



MANAGEMENT AND REGULATION OF ELECTRONIC MONEY CIRCULATION: INFORMATION AND JURIDICAL ASPECTS

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ABSTRACT

The article considers the information and legal basis for regulating the circulation of electronic money. The stages of the electronization of the monetary sphere are presented, the definition of electronic money is given; their advantages and disadvantages are given. The principle of electronic money is presented. The analysis of what electronic money and what purses are allowed in Ukraine, as well as the role and functions of the bank in issuing electronic money is given. The comparative characteristic of modern forms of money is presented. Prospects of development of electronic money in Ukraine are analyzed.

Keywords: Card-Based, Circulation, E-money, Electronic Money, Information Aspects, Juridical Aspects, MasterCard, Monetary Sphere, Regulation, Visa

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1. INTRODUCTION

The decade after the creation of the Internet was marked by the attempts of a new monetary revolution. Let's take a look at some historical events related to the development of electronic money circulation, which can be defined to some extent as stages of electrification of the monetary sphere (Fig. 1) [1-6].

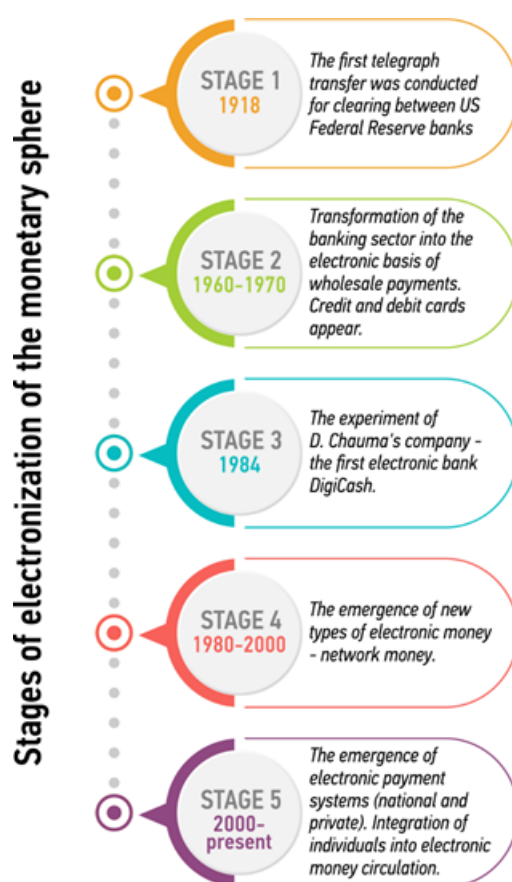


Figure 1 Stages of electrification of the monetary sphere

Thus, the first wire transfer in the United States gave impetus to the development of electronic money circulation.

Electronic money is a modern means of payment used to pay for various services and goods on the Internet and have exactly the same value as real money.

The definition of jurisdiction is historically the second systemic legal problem of the Internet, which most obviously postulates new approaches to the operation of the law in space and a circle of persons. Since the Internet is a cross-border information and telecommunications network, the relations that develop in it allow users who are indifferent legal systems to enter into legal relationships, which is happening. Moreover, this contradictory situation is often

complicated many times due to additional factors: for example, the fact that the information intermediary is in the third legal system, the community or territory to which the actions of one of the subjects of such legal relations are oriented is in the fourth, etc. In such circumstances, the "classic" rules that allow determining the applicable law and place of dispute resolution can often not be directly applied [7-10]. Moreover, in many legal systems, these norms are developed in detail only within the framework of civil law, to a much lesser extent - within the context of the criminal, but practically in no legal system - at the level of other branches of public law.

To date, the problem of determining jurisdiction is developing mainly in judicial and administrative practice, and two prevailing approaches - "test (criterion) of access" and "test (criterion) of minimum contacts (focus)" - do not allow to develop a single practical approach. From the point of view of the theory of law, this problem makes us rethink the fundamental provisions on the operation of the law in space and in terms of circle of people, since empirical material testifies to the growing prevalence in real practice of the approach according to which the legislation of the countries of the world can create rights and obligations for entities that are outside the territory to which, from the point of view of classical representations, the state sovereignty of the respective country extends.

2. THEORETICAL PRINCIPLES OF REGULATION OF ELECTRONIC MONEY CIRCULATION

Electronic money (also known as e-money, e-money, e-cash, e-exchanges, digital money, digital cash or digital exchanges) - means the definition of money or financial obligations, transactions and settlements made using information technology.

What is not currently considered electronic money:

- Internet banking transactions with ordinary accounts and funds in ordinary public currencies; regular money transfers via online portals (from the regulator's point of view, these are forms of usual payment with usual currency).
- virtual local currencies that operate within individual internet portals (this is a pseudo-monetary form of private exchange, regardless of the way they are purchased and redeemed).

2.1. The principle of electronic money calculation

The principle of electronic money is generally straightforward: any business or company can be both a merchant, receiving electronic money for goods and services, and as a user, paying for their purchases. For this purpose, a company, as a legal entity, based on a contract concluded with a bank (issuer or settlement agent), open two electronic accounts (wallets) - one for receiving electronic money as a merchant and the other for settlement as a user.

To make a payment, you must first purchase the system's payments (liabilities) for real money. They are credited to the electronic wallet and then used by the user. Electronic portfolio can be replenished through branch offices with which the system cooperates, from a payment card, from a current bank account or through payment terminals.

If electronic money is transferred to the electronic wallet, it can be transferred into cash or a bank account.

According to clause 3.3 of Regulation # 481, individuals - individuals have the right to use electronic means to pay for goods and to transfer them to other users. They can transfer electronic money to other users - individuals using prepaid cards for up to 500 UAH per day and not more than 4 thousand UAH in one month.

Users - Business entities - Legal entities are allowed to receive electronic money only in exchange for non-cash funds. They can only use this money to pay for goods.

Merchants have the right to accept electronic money, expressed only in hryvnias, from customers as a means of payment for goods. Use of the received funds can be exclusively for the exchange of non-cash funds or to return electronic money to users in case of their return following the Law of Ukraine "On Consumer Protection" of goods purchased in this way.

You can only transfer electronic money in UAH if you withdraw from the payment system.

Advantages of electronic money

By accepting electronic money as a means of payment, retailers receive some economic and social benefits, including:

- reduced contact of people with cash - a potentially dangerous carrier of harmful bacteria;
- Improving working conditions of cash handlers: reducing contact with potentially hazardous cash, reducing time spent per customer due to the lack of need to calculate funds, reducing emotional burden (risk of employee error when accepting electronic money is reduced to zero from taking cash when an employee can make a mistake in counting and checking the banknotes);
- Reduction of state expenditures for the production, maintenance and destruction of money;
- the use of electronic money as an electronic substitute for banknotes and coins in payments to the public may reduce the costs of bank clearing and cash collection and cash collection;
- electronic money calculations accelerate the purchase and sale of goods at the expense of their absolute divisibility - the ability to write off the required amount of funds immediately;
- work with this means of payment makes it impossible to carry out fraudulent operations by unscrupulous personnel of the enterprise due to automatic fixing of services in the respective software and technical complexes;
- as a payment instrument for bearer electronic money impersonal - identifies the electronic wallet, not its owner [11-13].

The disadvantages of electronic money

- the need for special equipment;
- dependence on uninterrupted energy supply and Internet connection, in which the access to bills is lost or payment operations are impossible;
- the vulnerability of electronic systems to hacking attacks, software malfunctions, and worse human error consequences.

2.2. Types of electronic money

In terms of form, electronic money can exist as a single piece of information inside network-based - and may also have an additional attachment to card-based payment-identification cards.

In terms of anonymity, electronic money comes with the mandatory requirement of user personalization (personalized) and without such need (anonymous).

From the issuer level, electronic money is fiduciary; they are fiat (fiat money) - included in the state financial system on the rights of a separate payment subsystem and are always nominated in the national currency of a country. And electronic money may also be an independent single currency, recognized as such by the state, but they require the exchange of free currency.

For example:

- WebMoney in Europe and America, QIWI, EasyPay (Belarus) - network-based private currency;
- PayPal, GlobalMoney - network-based fiat money;
- Electronic money boxes on Visa, MasterCard, NSMEP - card-based fiat money

• Yandex.Money in Ukraine is an online private currency, and in Russia it is now already card-based (Ukrainian users do not have their own Yandex.Money cards issued since February 2016).

2.3. How does Ukrainian electronic money work?

The current rhythm of life is quite intense, and Ukrainians do not have the time, and sometimes the opportunity, to adjust to the banks' work schedule to conduct the necessary financial transactions. However, the world is increasingly digital, and electronic money, as one of the tools to solve this problem, is gaining popularity in our country.

The peculiarity of Ukrainian electronic money is that a resident bank can only issue it, so today PayPal, WebMoney and other systems cannot directly be electronic money issuers. Fig. 2 shows the operations of banks of Ukraine with electronic money for 2018.

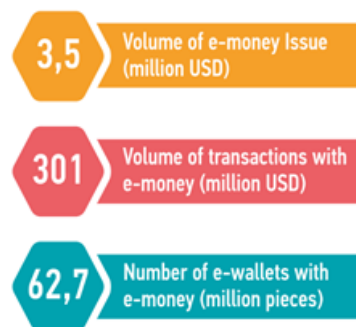


Figure 2 Banking Operations of Electronic Money Banks of 2018

Among the Ukrainian payment systems in which electronic money is issued, the most common ones are Maxi, Global Money, Space (NSMEP), electronic wallets on Visa cards, MasterCard.

To use electronic money, you usually need to create and then top up your electronic wallet. After that, there is an opportunity to pay for the services of many Ukrainian companies, to receive transfers on their e-wallet, to withdraw money independently through branches of partner banks and to transfer funds to cards.

A client at a bank opens an account to account for electronic money.

The client deposits cash or transfers non-cash to a bank account. You can use ATMs and payment terminals to top up your account.

The bank converts cash/cash into electronic money.

The client - the owner of electronic money with the help of specialised software can buy goods, transfer this money to other persons, change it to additional electronic money, to give if necessary. In turn, he may receive electronic money from others. In fact, it is valuable money that can endlessly rotate.

If the electronic money owner wants to transfer it back to cash or non-cash, he or she goes to the bank.

The bank converts electronic money into cash/non-cash.

Most often, banks in the Ukrainian market set the rate for money conversion and receive commission income from the client.

You can also manage your electronic money through a mobile application that allows you to use the service anywhere at any time. You can do currency exchange between wallets and manage limits yourself, without having to go to the bank.

2.4. What electronic money and what electronic wallets are allowed in Ukraine

According to official NBU data, electronic money in Ukraine is offered by several systems, such as Forpost, Alfa-Money, Electrum, GlobalMani and XPAY.

Forpost. Money transfer payment system created by Post Finance. The service is available to clients of the postal operator Nova Poshta. Alfa-Bank became the e-money issuer for the Forpost payment system.

Alpha Money. Alpha Bank Electronic Money. Access to money and e-wallet is available to financial institution customers through a mobile application and online banking at Alpha Bank.

GlobalMani. Electronic Money Issued by Globus Bank. According to the information on the official website, GlobalMani e-wallet can be replenished at any Ukrainian bank, and with the help of e-money you can:

1. top up your mobile and e-wallet
2. transfer money from card to card
3. pay for Internet, television
4. replenish bank cards and games

Electrum. The issuer of the e-money data is Ukrgasbank. The following types of Electrum operation are currently available:

1. replenishment of the electronic purse in cash or using a payment card
2. payment for goods and services - mobile bill, utilities, television and Internet, IP-telephony
3. charity, banking, games, social networks, taxis online
4. transfer of electronic money between wallets of users
5. Electronic money exchange Electrum for cash or non-cash.

XPAY. An electronic money system with access to an e-wallet, to which you can add money, documents, credit, bonus and discount cards. In June 2018, the National Bank of Ukraine registered XPAY as the operator of payment infrastructure services. After that, no news came from the payment system [12-15].

The National Bank also allows you to create e-money based on your space payment system. Thus, the digital money called Smart Money is released by Kyivstar. Their issuer is Alfa-Bank.

The Smart Money service is available only to Kyivstar prepaid subscribers and can be used to:

1. transfer money to a bank card
2. top up your mobile account
3. to buy lottery tickets, transport tickets and concert tickets
4. replenish games and social networks
5. Pay for services and purchases in online stores
6. repay or take out a loan
7. Pay for Internet, utilities and international communications
8. donate money to charity
9. Pay for insurance, distributors (Oriflame, Faberlik, Avon, etc.) and taxis.

In total, with the help of Smart money, you can pay for more than 3 thousand services and services online.

Also in late February, the NBU announced the completion of an expanded pilot project to launch e-hryvnia. The Central Bank has announced that the digital hryvnia will operate based on blockchain technology, but will have nothing to do with cryptocurrencies.

3. INFORMATION AND REGULATION OF TRANSACTIONS USING ELECTRONIC MONEY IN UKRAINE

In the territory of our country, any transactions using electronic money are governed by the following legislative documents:

- Law of Ukraine “On Payment Systems and Funds Transfer in Ukraine” of 5 April 2001;
- (as amended on 16/01/2003);
- Resolution of the National Bank of Ukraine “On Amendments to Certain Regulations of the National Bank of Ukraine on Regulation of Issue and Circulation of Electronic Money” No. 481 of 04.11.2010.
- Resolution of the National Bank of Ukraine “On conducting transactions with the use of special means of payment” dated 30.04.2010;

These legal laws regulate relationships related to the use of financial transactions on the Internet, but according to the interpretation of specific terms, there are some ambiguities. For example, the National Bank Resolution No. 481 of 04.11.2010 defines electronic money as units of value and is used as a means of payment. At that time, there is no such term as a "means of payment" in Ukrainian law, but Art. 192 of the Civil Code reveals the concept of "means of payment", this definition considers the hryvnia as the only legal means of payment in the territory of Ukraine.

Another critical problem for Ukrainian jurisdiction is the use of electronic money by single taxpayers. The bottom line is that, according to Art. 291 of the Tax Code of Ukraine, Uniform taxpayers, can only pay for goods or services received in cash or cashless cash. And according to the interpretation of the definitions in all the National Bank Decree No. 481, electronic money cannot be considered either in cash or in non-cash form. To resolve this problem, some payment systems may suggest that you use an intermediary to carry out a particular financial transaction; however, for some of the fees charged to the payer.

The requirements governing the issue and use of electronic money in Ukraine are set out in Article 15 of the Law of Ukraine "On Payment Systems and Funds Transfer in Ukraine" and the Regulation on Electronic Money in Ukraine, approved by the resolution of the National Bank of Ukraine dated 04.11.2010 No. 481 (with changes).

Article 15 of the Law of Ukraine "On Payment Systems and Funds Transfer in Ukraine" defines the concept of "electronic money" - units of value stored on an electronic device are accepted as a means of payment by a person other than the person who issues them and is a monetary liability that person, whether in cash or non-cash form.

The law stipulates that:

- electronic money can be issued exclusively by a bank;
- issue of electronic money is made by giving it to users or commercial agents in exchange for cash or non-cash means;
- the bank has the right to issue electronic money for an amount not exceeding the amount of money received by it;
- the electronic money issuing bank is obliged to repay the electronic money released by it at the user's request;

- the procedure for carrying out transactions with electronic money and the maximum amount of electronic money on the electronic device at the disposal of the user are determined by the regulatory acts of the National Bank of Ukraine.

Such a legal act of the National Bank of Ukraine is the regulation on electronic money in Ukraine.

3.1 Role and functions of the bank in the issue of electronic money

The requirements governing the issuance and use of electronic money in Ukraine are set out in Art. 15 of the Law of Ukraine "On Payment Systems and Funds Transfer in Ukraine" of 05.04.2001 No. 2346-III (after this - Law No. 2346) and the regulation on electronic money in Ukraine, approved by the resolution of the Board of the National Bank of Ukraine of 04.11.2010. No. 481 (after this - Regulation No. 481). The regulation regulates and monitors the activities related to the issue of electronic money in Ukraine.

Only banks are allowed to issue electronic money in Ukraine. The bank provides its clients with the following financial services in the field of electronic money usage:

- electronic money distribution;
- exchange transactions with electronic money;
- providing electronic money replenishment for electronic devices;
- receiving electronic money in exchange for cash/non-cash.

According to the requirements of item 15.2 of Art. 15 of Law No. 2346, a bank that plans to issue electronic money is obliged to first agree with the National Bank of Ukraine (after this referred to as the National Bank, NBU) the rules for their use following the procedure established by the NBU regulatory act. Subject to the requirements of the National Bank, entities engaged in electronic money transactions (electronic money issuer, operator, agents, merchants and users) can only do so under the rules agreed with the NBU.

3.2. Issue of electronic money in Ukraine

Ukrainian banks can issue electronic money based on Visa, MasterCard, NSMEP card payment systems. But some financial institutions are making their own electronic money. In essence, these are GlobalMoney payment systems from Globus Bank, Maxi from TASCOMBANK (formerly the issuer was Alfa Bank), Forpost and Alfa-Money from Alfa Bank, Electrum from Ukrgasbank and Xpay from Bank Sich. Only 23 banks are eligible to issue electronic money (Fig. 3).



Figure 3 Banking Operations of Electronic Money Banks of 2018

E-money transactions in Ukraine are gaining momentum. Thus, during the year 2018 (Table 1), the dynamics and growth of e-money volumes and the number of e-wallets showed positive value.

Table 1 Amount and amount of payments in EPS and card payment systems within Ukraine for 2016 – 2018

Indicator	2016		2017		2018		Growth rate	
	absolute value	% of total	absolute value	% of total	absolute value	% of total	2018/2017	2018/2016
In absolute terms, billion pcs								
SEP	0,3	11	0,3	9,9	0,3	8,2	-21%	-25%
Card systems	2,5	89	3	90,1	2,9	91,8	-3%	3%
Total	2,8	100,0	3,3	100,0	3,2	100,0	-5%	0%
In monetary terms, trillion UAH								
SEP	19,5	92,9	20,9	91,3	18,5	90,2	-11%	-3%
Card systems	1,5	7,1	2	8,7	2	9,8	0%	38%
Total	21,0	100,0	22,9	100,0	20,5	100,0	-10%	0%

According to the Table 1 during 2018, the volume of e-money banks' operations amounted to UAH 83.2 million of electronic money (more than 40%), the size of e-money transactions - UAH 7225 million (almost 2.5 times increased) electronic wallets - 62.7 million units (more than 19%) (Fig. 4).

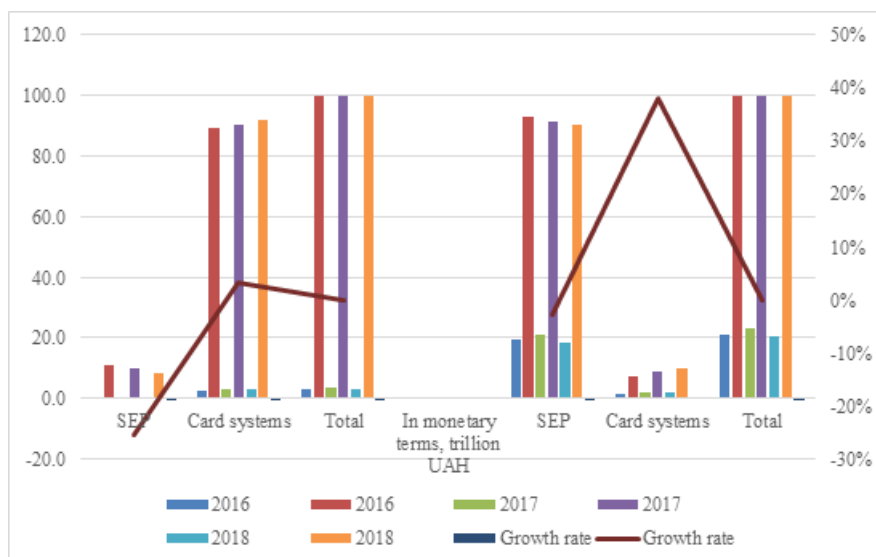


Figure 4 The number and amount of payments in EPS and card payment systems within Ukraine for the years 2016 -2018

During 2016-2018, the volume of payments through card systems is increased by 0.4 billion units. (16%) and reduction in the number of payments using the EPS - by 0.05 billion units. (16.1%). On the whole, there is a positive trend in the volume of payments (increased by 0.35 billion units (12.5%).

However, the volume of such payments declined by 0.5 trillion during the study period. UAH (2.4%). This change is caused by the reduction of SEP payments by 1.0 trillion. UAH (5.1%) and card systems increase by 0.5 trillion. (33.3%).

4. CONCLUSION

It is obvious that the regulatory legislation of this market segment in Ukraine needs considerable refinement, since, as the practice of other countries shows, in case of any problems in the national market, non-resident foreign companies pursuing more liberal policies take the place of domestic ones. That is, the economy of the country receives as a result of financial losses. A more precise formulation of definitions and basic rules for regulating settlement relationships between state bodies, legal entities and individuals will lead to the rapid development of e-commerce in Ukraine.

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