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Development of non-cash retail payment instruments in Ukraine

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Abstract. In the article it is researched instruments of non-cash retail payments in Ukraine, the functioning of payment infrastructure and proposed areas of regulation of payment instruments by the National Bank of Ukraine. The research allowed to determine the main directions of the improvement of non-cash retail payments: the development of mechanisms to increase the availability and security of non-cash retail payments; promotion the development of payment instruments, technology and payment infrastructure.

Keywords: non-cash retail payments, payment instruments, payment infrastructure, electronic money, payment systems.

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Розвиток інструментів безготівкових роздрібних платежів в Україні

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Анотація. Проведено дослідження інструментів безготівкових роздрібних платежів в Україні, функціонування платіжної інфраструктури і запропоновано напрями регулювання платіжних інструментів Національним банком України. Проведене дослідження дозволило визначити, що основними напрямками вдосконалення безготівкових роздрібних платежів є розроблення механізмів, що дозволяють підвищити рівень доступності та безпеки безготівкових роздрібних платежів; сприяння розвитку платіжних інструментів, технологій і платіжної інфраструктури.

Ключові слова: безготівкові роздрібні платежі, платіжні інструменти, платіжна інфраструктура, електронні гроші, платіжні системи.

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Развитие инструментов безналичных розничных платежей в Украине

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Аннотация. Проведено исследование инструментов безналичных розничных платежей в Украине, функционирование платежной инфраструктуры и предложены направления регуляции платежных инструментов Национальным банком Украины. Проведенное исследование позволило определить, что основными направлениями совершенствования безналичных розничных платежей является разработка механизмов, которые позволяют повысить уровень доступности и безопасности безналичных розничных платежей; содействие развитию платежных инструментов, технологий и платежной инфраструктуры.

Ключевые слова: безналичные розничные платежи, платежные инструменты, платежная инфраструктура, электронные деньги, платежные системы.

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The dynamic development of payment systems, the formation of new mechanisms of functioning of the payment infrastructure, the emergence of new types of payment instruments and forms of payments occurring in recent times necessitate the development of modern approaches to the improvement of their regulation with the purpose of increase of efficiency of influence of the payment and settlement mechanisms to ensure stable economic growth and economic security of the state.

However, despite the considerable amount of work on this problem and the high level of readiness, there is the necessity of further study of the theoretical and methodological foundations and practical approaches to the development of the payment space, forms and methods of regulation and management of non-cash payments and settlements to ensure payment security of Ukraine.

The purpose of the study is to conduct a theoretical generalization of the process of arranging instruments non-cash payments in Ukraine and the development the directions of enlargement of payment instruments for the purpose of increase the stability of functioning of money market.

With the development of electronic payment systems and use of electronic payment instruments role and share of non-cash settlements in Ukraine constantly increase. As a result of the digital revolution, financial institutions will have to move in a virtual world: customers will receive credits through the social network, but pay via smartphones. For the effective functioning of payment services market financial institutions need to digitize the services to use mobile apps or use the cloud. The main goal is to become available for cash transactions from any corner of the world.

From the style of work «to sell at any price» financial institution are transferred to the study of consumer psychology and its relationship with other people. Banks operate within the new infrastructure that does not apply the proven marketing methods. In their place come more accurate ways to analyze the behavior of customers and to provoke consumers to choose a particular product. The need for physical infrastructure gradually disappears. According to a study by Deutsche Bank, from 2006 to 2011 in Germany 6.6% of the Bank's units were closed, in the UK –19,8%. It is not the consequences of the crisis, but many

standard banking operations are now performed online. In 2030 44 million Germans will use online banking compared to 27 million in 2010. This trend is gaining momentum worldwide. Polish BRE Bank in the early 2000s on the wave of popularity of the Internet has launched mBank, which have relied exclusively on the development of online services. A few years later he became the third-largest retail Bank in the country. He decided to «dematerialize», closed almost all departments and has become a digital Bank.

To run a successful business, the financial institution should go to their customers, – to the social network. In 2014 French Groupe BPCE introduced the technology to make money transfers on Twitter. This example was followed by Indian ICI Bank. Moreover, this financial institution has been working not through branches but through Facebook, communicating with clients via a secure application Pockets. This app also gives users the ability to send money through a social network, top up mobile account, book movie tickets, check account balances and pay utility bills.

One of the potential features of the electronic purse is the ability to easily change the Bank. The person will be not so important where he has opened an account. Much more important will be the interface through which it pays.

The next stage of development of the payments market is electronic wallets, which are replacing payment cards. Their popularity is primarily due to the convenience of phone will be enough to pay for any purchases, such examples are Paypal, Google Wallet, Apple Pay.

In Ukraine there is a strong trend towards non-cash payments in the first quarter of 2015, more than half (51%) of all financial transactions conducted through credit cards amounted purchases. For comparison, in 2014 the rate was 48.2 per cent. On the second place on popularity – cash withdrawals (45%).

According to the National Bank of Ukraine, as of 01.01.2015, Ukrainian banks issued 70,55 million payment cards, of which 33,04 million were actively used during the Commission payment transactions. Almost all regions use only 50% of the payment cards from all cards issued by Ukrainian banks payment cards, the validity of which has not expired (*table 1*).

Table 1

Key data on the number of customers, payment cards and ATM/POS terminals [4]

Data as of:	Member banks of card payment systems (pieces)	Holders of payment cards (thousand persons)	Payment cards (in circulation)* (thousand pieces)	Payment cards (active) (thousand pieces)**	Automatic teller machines (ATMs) (pieces)	POS			Commercial entities operating in the sphere of trade in goods and services (units)
						total	commercial	bank	
01.01.2002	58	3 214	n/a***	3 630	1 830	14 593	n/a	n/a	n/a***
01.01.2003	77	5 696	n/a***	6 150	2 618	21 714	n/a	n/a	n/a***
01.01.2004	87	10 525	n/a***	11 529	5 027	26 433	16 837	9 596	n/a***
01.01.2005	93	15 735	n/a***	17 080	8 104	33 411	21 594	11 817	n/a***
01.01.2006	101	21 831	n/a***	24 780	11 325	42 361	28 366	13 995	n/a***
01.01.2007	111	29 414	n/a***	32 474	14 718	62 045	43 536	18 509	n/a***
01.01.2008	127	35 723	n/a***	41 162	20 931	94 317	67 233	27 084	n/a***
01.01.2009	139	37 232	45 346	38 576	27 965	116 748	85 260	31 488	n/a***
01.01.2010	146	39 395	44 469	29 104	28 938	103 063	74 510	28 553	n/a***
01.01.2011	141	39 942	46 375	29 405	30 163	108 140	80 544	27 596	57 753
01.01.2012	142	35 179	57 893	34 850	32 997	123 540	94 741	28 799	79 340
01.01.2013	142	44 339	69 826	33 106	36 152	162 724	133 964	28 760	117 789



Completion table 1

Data as of:	Member banks of card payment systems (pieces)	Holders of payment cards (thousand persons)	Payment cards (in circulation)* (thousand pieces)	Payment cards (active) (thousand pieces)**	Automatic teller machines (ATMs) (pieces)	POS			Commercial entities operating in the sphere of trade in goods and services (units)
						total	commercial	bank	
01.01.2014	143	49 719	69 726	35 622	40 350	221 222	192 331	28 891	122 303
01.01.2015	128	51 649	70 551	33 042	36 596	203 810	178 875	24 935	123 505
01.04.2015	119	51 873	70 298	32 619	36 060	187 680	165 091	22 589	116 536

* The total number of valid payment cards issued by the bank.

** The total number of payment cards that have been used to perform at least one debit transaction in the past three months (before 01.04.2012 – in the past twelve consecutive months).

*** Data are not available.

For obtaining cash in Ukraine used a network with more than 36 thousand ATMs. Acceptance of cashless payments is carried out in a network with 203.81 thousand payment terminals, of which 178.85 thousand trade and 25.93 thousand banking terminals. In recent years, the total number of POS terminals increased by 41% (table 2). However, Ukraine lags behind European countries in four times the number of payment terminals per 1 million inhabitants 2.938 thousand terminals, but the number of ATMs in Ukraine almost reached the European level: 1 million Ukrainians have 792 ATM, whereas in Europe – about 870 ATM. Assessment of the Ukrainian interbank Association of members of payment systems, the deficiency payment terminals in the country amounts to 1.1 million units.

As of 01.01.2015 the year in Ukraine was dominated by cards with magnetic tape – 90.82%. The proportion of cards with chip is 1.26%, with a chip and magnetic stripe – 7.17%, and payment cards for payments in the Internet to 0.75%. All payment cards of international payment systems

in Ukraine are available with magnetic stripe and chip, and chip are issued only NSMEP.

Another perspective direction is the development of cryptocurrency. One of the most important issues is the legal status of bitcoin and the peculiarities of its regulation. The National Bank of Ukraine considers «virtual currency/cryptocurrency» Bitcoin as a money substitute that has no real value and cannot be used by individuals and legal entities on the territory of Ukraine as a means of payment, because it is contrary to the Ukrainian legislation.

In addition, during the use of «virtual currency / cryptanalytic» Bitcoin there is a high risk factor associated with operation or supply chain, in particular the anonymity of transactions (which may include cash). At the same time, the international distribution of such payments makes this category of services attractive to illegal acts, including money laundering, or terrorism financing. Moreover, the National Bank of Ukraine as the regulator is not responsible for potential risks and losses associated with the use of «virtual currency» Bitcoin.

Table 2

Types of payment cards issued by Ukrainian banks [4]

Data as of:	Payment cards (thousand, pieces)*										
	Total	By type of storage medium					By type of financial transaction				
		with magnetic strip	with chip and magnetic strip		with chip		Internet cards	cash withdrawal cards	payment and cash withdrawal cards	without cash withdrawal function	of which e-money cards
		of which contact	of which contactless	of which contact	of which contactless						
01.01.2007	32 474	30 266	802	n/a**	1 300	n/a**	106	1 104	30 816	554	n/a**
01.01.2008	41 162	38 676	771	n/a**	1 518	n/a**	197	1 236	39 281	645	n/a**
01.01.2009	38 576	36 123	729	n/a**	1 558	n/a**	166	1 041	37 217	318	n/a**
01.01.2010	29 104	27 092	588	n/a**	1 348	n/a**	76	827	28 243	34	38
01.01.2011	29 405	27 438	602	n/a**	1 236	n/a**	129	832	28 559	14	25
01.01.2012	34 850	32 022	653	n/a**	1 188	n/a**	987	777	34 064	9	12
01.01.2013	33 106	31 238	1 014	n/a**	741	n/a**	113	313	32 683	110	3
01.01.2014	35 622	33 277	1 536	n/a**	623	17	185	178	35 263	181	5
01.01.2015	33 042	30 009	2 370	1 090	416	0	248	153	32 654	236	16
01.04.2015	32 619	29 702	2 350	1 088	266	4	300	141	32 184	294	7

* Number of payment cards issued by the bank that have been used to carry out at least one debit transaction in the past three months (before 01.04.2012 – in the past twelve months).

** Non-available data.

For the purpose of consumer protection, security of transfer of funds, the national Bank of Ukraine recommends Ukrainian citizens to use the services of those payment systems, which are certified by the National Bank of Ukraine the register of payment systems, participants in these systems and operators of payment infrastructure services.

In Ukraine non-cash payments using electronic money are widespread. On July 25 2014 the Resolution of the National Bank of Ukraine Board № 378 amending some NBU regulations on carrying out e-money transactions has entered into force. This Resolution has aligned the rules on carrying out e-money transactions with the requirements of the Ukrainian laws and EU norms. Specifically, the pro-



visions of the Regulation on e-money in Ukraine have been brought into line with Article 15 of the Law, Article 47 of the Law of Ukraine «On Banks and Banking», and EU norms.

The definition of «Electronic money» set out in Article 15 of the Law of Ukraine «On Payment Systems and Funds Transfer in Ukraine» is in line with the definition of «Electronic money» under the EU legislation. «Electronic money» is defined as an electronic store of monetary value on a technical device that may be widely used for making payments to entities other than the e-money issuer. Electronic money is the liabilities of the e-money issuer settled in cash or a non-cash form [1; 2; 3].

Electronic money is a pre-paid payment product, which does not require the user to open a bank account. It is a convenient instrument for making small payments. The user can make payments without having to go to the bank. In accordance with Article 15 of the Law, the rules on carrying out e-money transactions are set by NBU regulations.

Resolution № 378, inter alia, has:

- established a list of financial services that a bank issuing e-money (hereinafter – an issuer) is entitled to render to its customers (except for banks) under an agency agreement entered into with business entities;
- specified the requirements placed on agents that are entitled to provide the relevant services under agreements entered into with an issuer;
- obliged an issuer to provide the National Bank of Ukraine with information on commercial agents;
- repealed the provision requiring multi-purpose prepaid cards to have chips;
- established the amount of cash that an individual can receive through payment terminals in exchange for electronic money by using multi-purpose prepaid cards. Under this Resolution, an individual is allowed to receive cash in an amount of up to UAH 500 per day and not more than UAH 4,000 per month;
- established the amount of electronic money that individuals are allowed to transfer to other individuals using multi-purpose prepaid cards. The resolution reads that individuals are permitted to transfer electronic money in an amount of up to UAH 500 per day and of not more than UAH 4,000 per month;
- established the amount of electronic money that users are allowed to use to make payments by means of an electronic device available at their disposal. Users can deposit electronic money to this device. Payments of up to UAH 35,000 year are permitted per calendar year. This amount does not include the amount of electronic money cancelled by the issuer at the request of the user (the amount of electronic money withdrawn from circulation, and returned to the user in cash or a non-cash form at the issuer's cash department during a calendar year.)

The total amount of electronic money that can be used to perform transactions during the calendar year meets

the requirements of EU legislation, specifically, Directive 2009/110/EC of the European Parliament and of the Council on the taking up, pursuit and prudential supervision of the business of electronic money institutions amending Directives 2005/60/EC and 2006/48/EC and repealing Directive 2000/46/EC, and Directive 2005/60/EC of the European Parliament and of the Council on the prevention of the use of the financial system for the purpose of money laundering and terrorist financing.

The above-mentioned restrictions shall not apply to banks' customers that have a checking account at the bank, and use payment cards to transfer funds from their checking account and/or use payment cards to withdraw cash through the payment terminal.

Despite the simplicity and obviousness of the need for the use of electronic money, there are still some obstacles to their wide distribution. This is primarily due to the need for infrastructure development as well as legislative regulation of relations between participants of the system of electronic money. In addition, a substantial reduction in costs for issuers, as they are obliged to ensure the implementation in the system of electronic money of certain complexes of technical means, organizational and procedural measures to protect information, identify and prevent abuse, etc.

The most promising direction is the development of electronic payments in different spheres of interaction of citizens and businesses in areas of payments: citizen-government (C2G), government-citizen (G2C), business-to-government (B2G), government-to-business (G2B). In particular, electronic forms of payment can be used in the implementation of such transactions as contributions for social insurance, road tolls, fines for violation the traffic rules, payment and reimbursement of taxes, registration of companies and public procurement.

The main obstacles to the development of non-cash retail payments in Ukraine are also low financial literacy and limited access of the population to financial services. But the NBU believes that the issuance of electronic money threatens the financial system of Ukraine. Granting the right to issue electronic money to other legal entities, except banks, contains the potential for abuse, which will threaten the stability of the financial system of the country. Most complaints of participants of the market of electronic money refers to the position of the National Bank of Ukraine on the issue of electronic money exclusively banks and the impossibility of using electronic money in the implementation of cross-border payments. In addition, the use of electronic money is associated with elevated risk of money laundering, received by a criminal way, or terrorism financing. Granting the right to issue electronic money to other legal entities, except banks, contains the potential for abuse, which will threaten the stability of the financial system of the country.

Meanwhile the legislation of Ukraine the right to issue electronic money provided exclusively to banks. This is because:

- the activities of banks is licensed by the National Bank of Ukraine and is subject to continuous supervision and control;



- The National Bank of Ukraine has adequate measures of the impact on banks in case of detection of violations in their work;
- The National Bank of Ukraine, if necessary, can apply measures to support the liquidity and solvency of banks.

All these measures help increase the level of protection of the rights of users and of public confidence in the use of electronic money. The National Bank also argued that the banking regulator is actively cooperating with the banks that plan to issue electronic money and sent for consideration to the NBU documents for the purpose of harmonization of the use of electronic money.

Technical development and support of new payment instruments in the world happen quite rapidly, however, the legislative and normative regulation of the functioning of payment systems, especially with the use of plastic cards and electronic money, often lags behind technical and organizational improvements. For example, today many companies in order to stimulate consumers develop preferential system of payments and settlements with the use of credit cards, various storage systems etc., that re-

quires new approaches to accounting and control of such payments.

Improvement of the regulation of clearing systems will contribute to the further development of the national payment infrastructure that will ensure sustainable and efficient functioning of payment systems, will reduce the foreign exchange costs of banks by switching to payment services, payment institutions and payment system in local currency, as well as to improve the quality of services provided by payment systems.

Thus, taking into account international experience, the main directions of improvement of non-cash payments is the use of new types of payment instruments, in particular contactless technology, mobile payments and electronic money. To the fullest realization of their advantages, it is necessary to improve the regulatory and legislative framework, regulation and supervision by the Central Bank, in particular, the implementation of the oversight of payment systems, as well as the formation and development of new institutional mechanisms to ensure the reliability and effectiveness of the systems of cashless payments and charges.

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