more specific understanding [9, 30].

As the legal basis for payment services is a significant factor in creating favorable conditions for their effective operation, it has constantly improve and change synchronously in accordance with changes in other components of the infrastructure. Amendments to the legislation of Ukraine regulating the financial and payment market will improve the legal framework in the field of non-cash payments, introduce a unified approach to state regulation of payment systems in Ukraine, created by both banks and non-banking institutions. Conditions will be created that will increase the share of non-cash payments and reduce the costs of the state and business to maintain cash circulation.

The material we studied allows us to draw certain conclusions: harmonization of Ukrainian legislation in line with European legislation will provide a number of benefits for Ukraine. This, first of all, will make it possible to integrate Ukraine's financial system into the world financial community. Currently, the legislation is different, there are outdated definitions and approaches, but the draft Law of Ukraine "On Payment Services" allows to expand certain concepts that already exist in the legislation, and to define some for the first time.

For the first time, we are formulated the evolutionary nature of legislation in the field of payment services, which, of course, provides an understanding of the process and facilitates the process of understanding integration into the global financial space.

We was determined that the legal framework is an important prerequisite for the integration of the plethora market of Ukraine into the global financial space.

## 2.2. Characteristics of target segments of the payment services market.

The world is in a state of changes. All over the world new technologies and new subjects are disputed by the traditional banking paradigms. The available providers of payment servants are under pressure from the financial technology startups, and also by large technological firms. But in the long run and fourth, much cheaper, smarter and more versatile mobile devices allow for new and convenient ways to transfer money. Digitization is crucial for the development of the payment services industry and market integration into the global financial space.

To analyze this issue, in this section we will determine the quantitative characteristics of the market, analyze which payment services are preferred, analyze the payment infrastructure.

Firstly, in accordance with Article 9 of the Law on Payment Systems, the NBU maintains a Register of payment systems, systems settlements, participants of these systems and payment infrastructure service operators. Payment system organizations, payment system participants and infrastructure service operators are objects oversight in terms of their activities in Ukraine and have the right to carry out activities only after their registration in the Register (except for systems created by the NBU), which is a prerequisite for integration into the global financial space. [30].

According to Appendix B.1 as of December 31, 2019, 48 payment systems are registered in Ukraine: 2 - created by the National Bank of Ukraine, one of which is systemically important; 17 - created by banks of Ukraine, among which one is important; 17 - created by non-banking institutions of Ukraine, including two socially important and two important; 12 - created by non-residents (8 money transfer systems and 4 card payment systems), including three socially important and three important.

The total number of participants in payment systems (excluding SEP) was 128, of which: 69 - banks, 59 - non-bank financial institutions.

Secondly, among the payment systems created by residents, the largest number of resident participants had such payments systems [30]:

- FLASHPAY - 49 (46 of them are non-banking institutions);

- Welsend - 36 (9 of them - non-banking institutions);
- “Finansiviy Svit” - 27 (23 of them are non-banking institutions).

As of December 31, 2019, 68 banks and 1 non-bank were direct participants in international card systems 8 institution. Indirect participants in these systems were 18 non-banking institutions operating through 7 direct participants (banks).

Direct and indirect participants in money transfer systems created by non-residents were: 53 banks; 4 non-banking institutions.

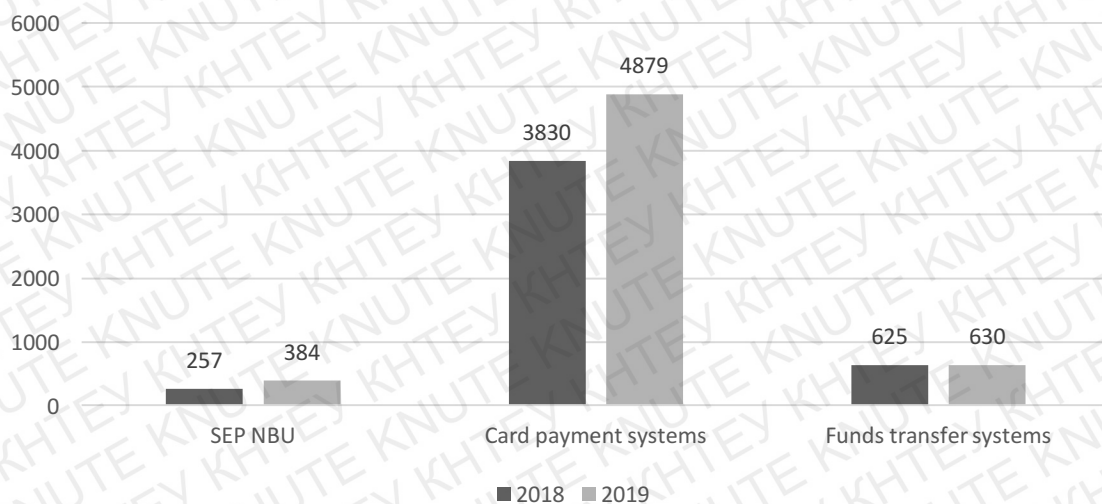


*Fig. 2.1 The amount of payments and transfers within Ukraine in 2019, UAH billion [30]*

As you can see, from Figure 2.1 the largest amount of payments and transfers within Ukraine in 2019 is traditionally made in SEP - 32.5 trillion UAH or 89.6% of all payments and transfers within Ukraine. At the same time, the largest number of payments and transfers was made in card systems (4.9 billion units or 82.8%).

In 2019, the National Bank established the procedure and criteria of importance for determining significant operators payment infrastructure services (hereinafter – OPPI Definition significant OPPI became possible due to the introduction in 2019 of these institutions reporting to the NBU.

Assigning OPPI to the category of significant will allow the National Bank to more effectively carry out oversight with taking into account the risk-oriented approach. The National Bank recognizes OPPI significant if it processes more than 10% of transactions, processed in payment systems entered in the Register



*Fig. 2.2 Number of payments and transfers within Ukraine in 2018-2019, million units [30]*

As you can see, according to Fig. 2.2 there is an increase in the number of transfers in all three categories. However, it should be noted that the largest share is occupied by card payment systems.

Today, the payment system in Ukraine is systemically important - SEP. This is a state payment system of the RTGS15 class, which provides for interbank transfers in the national currency through accounts opened with the National Bank. The National Bank is a payment organization and a settlement bank of this system.

The systemic importance of SEP is due to the fact that it provides:

- 1) making 96% of interbank transfers in the national currency within Ukraine;
- 2) making transfers of funds on transactions with government securities on the open market;
- 3) settlement of obligations of participants that arise in other payment systems.

As of December 31, 2019, the participants of SEP were 75 banks of Ukraine, the State Treasury Service of Ukraine and National Bank of Ukraine. SEP provides settlements within Ukraine between banks as instructed customers of banks, as well as the obligations of banks and other participants in the system.

As can be seen from Appendix C.1 In 2019, SEP processed 383.8 million initial payments amounting to UAH 32.47 trillion, which is 7.6% more in number and 28% more in amount than in the previous year. In general, in 2019, an average of 1.5 was processed daily in SEP. million payments in the amount of UAH 129.9 billion.



The key performance indicators of a systemically important payment system are indicators of the role of this system in the economy ratio to the country's GDP. The amount of payments processed in SEP for 2019 is more than 8.8 times higher than the GDP<sup>16</sup> of Ukraine. Correlation daily volume of transactions in SEP to GDP was 3.5%. Number of days for which SEP payments were processed equivalent to GDP, was 41 days. This indicates the important role of SEP in the economy of Ukraine. An important indicator of the efficiency of the payment system is the turnover ratio in the system, which shows how many times the same hryvnia is used by participants of the payment system for a certain period of time.

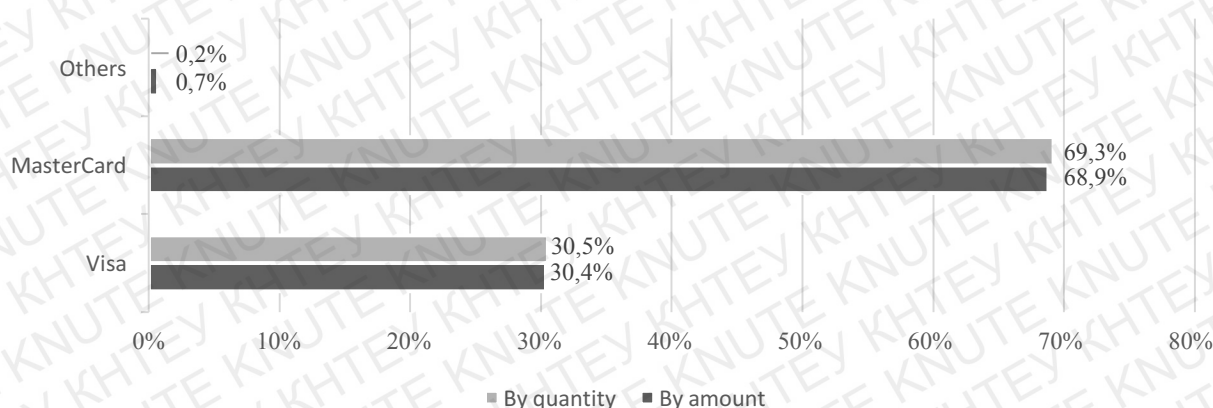
The turnover ratio in SEP in 2019 was 1.54. The highest value of the coefficient was observed in January (coefficient 2.2), April (coefficient 1.92) and July (coefficient 1.88). The lowest value of the turnover ratio – August - November 2019 (from 1.12 to 1.29).

Thirdly, during 2019, the volume of transactions using payment cards continued to increase. Yes, the number transactions with payment cards issued by Ukrainian banks reached 5,057.3 million units, which is 29.2% more than in 2018, and their amount is UAH 3,576.7 billion, which is 24.3% more than in the previous period.

Most of these operations were carried out in the own network of Ukrainian issuing banks (60.6% of the number and 78.5% of the amount all card transactions). In the network of other resident banks, 35.9% of the number and 17.3% of the amount of operations were performed with cards.

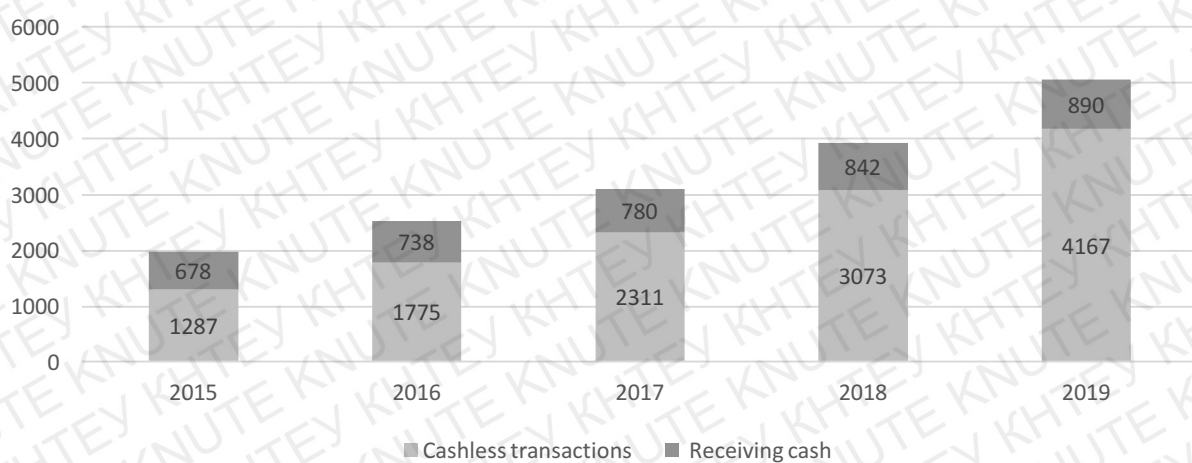
Outside Ukraine, the volume of card transactions issued by resident banks remained insignificant and amounted to 3.5% of the number and 4.3% of the amount of all card transactions. At the same time, card transactions issued by non-resident banks on the territory of Ukraine accounted for only 1.2% of the number and 2.0% of the amount of all such transactions.

Almost all transactions using payment cards (99.8% of the amount and 99.3% of the amount) in 2019 were performed in the international systems MasterCard (69.3% of the number and 68.9% of the amount) and Visa (30.5% of the number and 30.4% of sum) shown in Fig 2.3. The same situation was observed in 2018.



*Fig. 2.3 Distribution of operations performed using payment cards in terms of card systems, % [30]*

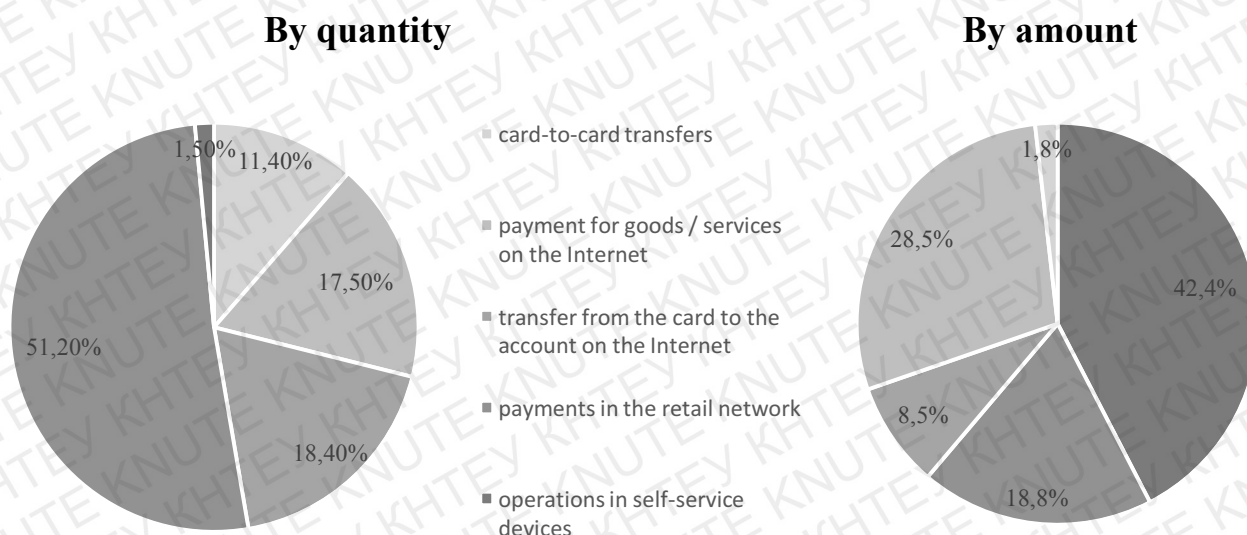
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*Fig. 2.4 Number of transactions made using payment cards, million pcs. [30]*

According to Fig 2.4 In 2019, compared to 2018, the number of non-cash transactions using payment cards increased by 35.6% to 4,167.1 million units. (82.4% of the total), and the amount - by 38.6% and reached UAH 1,798.3 billion (50.3% of the total amount of card transactions).

We can conclude that non-cash transactions are popular, so integration into the global financial space should be as soon as possible.



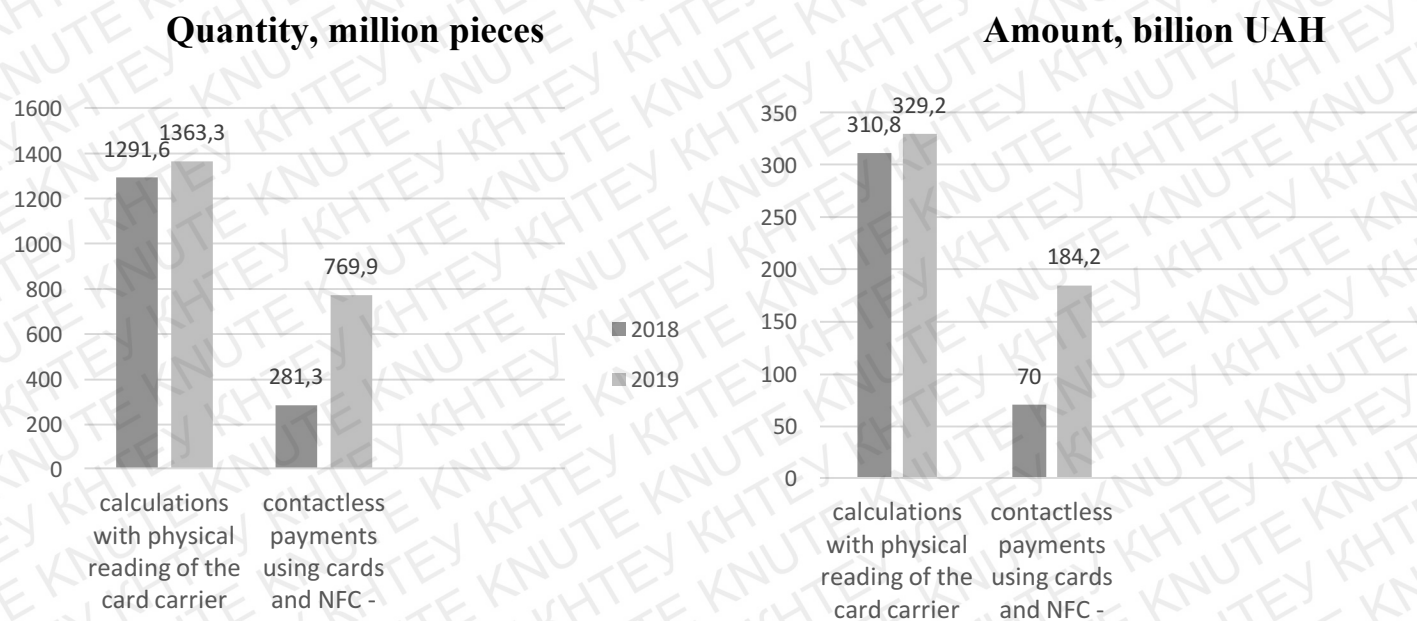
*Fig. 2.5 The structure of non-cash transactions using cards in 2019, % [30]*

Analyzing Fig. 2.5 we can draw certain conclusions by the amount of non-cash transactions using payment cards, card-to-card transfers prevailed (42.4%), their number was 11.4%.

At the same time, more than half of the number of non-cash transactions using payment cards (51.2%) were made in trade network, their amount was 28.5% of all non-cash transactions. Compared to 2018, calculations in retail chain increased by a third (35.6% in number and 34.8% in amount).

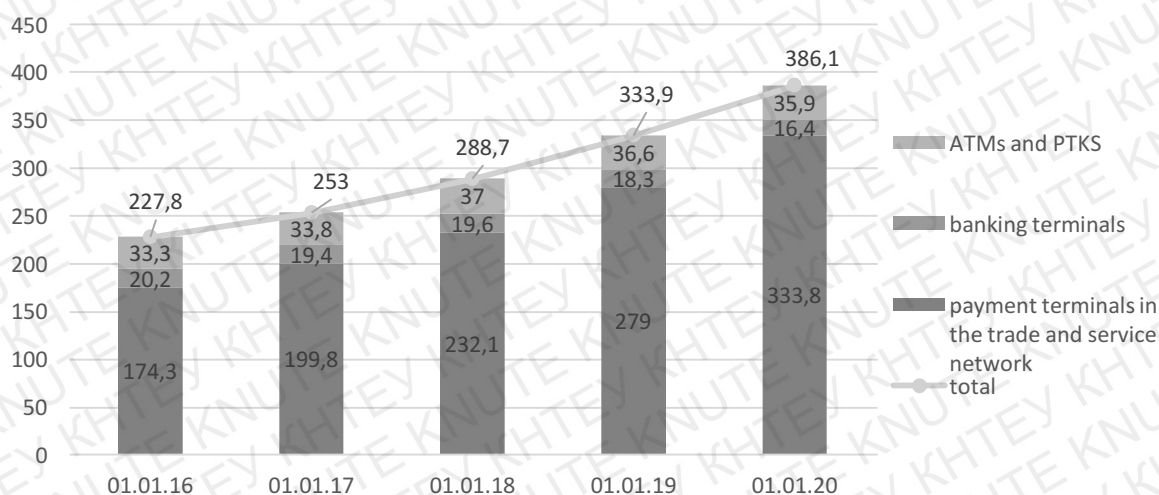
At the same time, 36.1% of the number and 35.9% from the amount of transactions in the retail network - transactions using contactless payment technology. In general, operations with the use of contactless payment technology are growing rapidly.

Yes, if the transaction is in trading networks with physical reading of the payment card compared to 2018 increased by only 5.5% in number and 5.9% in amount, transactions using contactless technology during this period increased more than one and a half times (by 173.7% by quantity and 163.4% by amount) according to Fig 2.6.



*Fig. 2.6 Cashless transactions in the retail network, mln units, bln UAH [30]*

One of the factors in the growth of non-cash transactions in 2019 was the development of payment infrastructure. Yes, the number payment terminals in the trade and service network compared to 2018 increased by 19.7% to 333.8 thousand units, of 302.1 thousand of them (90.5%) - contactless terminals. In general, the number of payment terminals in trade and service networks over the past 5 years has almost doubled - from 174.3 thousand units. up to 333.8 thousand pieces. At the same time for the last three years there is a gradual annual decrease in banking devices (ATMs, PTKS and payment terminals) - from 56.6 thousand units. up to 52.3 thousand units, see Fig. 2.7.

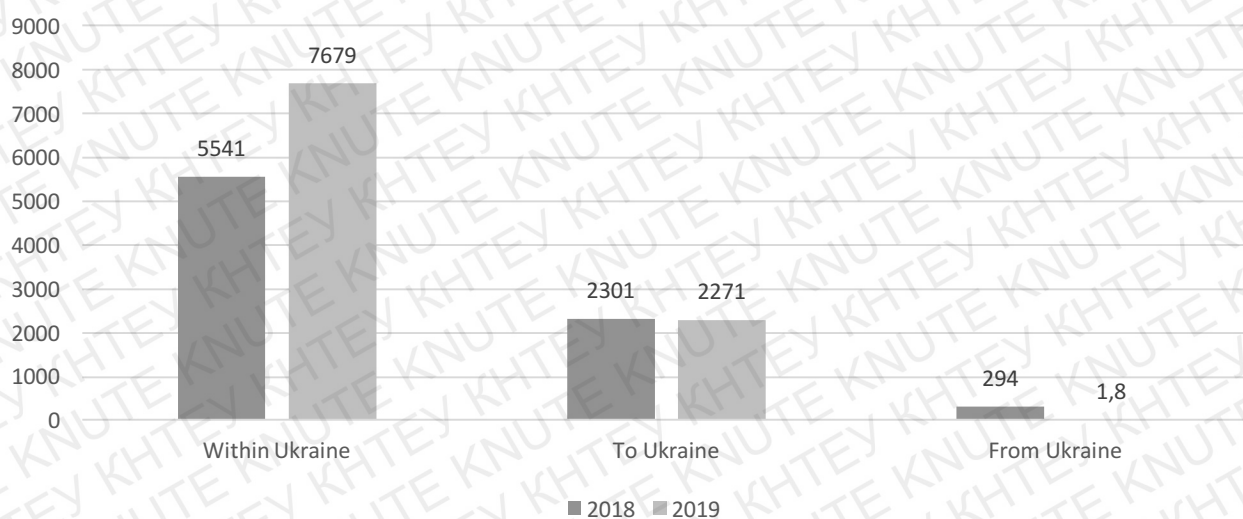


*Fig. 2.7 Payment infrastructure, thousand units [30]*

Number of payment terminals in trade and service networks per 1 million permanent residents Ukraine for the year increased from 7.1 thousand units. up to 8.4 thousand units (at 18.3%). The regional distribution of trade terminals remained quite uneven. The leaders in this indicator were the city of Kyiv (21.9 thousand terminals per 1 million population), Kyiv region (12.0 thousand terminals) and Dnipropetrovsk region (11.2 thousand terminals). The smallest number of terminals in per 1 million population are in Transcarpathia (4.6 thousand terminals), Donetsk (3.5 thousand terminals) and Luhansk (2.1 thousand terminals) areas. The largest number of trade terminals in JSC CB "PrivatBank" (60.8% of all trade terminals), JSC Oschadbank (16.9%) and Raiffeisen Bank Aval JSC (8.3%).

During 2019, money transfer services actually provided 37 money transfer systems, including 30 systems, created by residents, and 7 systems created by non-residents. Using these systems are translated:

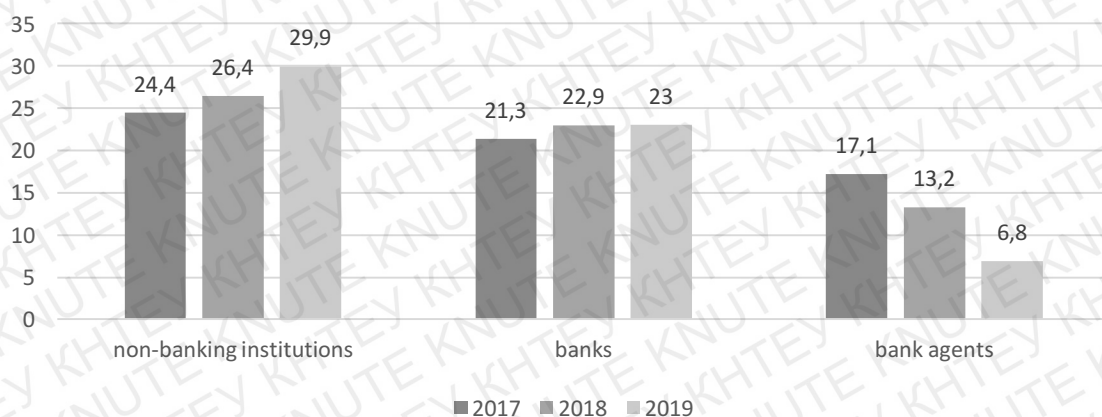
- within Ukraine - UAH 197.9 billion or USD 7.7 billion. USA (in equivalent);
- to Ukraine - USD 2,270.6 million. USA (in equivalent);
- outside Ukraine - USD 398.0 million. USA (equivalent).



*Fig. 2.8 Distribution of remittances made through money transfer systems, USD million US (equivalent) [30]*

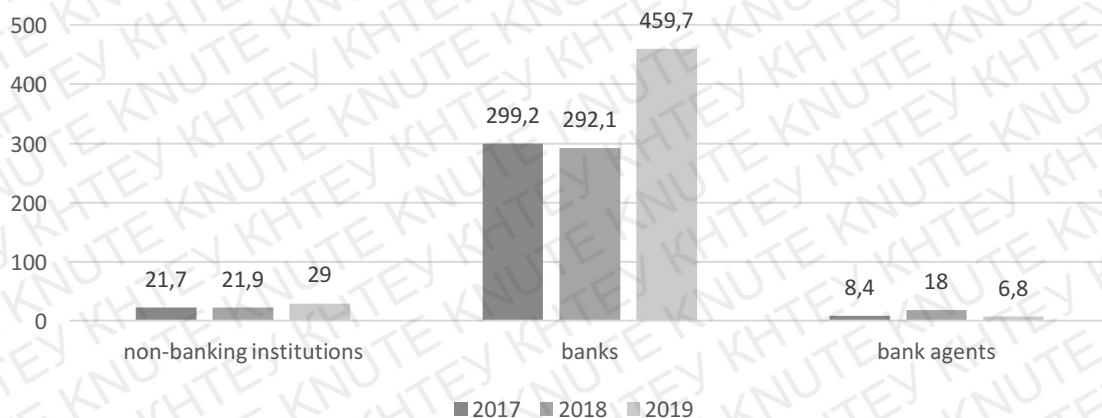
Analyzing Fig. 2.8 we can draw certain conclusions the volume of transfers within Ukraine in 2019, carried out using the funds transfer systems created residents, amounted to 7.7 billion dollars. US equivalent (99.97% of total transfers within

Ukraine). Only one system, created by a non-resident (Western Union), transferred funds within Ukraine. Amount transfers using this system is \$ 2.1 million. US equivalent or 0.03% of the total transfers of funds within Ukraine.



*Fig. 2.9 Number of payment devices, thousand units [30]*

In view of Fig. 2.9 UAH 531.1 billion was accepted with the help of payment devices in 2019 (82.3% of all cash payments), which is 22.9% more than in the previous period. At the same time, 86.6% of this amount was accepted through payments devices owned by banks.



*Fig. 2.10 Amount of cash accepted by means of payment devices, UAH bln [30]*

In 2019, there was an almost twofold increase (from 5.1 thousand units to 11.2 thousand units) in the number of cash collection points, which belong to bank agents. This was mainly due to the involvement of new agents by banks. Yes, more half of the cash collection points (57.9%) belong to non-banking institutions see Fig. 2.10.

Fourth, the Retail EXPO study [11] revealed that 23% of customers want to make transactions in the store, which replicate the simplicity of online payments with one click.

- 53% of customers consider queues the biggest problem in the store and the payment technology itself, reducing the waiting time, was the pleasant improvement of the meeting with bricks.
- 52% of buyers have improved customer experience by features self-checking and scan-and-go (consumers automatically get paid for the scanned products at the exit of the store)
- 42% of consumers want retailers to accept options for mobile wallet or digital currencies such as bitcoin.
- 46% of customers would still use bank cards as a payment method. Although the appetite for new payment methods increases, the proximity to the payments card does not change; Even if the mobile payments were more widely accepted. Studies suggest that this may be due to persistent security issues around mobile payments such as Apple Pay or Samsung Pay, as 61% of consumers say they are still worried about the safety of these technologies.

Even today, Ukrainians have the opportunity to pay for their purchases through Google Pay and Apple, paying in more than 6,000 online stores, which saves users a lot of time, instead of filling out long forms with payment information. Now, if the site has a button "pay via G-Pay", the user has the opportunity to quickly make payments online using this service, it helps to integrate into the global financial space [48].

Assessing the current situation, and analyzing target segments, we are formulated the opinion that once again we can specify the world trends in the growth of cashless payments. Traditional financial institutions, payment systems to withstand the conditions of competition with the innovative services of fin-tech startups, too, are not standing still and are gradually finding ways to implement the provisions of the PSD2 in their activities. Looking of Ukraine, users integration go to the global financial space and adhere to global trends in the field of payment services, but not all domestic financial institutions can support this wave of digital financial innovation.

### 2.3. Disadvantages of the interaction of the subjects of the payment services market in Ukraine and ways of solving them.

The payment services market carries out one of the key functions of the financial system, ensuring the implementation of diverse transactions. In the modern world of digital technologies, the consumer is becoming more demanding to payment services provided by banks, non-bank financial institutions, payment systems, and fin-tech services. It is important for the consumer to be a part of the global financial space, for the convenience of payment services.

We adhere to the definition that the payment service is the activity of the financial institution to ensure the payment on behalf of another person - the initiator of money transfer, or on its behalf.

The purpose of providing payment services is to ensure the needs of consumers in the payment for goods, works, and services [13]. It can be more fully said that the aim is to ensure the need for reciprocal payments between physical, legal and natural persons and legal entities.

To analyze this issue in this section, we will define what is the subject of payment services, the payment structure of the Internet services market, ways to modernize the payment ecosystem.

Firstly, payment services can be classified by payment instruments, the size of settlement transactions, the type of payment systems, the possibility of opening an account. The payment services entities include the payment initiator, the payment recipient, and the mediators, which provide payment services (fig. 2.11)

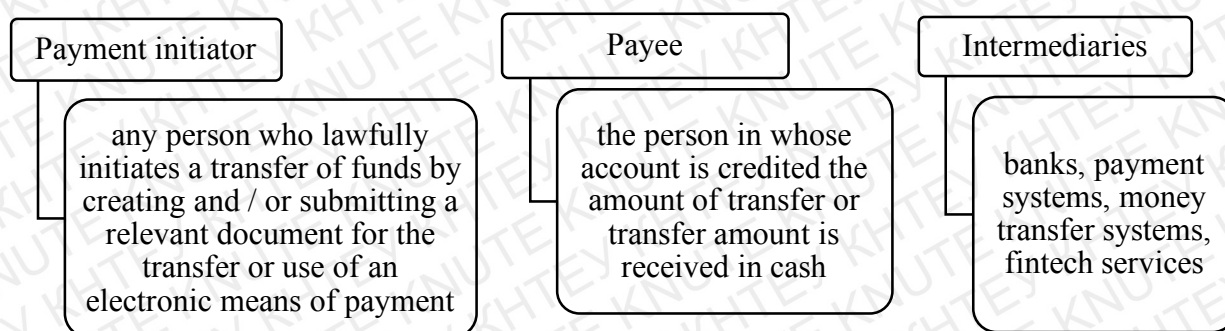


Fig. 2.11. The subjects of payment services [23]



Money transfers in Ukraine can be made using domestic and international payment systems. The payment system (except for an internal payment system) is valid according to the rules established by the payment organization of the corresponding payment system. Domestic payment system operates according to internal documents internet-payment system activities must comply with the current legislation of Ukraine [49].

The National Bank of Ukraine maintains the register of payment systems, settlement systems, participants of these systems and operators of payment infrastructure services. Payment systems payments, participants of payment systems and operators of payment infrastructure have the right to carry out activities in Ukraine only after their registration by entering information about them in the register.

The National Bank shall make information to the register concerning the payment system, participant of the payment system and the operator of payment infrastructure services in the manner established by the normative-legal acts of the National Bank [29].

Secondly, also, in our opinion, it is worth the kind of separate elements of the subjects involved in the process of providing payment services in the internet payment system (Appendix G, table G.1).

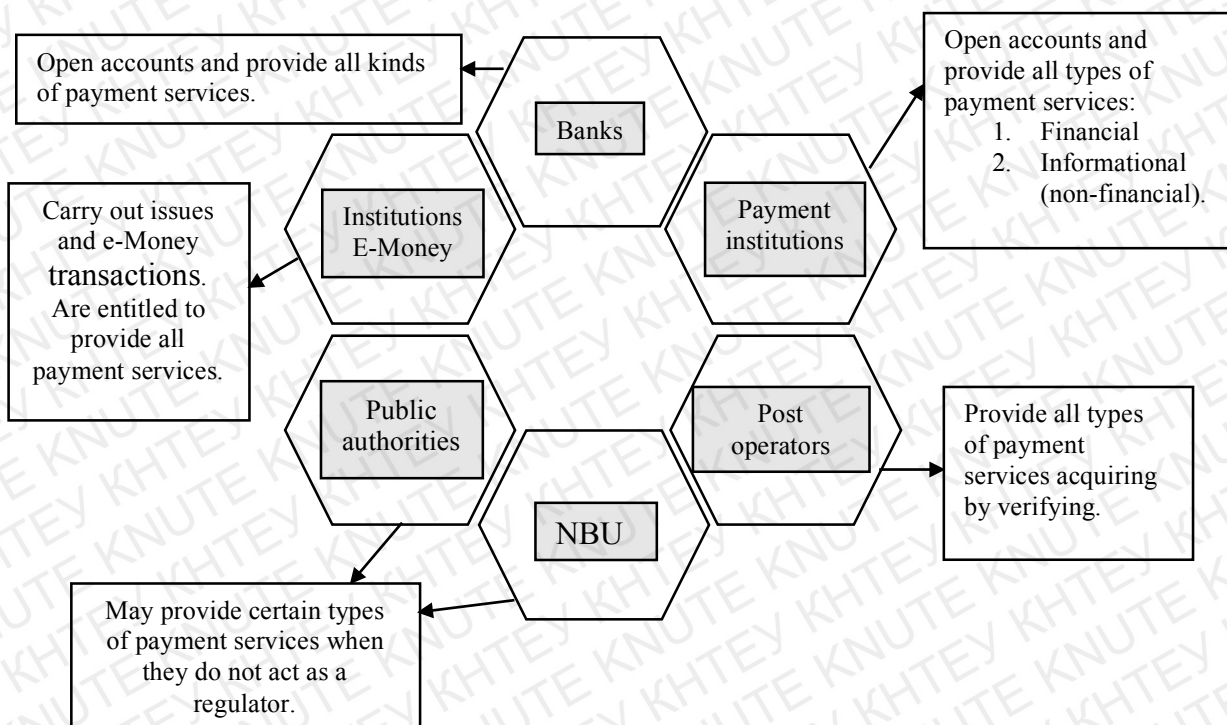
Relations between the subjects of the transfer are regulated based on agreements concluded between them taking into account the requirements of the current legislation of Ukraine [23]. Which definitely integrates the market into the global financial space.

Payment services in the Internet system – payments are made in a scheme its presented in the scheme (Appendix H, fig. H.1).

Thirdly, also, in our opinion, it is important to accent attention on new interaction of the bank payments to the payment.

The modernized payment market ecosystem represents its multichannel nature. According to the scheme, you can see the structure of participants and their modernized function.

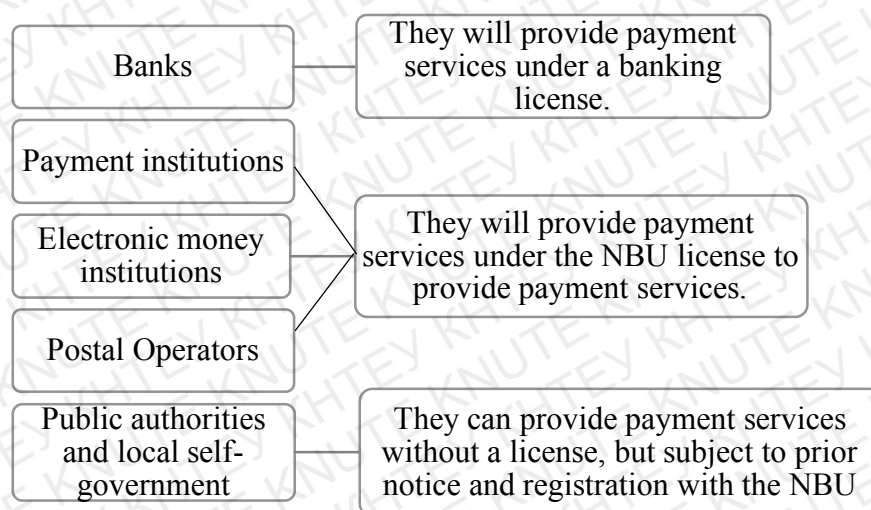
The new scheme (fig. 2.12.) Payment service providers will look like this:



*Fig. 2.12. Modernization of payment eco-system in Ukraine [19].*

Fourth, the transformation of funds transfer entities does not require payment services from the supplier to create a payment system. Also, a new provider of Information Services has been introduced: consolidated information on the payment account (AISP). This is the foundation of integration into the global financial space.

Licensing of payment service providers will occur as follows fig. 2.13:



*Fig. 2.13 Modernization of payment eco-system provider licensing scheme [8]*

Innovations in the licensing of payment services stipulate the following:

- The status of a non-banking financial institution will be provided automatically with the license - issuing of a two-stage licensing procedure;

- The license for the provision of payment services is issued in electronic form – downloading paper forms;
- Regardless of the number of payment services one license is a given-a list of payment services, which has the right to provide the person, is in the license.

It is also important in our opinion that we consider adding information on the development and transformation of the payment ecosystem. In Ukraine, more than 100 companies are currently operating in the field of financial technologies, and more than half of them have started their activity in the last three years. The most popular line of work is payments and mobile wallets. Such data are provided in the Ukrainian financial technology catalog-2019, the presentation of which took place on July 15, 2019 at the National Bank of Ukraine [26].

The edition was prepared by the Ukrainian Association of Financial technology and Innovation Companies together with the Visa Technology Payment Company and the National Bank of Ukraine.

Ukrainian financial technology catalog-2019 is not only a study of the Ukrainian market of financial technologies, but also an analysis of trends in the development of this market. In addition, it is a kind of map of the domestic fintech ecosystem and a directory of companies operating in this market in Ukraine.

Thus, according to the information contained in the ukrainian financial technology 2019, 63% of ukrainian financial technology companies are financed solely at their own expense and the same number have passed the break-even point. At the same time, 14% of companies have more than 75 employees. The international market is conquered by 43% of ukrainian fintech companies. And of those who work exclusively in Ukraine, 73% are going to start business abroad.

To date, the attention of central banks is known, which is on average on the management of cyber risk and risks fraud opportunities for which the Payment System and Market Infrastructure Committee of the Bank of International

Settlements (Payments and Market Infrastructure Committee, Bank for International Settlements) and the International the organization of the Securities

Commission (International Organization of Securities Commissions) in 2016 developed a separate document that complements the international standards of the universal. One of the key areas of this document is the need to provide the regulator with infrastructure financial market recommendations to increase cyber resilience. The IGF, for its part, needs to take the necessary steps measures to increase cyber resilience, taking into account the relevant identified recommendations. In 2020, the National Bank plans to begin work on developing appropriate recommendations for the FMI on increase cyber resilience [26].

Fifth, according to the NBU, which are given in paragraph 2.2, we can conclude that the growing popularity of retail non-cash payments among Ukrainians Therefore, the Ukrainian market of electronic bank payments has significant potential with a tendency to increase the number of banks that implement Internet banking. Therefore, electronic payment systems (including card) for successful development must ensure the implementation of such principles table 2.2.

*Table 2.2*

**Key principles and their implementation in electronic payment systems [3]**

<b>Key principles</b>	<b>Features of practical implementation of key principles</b>
Competitiveness services	It is determined by cost, convenience, distribution, security, speed, etc.
Security of payments from external intervention	Users have direct access to the infrastructure payment system and the ability to independently perform transactions through ATMs, self-service terminals and the Internet, which greatly complicates the protection
Territorial and temporary accessibility	Determined by the prevalence of the payment system (number participants and their branches), the development of its infrastructure (terminals, ATMs) and ways to initiate the transfer (the ability to make payments via the Internet, telephone, etc.)
Profitability of participation in the system	Business models and tariffs of multi-issuer payment systems should ensure profitability of participation in the system for issuers and acquirers
Consumer protection	The system must provide the ability to appeal transactions for non-receipt of goods

Given the above, we present a number of disadvantages and advantages that are obvious when using electronic payment systems:

The advantages include:

- you do not need to carry a large number of banknotes and coins;
- there is no problem with the issuance of the remaining few kopecks in stores;

- No need to worry about currency conversion. This will make the bank, and so that the customer wins the difference between the exchange rate in the store and the rate at which the conversion will be made by the bank;
- in case of loss of the card it is enough to inform the bank that all payments for it were immediately blocked;
- regular receipt of complete information on transactions.

The disadvantages are:

- imperfect infrastructure of payment terminals and ATMs;
- in some cases a commission is charged.

In our opinion, in order to solve the problems of interaction, all forms of financial control of the payment services infrastructure should be carried out in a timely and high-quality manner. As you know, oversight of payment systems, banking supervision and financial monitoring are practiced in Ukraine. These forms should be considered in more detail, Appendix I, table I.1 shows the main differences and features.

In addition, payment systems can be the focus of antitrust authorities, for example, in setting tariffs for payment system services, which is also, for the most part, not an oversight issue. Although, at the same time, it is worth noting that the oversight is aimed at ensuring the transparency of tariff payment policies systems and their participants. Also, given that modern payment systems exist high-tech systems related to the transfer of money and information flows, they need adequate protection and are obliged comply with the requirements of the authorities authorized to regulate and standardization in the field of information protection. Also, traditionally, to the competence the oversight does not protect consumer rights. For example, in the United States, elated to the protection of the rights of users of money transfer services belong to competences of the special bureau - the Bureau for Financial Protection of Consumers.

Thus, in the international market, electronic payment systems have become widespread. The use of electronic money and payment services in the world has been developing for a long time, but electronic payment systems have become particularly

rapid in recent years: international payment systems, banking began to reach the international level. That is, the international movement of capital in monetary form took the form of electronic money. More and more people are starting to use this type of payment, which is much more efficient than paying, for example, for goods, works, services in cash.

An important stage in the development of payment services in Ukraine is, of course, the creation of security for the use of electronic money in cyberspace. After all, the problem of fraud in electronic money transactions using electronic payment systems is a problematic nuance not only in the Ukrainian reality, but also at the international level. Solving such problems brings the integration of the market into the global financial space.

Thus, we formulated the idea that the rapid and efficient development of electronic payment systems in Ukraine using international best practices has a number of benefits for the state economy in general, helps integration into the global financial space and for the individual user in particular: reduced cash flow, increased credit resources, development and wide access to the financial system. It is also worth noting that another important advantage of electronic payments is saving time and minimizing the risk of fraud.

Our scientific results can be used in the medium and long-term planning of the development of payment services and the integration of the payment services market into the global financial space. And in general in determining the vectors of development of the payment services industry.

## PART 3

### RECOMMENDATIONS ON THE INTEGRATION OF THE PAYMENT SERVICES MARKET UKRAINE INTO THE GLOBAL FINANCIAL SPACE

#### 3.1. Implementation of international experience in the process of functioning of the payment services market.

An urgent issue today is the integration of the domestic payment services market into the global financial space, which, of course, is characterized by processes of globalization and modernization. Integration processes of payment market players are characterized by the introduction of institutional development programs, modernization and automation systems, international payment standardization, the implementation of which contributes to the formation of a national clearing system, obtaining the right to lend to IMF and World Bank programs and other international credit lines.

The financial services market is the environment in which exchange takes place financial resources, lending and capital mobilization. Objective the basis for the functioning of the financial services market is the mismatch of needs financial resources with the availability of sources to meet this need. It is natural here that the exchange of financial resources is not limited borders of one country, and occurs between the financial markets of different countries. Financial globalization and the process of financial services market integration Ukraine in the global financial space determine the intensification of the actions of regulators on the further development of the country [33].

In the context of globalization, Ukraine must choose its path of integration, no forgetting about their national interests. This is possible only with a powerful efficient national economy. Today in Ukraine there is a great influence on the domestic financial market services, in addition to private foreign financial institutions, have international financial organizations and financial activities of the government.

International Payments has unmatched importance for global trade and global business. Yet, it is an area that has remained relatively untouched by the digital

revolution that has been under way for almost twenty years. It's also clear that there is substantial room for improvement: International Payments can take days and sometimes weeks to arrive at the recipient's account; the content of messages is erratic and hard to match to open positions; fees are substantial and unpredictable due to the involvement of multiple participants in the process; and the overall integration into customers' value chains is poor. All of this leaves banks' customers and Fintechs looking for alternatives, and Fintechs believing things can be done much better.

Retail payment systems in the euro area handle mainly payments that are made by individuals, with a relatively low value, high volume, and limited time-criticality.

In 2019, data have been reported for 24 retail payment systems within the euro area as a whole. During the year, around 45 billion transactions were processed with a combined value of €35.0 trillion [35].

There continues to be a high degree of concentration in euro area retail payment systems in 2019. The three largest systems in terms of number of transactions (CORE in France, STEP2 and RPS in Germany) processed 66% of the volume and 70% of the value of all transactions processed by euro area retail payment systems. Chart 2 shows the number and value of transactions processed by euro area retail payment systems in 2019.

Analyzing the activities and management of payment systems of the European Union, we have reached certain crucial categories of development and modernization [15].

1. **DIGITALIZATION.** The digitalization of all aspects of doing business is driving change in the relationship between banks and their customers—with growing impacts on International Payments. Major drivers include Industry 4.0 and the resulting changes to industry business models and payment needs, as well as IT giants and Fintechs seeking to disintermediate and reinvent all payments—including international ones.

2. **MARKET INFRASTRUCTURES.** Additionally, the underlying market infrastructure is changing, due especially to the realtime-ization of domestic clearing and ongoing improvements in settlement systems. New alternatives are emerging,



enabling the bypassing of traditional messaging systems and eventually domestic clearing.

3. NEW BUSINESS MODELS AND ECOSYSTEMS Keeping up with digitalization and changing market infrastructures demands significant investment—a burden that is increased by continued rises in compliance costs and widely-anticipated price erosion. Given these factors, it seems inevitable that International Payments will be subject to growing consolidation and specialization among the thousands of banks involved today.

Digitalization has a fundamental impact on the way consumers and corporations do business with each other – and also on how they exchange money and information between them. The expectations of corporates and consumers have changed dramatically, driven by their experience with other means of digital communication [14]. They are accustomed to:

1. Immediate response and payment execution
2. Full transparency of information
3. Digital services for free
4. Lean and easy user experiences in onboarding and transacting
5. Fully digitalized/automated value chains

However, the experience of International Payments is not meeting these expectations, and often includes:

1. Multiple days to execute payments and receive responses
2. Very limited control and transparency over information submitted
3. Substantial fees—based not on cost-to-serve, but on the value transmitted
4. Fragmented user experience—involving submission of files and papers
5. Highly manual—and hence error-prone—processes on both customer and bank side

The emerging era of PaaS: “payments as a service” Banking and FinTech are continually undergoing transformations in response to new technology, regulation, and operating models. An important recent example is the rise of banking as a service (BaaS), a new approach to delivering banking services and products. Offering BaaS

became an attractive strategy thanks to cloud-based technologies, API-driven architectures, open banking, and agile business processes. This transformation is accelerating innovation and competitive intensity in many facets of the industry.

PaaS use cases are proliferating, with efforts to leverage the PaaS model led by both established payments players and Fintech “attackers.” Besides consumer services, an increasing number of examples involve commercial payments businesses driven by PaaS technology. The examples are wide-ranging and point to the innovation and new business models that are changing the landscape [31]:

— ACI Worldwide, a provider of technology solutions to banks, intermediaries, merchants, and corporate customers, has migrated its retail payments platform to the cloud. A leading European bank is an early adopter of ACI’s cloud platform and has estimated savings at 90 percent of their legacy cost for this solution, while another major acquirer is implementing the cloud platform for international expansion to accelerate time-to-market.

— ClearBank, a UK-based fintech attacker bank, has developed a cutting-edge payments clearing platform, which customers can access through PaaS. Building its technology operations largely from scratch, ClearBank has crafted a niche—offering clearing services to other banks and financial institutions—by combining the benefit of an efficient de novo platform with the advantage of a banking license that enables them to hold customers’ funds.

— In retail financial services, Marqeta offers a card-issuing platform that allows its financial institution customers to instantly issue virtual cards and integrate them into a digital-wallet proposition while the customer enjoys full issuing processing and value-added services (for example, transaction analytics) through Marqeta’s service offering.

Technological developments have accelerated across several dimensions at once to redefine GTB client experiences. Heightened expectations for digital channels, open APIs, advanced analytics, and the application of the blockchain’s fundamental strengths—all have altered the landscape, creating opportunities for new players to establish themselves through new value propositions. Banks are at risk of being

relegated to the role of balance sheet providers if they fail to embrace this multifaceted challenge to deliver new customer experiences.

Digital channels provide a step change to customer experience that allows for the evolution of truly holistic digital CFO/treasurer workbenches, catering to the needs of different users in one solution and finally delivering on the promise to move away from standalone corporate portals that are loosely integrated at best. Early-mover banks have gone as far as providing seamless omnichannel experiences for busy CFOs and treasurers and developing customer journeys tailored to specific situations, moving away from the traditional product-centric view, table 3.1.

*Table 3.1*

Technology is bringing rapid and significant innovation to global transaction banking. [16]

<b>Digital channels</b>	<b>Open APIs</b>	<b>Advanced analytics and artificial intelligence</b>	<b>Blockchain</b>
From corporate portal—to CFO workbench <ul style="list-style-type: none"> <li>• Smart omnichannel</li> <li>• Cross-product journeys</li> <li>• Extreme personalization</li> <li>• Modern customer experience</li> <li>• Digital marketing</li> </ul>	From multi-bank payments—to multi-bank banking <ul style="list-style-type: none"> <li>• Open banking and PSD2</li> <li>• Bespoke APIs</li> <li>• Seamless ERP integration</li> <li>• APIs catalogue</li> </ul>	From reporting —to predicting <ul style="list-style-type: none"> <li>• Liquidity forecasting</li> <li>• FX exposure management</li> <li>• Predictive operational risk management</li> <li>• Natural language processing for middle offices</li> </ul>	From point-to-point —to distributed ledgers <ul style="list-style-type: none"> <li>• Trade finance consortia</li> <li>• Smart contracts</li> <li>• Real-time messaging</li> <li>• Risk sharing</li> </ul>

We have identified 4 groups of areas for improvement, according to European experience which are shown in the table 3.2. They are divided into 4 groups by factors understanding these groups will help to integrate the payment services market into the global financial space as soon as possible.

Table 3.2

## 4 groups of areas for improvement payment services [31]

<b>Promote cross-border European payment solutions</b>	<b>Develop a competitive and innovative payments market</b>	<b>Better payment and infrastructure</b>	<b>Efficient international payments</b>
<ul style="list-style-type: none"> <li>• Support roll-out instant payments as the new normal, including by legislation if needed</li> <li>• More choice, more diversification, strengthened resilience</li> <li>• Broaden acceptance network for digital payments (shops, public administrations etc.)</li> <li>• Maintain availability and acceptance of cash</li> <li>• Support work towards issuance of a digital euro</li> </ul>	<ul style="list-style-type: none"> <li>• Support further the development of open banking</li> <li>• Ensure that the legal framework covers all important players in the payments ecosystem including technology companies</li> <li>• Further align the EU legal framework for retail payments (PSD2 and EMD2)</li> <li>• Ensuring a high level of consumer protection, including for instant payments</li> <li>• Ensure wide adoption of highest security standards</li> </ul>	<ul style="list-style-type: none"> <li>• Reinforce inter-operability of infrastructures processing instant payments</li> <li>• Ensure direct access by non-bank players to all payment systems, if necessary by revising existing legislation</li> <li>• Eliminate restrictions of access to essential technical infrastructures to facilitate mobile contactless payments</li> </ul>	<ul style="list-style-type: none"> <li>• Support cheaper international payments, including remittances</li> <li>• Adoption of global messaging standards</li> <li>• Support links between payments systems in different jurisdictions</li> <li>• Take regulatory action when necessary (reduce time to process transactions, increase transparency)</li> </ul>

As we can see from the study, the vectors of development are the use of cloud technologies and security of use of financial services this will allow faster integration of the market into the global financial space. It should also be noted that the formation of a single ecosystem has a positive effect on the development and communication between players, which ultimately is a significant advantage for the consumer. With the implementation of EU recommendations, of course, a certain list of issues will be resolved as soon as possible, but this is the legal side, we are more inclined to talk about the problems of technology and digital.

Today, in times of fraudulent attacks on consumers of financial services, it is important that providers of such services make an effort and implement international experience in information security and payment security. This contributes to the development of the payment industry in general, and is one of the most important prerequisites for integration into the global financial space.

### 3.2. Algorithm for payment services unification

The development of the payment services market and its integration into the global financial space largely depends on a consistent state policy, including the policy of regional authorities with mandatory consideration of certain measures and due to the correct algorithm of unification of such services. The development of any market advocates free competition, needs and interests. The competition forces to look for ways of improvement, stimulates support of high business activity.

The sequence of interests of all market participants is manifested in the stimulation of further results of joint activities. In Ukraine, the payment services market operates in the conditions of equalization of the phases of production, distribution and consumption. In turn, the National Bank of Ukraine as a special central government body, whose main task is to promote and maintain the stability of the banking and financial system and maintain stable economic growth, often carries out its actions Influence on payment services market.

In our opinion, it is worth analyzing the conditions of the formation and the factor and determining the demand and supply of banking and non-banking payment services. Because this is an important condition for integration into the global financial space.

It is important to identify the factors that affect supply and demand (Table 3.3.). In parallel with this great importance is given to social and financial aspects that its influence and action also form and determine the demand and supply in the banking services markets. It should be noted that the scientists focused more on the demand and supply on the absolute values of its size and analysis of the equilibrium price. In our opinion, important in the market research of payment of banking services is an evil value of demand or supply under the influence of various factors.

Specifics of the payment banking market in different banks caused by the action as demand factors (cash income and socio-demographic structure of the population, financial results of business entities, etc.), and of the proposal (economic development, population welfare, etc.). The study of supply and demand primarily involves

evaluating the needs of banking services and business entities, the analysis of the provision of banking services, the allocation of monetary income, etc.

*Table 3.3*

Factors influencing the demand and supply of payment services [33].

Demand	Supply
<ul style="list-style-type: none"> <li>• Main indicators of economic and social status;</li> <li>• Cash income and expenses of the population;</li> <li>• The rate of growth of monetary incomes and expenditures of the population;</li> <li>• Structure of incomes and expenditures of the population;</li> <li>• Consumer price indices and prices of industrial producers;</li> <li>• Changes in consumer prices and prices of industrial producers;</li> <li>• Labor market;</li> <li>• Interest rates of banks on transactions with clients;</li> <li>• The corporate image of Banks;</li> <li>• Consumer awareness regarding the spectrum of banking products and services;</li> <li>• Trust in the banking system;</li> <li>• Quality of service.</li> </ul>	<ul style="list-style-type: none"> <li>• Main indicators of economic and social status;</li> <li>• Dynamics of banks ' requirements on loans provided to the economy;</li> <li>• State of the interbank credit market;</li> <li>• Structure of the deposit market;</li> <li>• Dynamics of banks ' obligations by funds attracted to accounts of economic entities and natural persons;</li> <li>• Interbank deposit Market;</li> <li>• Refinancing interest rates of NBU banks;</li> <li>• Interest rates on the interbank credit market, deposit market;</li> <li>• State Securities market;</li> <li>• The official rate of UAH;</li> <li>• Hryvnia rate for foreign currencies in the interbank and cash currency markets;</li> <li>• Operations with foreign currency in the interbank and cash currency markets of Ukraine;</li> <li>• The structure of cash in circulation;</li> <li>• The cost of securities in the bank's portfolio;</li> <li>• Legal support of banking activities</li> </ul>

Given the factors that influence demand and supply, we note that demand is the needs of consumers in banking services, which are provided with certain goals, relevant monetary funds, and assets. While the offer is an opportunity to provide banking services reinforced by demand, as well as the ability of banking institutions to reproduce resources depending on the specifics of payment services.

Analyzing the demand in the market of payment banking services should highlight those components that are positively and negatively can characterize its total volume. First of all, we will share the demand for the form of retail and corporate clients. Describing the retail customers, to the positive population of the working-age, to the negative-the number of unemployed. According to the above, we will highlight the positive indicators of solvency – the size of the average monthly wage and negative

– the share of the cost of consumption on average per capita, the level of arrears of wages, etc [29].

In turn, characterizing the demand in banking services markets by corporate clients, it should be noted and its dependence on the level of economic development of regions. For example, the value of such indicator as the volume produced in the regions of industrial production means for enterprises the increase in revenues from its implementation, improvement of their financial state, and therefore has a direct relation to the formation of demand for bank services.

It is also important to consider the latest changes in the market of payment banking services, which stimulate the growth of supply and demand, which has a positive effect on the integration of the payment services market into the global financial space [41].

Considering all of the above, we can describe an algorithm for how tanks should generate a supply to maintain and increase the existing level of demand. The consumer of payment banking services sets the potential demand for their needs and thus forms one of the key elements that will influence the formation of the offer in banking. The bank analyzes current trends, external factors and consumer needs. The next step will be to standardize the information obtained into an algebraic expression, which will look like this (formula 3.1)

$$S = \sum_{i=0}^n X * a, Y * a, Z * a$$

3.1

where, S – supply;  
 X – external factors;  
 Y – requirements of the regulator;  
 Z – consumer needs;  
 a – importance of the factor.

The Appendix J, table J.1 presents the developed table on factors X, Y, Z and their simulation parts. In our opinion, the scale of importance of each factor in the calculation is also determined. The importance was determined by the degree of macroeconomic impact.

We calculated the simulation for 2018 and 2019 ( formulas 3.2, 3.3, table 3.4).

Table 3.4

The value of factors and their importance in the calculation, UAH, %.

№	The name of the factor	2018		2019	
		Amount	Value	Amount	Value
1.	Import value	1914893 mln UAH	4	1947599 mln UAH	6
2.	Export value	1608890 mln UAH	3	1636416 mln UAH	5
3.	Inflation index	109,8 %	7	104,1%	9
4.	Total resources of households	9904,1 UAH	2	10261,2 UAH	3
5.	Average cost of commission	5%	4	4,2%	6

$$S_{2018} = \sum_{i=0}^n 4 * 4 + 3 * 5 + 7 * 4 + 2 * 3 + 4 * 5 = 85$$

3.2

$$S_{2019} = \sum_{i=0}^n 6 * 4 + 5 * 5 + 9 * 4 + 3 * 3 + 6 * 5 = 124$$

3.3

According to the presented calculations, we received a coefficient of 85 - in 2018, and 124 - in 2019. We can conclude that the demand for payment services in 2019 increased, which is confirmed by the data of part 2.2.

At the final stage, the bank refines existing products and approaches to providing payment services based on the calculations and research carried out. This algorithm is shown schematically in figure 3.1

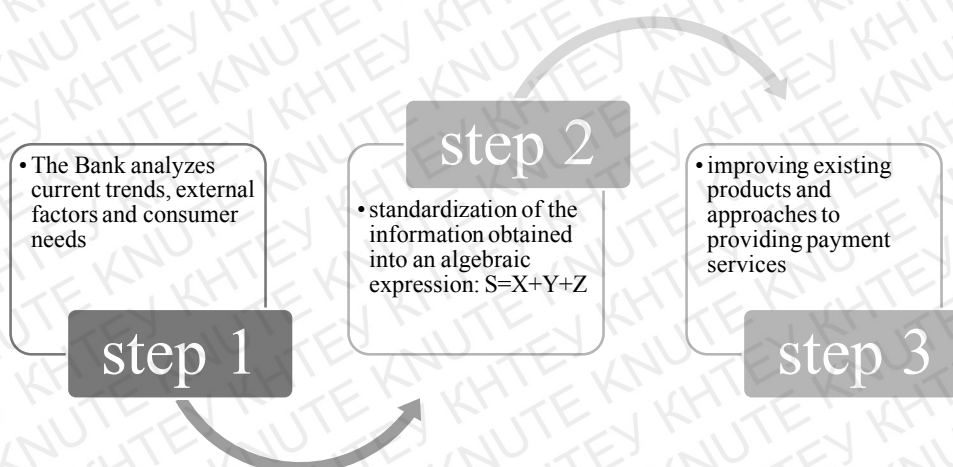


Fig. 3.1 Supply generation algorithm



However, by assessing the domestic economic situation, we can conclude that supply-side banks and non-bank institution need to take the following steps to maintain demand:

- to work out the principles of open banking, ensuring (restoration) of the competitive environment in the ukrainian financial market;
- implement the terminology, principles and provisions of the European Payment Service Directive;
- implement digital financial services consumer protection requirements that are proportionate to all types of service providers
- Improve the legal framework that protects the privacy and security of personal data when consuming digital financial services.

Promote competition, fair and open conditions for digital financial inclusion technologies by ensuring that providers of similar digital financial services have similar rights and obligations, regardless of their institutional type and the technology they apply. Including preparation and implementation of the following projects based on government decisions:

- digitization of large-scale, periodic payments from government agencies to consumers and small businesses (G2C, G2B);
- implementation of transactional services for financially excluded and uninvolved citizens, which can provide significant amounts of digital payments;
- providing actual informal free choice for the financial institution's customers to service;

Security is a key concern and vital issue for the success of e-commerce and customer payment. In this paper, we propose a secure protocol in e-commerce to enhance the security of the e-commerce process, which can also improve the security of existing work. Interestingly, the proposed system does not require the customer to input his/her identity in the merchant website even though the customer can hide his/her identity and make a temporary identity to process a request for the service. The proposed system is made up of five entities: client (C), merchant (M), payment gateway (PG), user bank (B), and merchant bank [27].

Each entity, that is, the client, merchant, user banks, and merchant bank, registers with the payment gateway to create its secret key with the gateway. Secret key elements are necessary to secure communication. Additionally, the user and merchant also create a secret key between themselves. The customer examines the merchant and requests for the product, now with his/her temporary identity created in the merchant website, and the merchant sends the request to the payment gateway. The proposed model of the e-payment system is shown in Appendix K, Figure K.1.

The gateway performs several verification steps and forwards the petition to the client's registered bank. At exactly the same time, the payment gateway forwards some encrypted communications to the server. Upon receipt of the quantity subtraction demand, the user bank authenticates it and takes it to the transaction gateway and acknowledges the deduction gateway, after which it sends the authenticated data to the payment gateway. The payment gateway calculates the required result and also forwards it to the bank, wherein the bank captures different versions and amount responses, which are acceptable after verification. The user initiates the transaction by mailing his short-term identity to the server.

#### Preliminaries of the Proposed System:

- Online customer - a consumer is a person who is going to purchase items by creating payments in a timely manner. In the electronic payment process, an Internet customer is an individual or maybe an organization that gets, consumes, or maybe purchases something online and will choose from various suppliers and goods.
- Merchant - a merchant is an enterprise or a person who offers a service or product. An e-commerce merchant is somebody who offers a service or product solely over the Internet. A merchant sells products to a customer for a price, and, by law, has a duty of hygiene to the consumer because of the expertise of the merchandise he is on the market.
- Client bank – a client bank is a kind of bank that holds the client's account and authorizes him or her during account registration. It generally has the money of numerous customers and is specially designed for the goal of keeping the client's cash on trust .

- Merchant bank – a merchant bank is a monetary institute, which involves underwriting and company loans, catering mainly to the requirements of big companies and individuals with substantial net worth. In e-commerce, a merchant bank is a kind of bank that permits companies to accept payments through credit or debit cards and is liable for fraud management.

- Payment gateway – a payment gateway is an essential component of a structure that guarantees worry-free transactions and ensures the common safety among electronic systems. A payment gateway acts as an entrance point to the national banking system. Every transaction that takes place online is created via payment gateways, which serve as points that economic institutions can access. A payment gateway is attached wholly to consumers, banks, and merchants through the Internet and is responsible for the speed, reliability, and safety of all transactions.

The proposed model of the algorithm for unification of payment services can be the basis for the Ukrainian market of payment services, previously the process of payment service was not consolidated and presented in the form of a model, which has a positive effect on the integration of the payment services market into the global financial space.

Wider introduction of algorithmization and unification of payment services in Ukraine to promote integration national payment market into the global financial space. We have the opportunity to join in convenience, socialization and security payment services. Harmonization is an increase in the innovative development of the domestic payment services market standards and rules of doing business with European requirements, which includes licensing and control for the activities of service employees. This contributes to the security and efficiency of payment services.

In the part we presented new forms of algorithm for unification of payment services, developed a formula for calculating demand and a scheme of the algorithm in the further use of the formula. For the first time, we have developed an algorithmic model for the payment system that can be used in the financial space of Ukraine and will promote the integration of the national payment market into the global financial space.

## CONCLUSIONS AND SUGGESTIONS

The development of the digital economy stimulates the development of modern business models and financial systems, structural changes in the financial infrastructure of the world market, namely the creation of virtual banks, financial and technical companies, attracting platforms internet investment, etc. The need for making payments will always be relevant among people, so in the last two decades, financial technologies have radically changed the procedure for their provision and receipt, and the scope of payments is not the most popular among the founders of Fintech startups.

In the first part, we have deepened our understanding of the nature of payment services and formulated their traditional form by analyzing the work of various scholars. Ukraine's current focus on joining the European Union and the Association Agreement signed have defined the relevant area of the first section, in which we have examined the regulatory framework for the provision of payment services to financial institutions in the EU.

Our analysis is more structured and substantive than the one in the domestic scientific literature. The results of our study can be used to develop recommendations for the implementation of new legislation.

In the second part, we analyzed the practice of providing payment banking and non-bank services. We also studied the process of adaptation of Ukrainian legislation to European standards in the field of payment services regulation.

We have deepened our knowledge of European legislation and ways to implement it in the country. The conclusions of our study can be used by the NBU in making changes and additions to the existing draft law.

We deepened the analysis of quantitative characteristics have been identified and have been associated with the related changes in the values. We were formed based on the detailed study of the evolution of instruments for providing payment services and system calculation methods, each of which includes clarification and major payment systems giants in the form of observant examples for clearer understanding.

The Directive 2015/2366/EU analyzed, which is a key document in this field, offers strict regulation of the market of payment institutions and strict conditions for

obtaining a license to stop any fraud with the money of its citizens. The PSD2 consolidated the possibility of providing payment services not only to traditional institutions but also to fin-tech services, according to regulating their activities. The directive calls for cooperation in all institutions to improve the provision of payment services to its citizens and emphasizes the importance of mandatory data protection enhancement. Therefore, we believe that this is the case where Ukrainian legislation should adopt the best global practices.

We Compare the definition of "payment service" on certain documents, namely Directive (EU) 2015/2366 of the EPC (PSD2) and Draft Law of Ukraine "On Payment Services" (PSD2).

It also caused the procedure of interaction of entities in the process of providing payment services. We have allocated that the world does not stand still, the processes of digitalization extend their influence in all spheres of society's life, especially significant leaps of development are noticeable in the way that the tools of providing payment services are changed, from paper cheques to smartphone calculations and now we can note that development will not stop, because competition inflects the market, forcing intermediaries to implement alternative methods of payment, even cheaper, even faster and more convenient, and therefore to develop new business models and cooperation between participants.

Examined the financial monitoring of the provision of payment banking services and reforms, which are planning to conduct a regulator for the more efficient functioning of the market, which will further promote the development of the banking system and the economy of Ukraine as a whole. One of the main changes will be: to introduce several new payment services (financial and non-financial), to transform the subjects of money transfer and to change the role of payment seven, x to legalize suppliers. Payment services, implement Open Banking (secure online access to money and data on customer accounts for certain categories of vendors providing services to initiate payment and to provide consolidated information for the new licensing and registration of non-banking institutions that will provide payment services, and supervise them. Increase the protection of the rights of payment services users by

establishing clear requirements for suppliers on their duties, introducing the limits of liability for unauthorized transactions and other, to define the role of the National bank of Ukraine as a regulator of payment services market and other.

In the third part, we analyzed the international experience, especially the experience of the European Union in the provision of payment services and how the implementation of this experience can affect the integration of the payment market of Ukraine into the global financial space.

We formulated groups singled out according to which it is possible to analyze the domestic market and set vectors for the development of the financial system through the reception of payment services.

Developed vectors possible ways to improve and develop domestic payment infrastructure. The obtained results can be used by the NBU, working groups of the Verkhovna Rada to develop development programs in the medium and long term.

We also analyzed the demand and supply on the market of payment banking services and made the conclusion that there is a direct connection between supply and demand in the market of payment banking services. And changing demand causes a corresponding change of offer. The offer is determined by the number of bank and non bank institutions, their opportunity to provide these services and the number of banking services that are on the market. Demand and supply have a significant impact on the market development of payment services, is a real reflection of the interests of such entities as banking institutions and clients.

We have developed and proposed a model of the algorithm for unification of payment services, and the possibility of its use, for ease of understanding, we presented our developments in the form of an algebraic expression and in the form of a diagram. Simulated calculations of the supply of payment services according to our algorithmic model are given.

The proposed algorithm can be improved and used by both the NBU and commercial financial institutions to forecast supply and understand the situation in the payment services market, which will also help to better understand the process of integration of the payment market into the global financial space.

The research materials were presented in a scientific article and in published abstracts. In Kyiv National University of trade and economics at the conferences.

Based on the purpose of our study, we did analyze the international practice and develop recommendations for the domestic payment services market for its integration into the global financial space. Finally, as described above, national legislation is currently in a period of transformation and is actively pursuing policies in all areas, including the area in which we are interested in adapting to EU legislation, amending existing legislation and processes, transforming approaches to stakeholder interaction, and special emphasis is placed on the fact that the consumer can focus on the security of information during payment transactions, as the active actions taken by the National Bank of Ukraine allow to encrypt all data as much as possible.

Finally, the state of the payment services market in Ukraine can be called satisfactory. Of course, in order to integrate the domestic market into the global financial space, a number of reforms and modernizations should be carried out, but as our study shows, Ukraine is on the right track. There are some steps on the part of the state as a regulator, and on the part of the financial institutions themselves, which show development and interest in this issue.

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