

Twilight Electronic Money Schemes? – An overview of electronic money regulation in European Union and Poland

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1. Introduction

E-money (or “electronic money”, for long) was first presented as a complete payment system by the firm CyberCash in 1994. It was especially designed to the Internet’s payment, because it allowed paying micro sums. But the real pioneer in “electronic money” was David Chaum that founded and propagated his firm’s DigiCash system for charging money that allowed doing a shopping with security and anonymity of buyers already in 1989¹. It was an integral part of the “digital revolution”, which products were based on the idea of the “electronic wallet”. “Digital coins”, which were stored offline on smart cards or on user’s hard disks, were intended for “Micropayments”, which allow to use online content (magazine articles, music files, etc.) after payment or shortly pay micro sums for other diverse services in virtual world. Those small virtual digital units were seen as electronic money’s defining application and were ruling paradigm.²

Many schemes have been devised to provide an electronic payment mechanism specifically adjusted to electronic transaction, since introducing of Internet e-commerce. Many systems were called in variety of expressions such as “digital cash”, “e-cash” or “e-money” but really, they were

¹ S. Levy, E-Money (That’s What I Want), Wired, Issue 2.12. December 1994, <http://www.wired.com/wired/archive/2.12/emonet.html> and T. Steinert-Threlkeld, The Buck Starts Here, Wired, Issue 4.08. August 1996, <http://www.wired.com/wired/archive/4.08/nanobucks.html>

² M. Kohlbach, Making Sense of Electronic Money [in:] The Journal of Information, Law and Technology (JILT), Number 1, 2004, p. 1, <http://elj.warwick.ac.uk/jilt/04-1/kohlbach.html>

used in relation to these schemes. In reality, the schemes operate in a number of different formats and are diverse.³

The schemes usually engage the creation of tokens of value as well digital units in a particular currency that is stored on an electronic device such as a chip card or a computer disk and can be transferred from one entity or party to another, i.e. from a buyer to a seller. Such as digital units, we call "digital coin", which can be written on a smart card or a hard disk in the computer. Other form of transmitting electronic money is an online way, especially via e-mail. In this method the units storing devices is not necessary, because we receive money from one part's bank or credit card account to another's account and notifying the adequately entities by e-mail.⁴ The schemes are structured in different form. The structure might base the form on which is called "identified e-money" or the like in which case the identities of the parties are revealed in the payment operation (especially the payer who would have obtained the money from the originator or service provider).⁵

The exchange the e-money for actual money or value can cause an identification of the payee, but occur also the schemes that may take the form of "anonymous e-money", within the identification of the payer is not revealed. This scheme can be called accurately a real "digital cash", because the payer is not revealed as a part of the payment operation, in other words it does not affect to make an identification of paying person.

The schemes we can difference between them in another point of view. They can operate on an 'on-line' or 'off-line' basis. If a scheme operates on an 'on-line' basis, then is necessary to contact either the originator of the scheme or authorised trusted third institution in order to complete payment by one entity to another. In this case, the parties apply a connection via a modem or network. But it might happen also the scheme that operates on an 'off-line' basis. Then the payment transaction is realized directly between the parties without necessary involvement of the originator or other institution.⁶

³ For an extensive list and overview of some of the different extant schemes, see at <http://www.w3.org/ECommerce/roadmap.html>

⁴ G. Bamodu, The Regulation of Electronic Money Institutions in the United Kingdom, [in:] The Journal of Information, Law and Technology (JILT), Number 2, 2003, in footnote 90 in the p. 19, <http://elj.warwick.ac.uk/jilt/03-2/bamodu.html>, New Citation as at 1/1/04: http://www2.warwick.ac.uk/fac/soc/law/elj/jilt/2003_2/bamodu/: "In this simplified form of the e-mail money service, as there is no issuing of e-money involved at all, the service is unlikely to be caught by the regulatory provisions concerning the regulated activity of issuing e-money. However, some of the companies offering this type of service also offer an extension of the service in that it is possible for a customer to open an account with the company for making and receiving payments. It is at least arguable such a scheme falls within the definition of e-money, certainly being used to make payments to persons other than the operator and possibly being monetary value "stored on an electronic device" and "issued on the receipt of funds". In this connection it is interesting to note that at least one of the providers of this type of service, Nochex, is included on the 'Small e-Money issuers List' of the FSA Register."

⁵ ibidem, p. 1.

⁶ For further description of the various possibilities, see M.A. Froomkin, Flood Control on the Information Ocean: Living With Anonymity, Digital Cash, and Distributed Databases, (1996), published at 15 U. Pittsburgh Journal of Law and Commerce 395 available online at <http://www.law.miami.edu/~froomkin/articles/ocean.htm>; see also <http://www.ex.ac.uk/~RDavies/arian/emoney.html>

Some of the early schemes of electronic money and their first steps were rather unsuccessful, but it does not interfere to remain a lot of interest in e-money within the financial services and telecommunication industries, even by regulatory authorities. Introduce and use of electronic money from authority's perspective raises a number of policy and legal issues. One of those matters is giving the units of value created through these schemes of e-money the function of a legal tender, which has an effect of their using in daily operation on the fiscal situation and law policy related it. The other important matter is the effect of schemes constituting electronic money in case of laundering its and his control policy like also the legal responsibilities of the originator concerning its solvency and supporting the electronic value in the system.

Finally, the legal responsibilities for legal institutions control their solvency. The important case is also positioning the electronic money institution with reference to other money institution as well the liabilities of originator and participating parts in transactions either the customer or even the supplier. The crucial matter seems to be the effect of the method of payment, especially from contractual disputes between buyer (payer, customer) and supplier (payee).⁷ From early years, the European Union had been engaged in constituted these matters.

Before we go further, we can add that in spite of the technological hype in early phases of introducing electronic money, consumers were become lost and more apathetic, because they did know how to use e-money properly as well as merchants were become unimpressed due to lack of infrastructure, and most electronic money schemes disappeared as quickly as they had surfaced. After it, a number of risks were identified, and possible legal regulation based on "digital coin" metaphors and smart card technology was debated till now.

Today, payment systems (i.e. PayPal) and services offered via mobile phones are electronic money's new paradigm. The technology is online and predominantly account-based. Payments are become "macro" rather than "micro" and consumers and merchants seem much more impressed with available services and solutions. Electronic money has come of age.⁸

Under the old assumptions of electronic money, it was very common and ordinary to define e-money as "monetary value charged and stored on an electronic support, in the form of a smart card or incorporated into the memory of a computer"⁹. The particularly emphasis was on electronically stored value. The value saved on the electronic instrument, as in the case of credit cards, was in opposition to information to substitute one contractual debt for another. In the case of

⁷ Look at e.g. W.R.M. Long, J.M. Casanova, European Initiatives for Online Financial Services: Part 1: The Regulation of Electronic Money, *Journal of International Banking Law (JIBFL)*, Number 6 (2002), p. 242.

⁸ op. cit., M. Kohlbach, *Making Sense of ...*, p. 3.

⁹ E. Batalla, *Electronic Commerce, Computer and Telecommunications Law*, 2001, Rev. 80, p. 81.

debit cards, the value saved on electronic support in opposition to information to instruct a bank to transfer money from an account.¹⁰

The new paradigm has completely different definitions, which lies in fact that they are made by way of contrast. It means, they focus on structural characteristics of electronic payment systems and are often technologically neutral. Those systems work in way that an e-money issuer sells tokens of electronically stored monetary value on receipt of funds from a bearer (a customer). These tokens are bought by the bearer by using any payment system other than the e-money system in question. It can be cash, cheque, credit card, debit card, even a different e-money system. Then the customer may purchase goods or services from any vendor who accepts the tokens. On receipt of the tokens, the vendor can either use them to buy services or goods herself, or ask the issuer to redeem them (i.e. to exchange them for physical cash, for a cheque, etc.). The issuer of e-money, in turn, has four principal ways to make a profit in this system.

The first of them is adding a special charge by selling each of tokens. It means that a surcharge is shifted to the future bearer. The other possibility to make the profit through this system is redeeming tokens at a discount. It exists also a third option to earn money I mean when the issuer receives some funds she may invest them. The interest that will be earned is called seigniorage.

¹¹The fourth opportunity is offering the funds she receives in form of credit to a third party.¹²

2. European Union

The issuing of electronic money, the operation of an electronic money scheme should tally with general and usual regulation of banking institutions, in spite of the simple operation of electronic money scheme does not constitute at all the taking of deposits, lending or even finance. But from other side, there are real reasons for regulating electronic money schemes by authorities. Generally speaking, if central banking authorities want to monitor money supply and implement monetary policy properly, their opportunity to regulate and check issuance of electronic money can not be limited. In other falls, unregulated and unchecked issue of e-money may impact the ability central bank to control e-money supply.

¹⁰ P. Robertson, Internet Payments, [in:] Brindle M & Cox R (edit), Law of Bank Payments, Second Edition, London, 1999, p. 250-251 and E. Solomon, Virtual Money: Understanding the Power and Risks of Money's High-Speed Journey into Electronic Space, New York: Oxford University Press, 1997, p. 64-65.

¹¹ Not all of these possibilities are without risk. Depending on the nature of the investment in the issuer might generate a loss; the risk here is that she might not be able to redeem tokens. (This is only one possible scenario, of course; the issuer might fail to redeem tokens for other reasons also. In any case, consumer confidence would be shattered.)

¹² op. cit, M. Kohlbach, Making Sense of ..., p. 3. Offering credit in increases an economy's money supply; the risk here is that if the sums involved are not regulated inflation may occur.

The other important issue is protection of consumers and merchants, which use electronic money in the conduct of business. This concern is caused by the need for market confidence in such schemes as well as particularly in respect of the potential for systemic failure of such schemes.

Several other issues might be added to this part as well as the ability of an electronic money operator or issuer, which is licensed in one EU member to conduct his operation in another state and the ability to operate like an operator or issuer licensed in any country to conduct his operation in another state.

In light of these considerations, we can easily guess, why legislators might take an interest in regulating the issue of electronic money. Both e-money creating through electronic money institution and purchasing, putting, spending electronic money by individuals as a whole are at a potential risk. The European Union thinks that the risks can be avoided through creation a complex regulatory regime, where critical falls are enough justify.

The European Union bases primarily two directives in this area. The hearts of electronic money regulation are¹³: Directive 2000/46/EC on the taking up, pursuit of and prudential supervision of the business of electronic money institutions often referred to as the “Electronic Money Directive”¹⁴ and Directive 2000/28/EC¹⁵ which in turn amends Directive 2000/12/EC relating to the taking up and pursuit of the business of credit institutions. It is often referred to as the “Banking Directive” through extending the definition of credit institution to include electronic money institutions.¹⁶

We can observe that the objectives of the primary Electronic Money Directive include protection of consumers as well as ensure bearer confidence (by the implementation of rules for safeguarding the financial stability and integrity of electronic money issuer), but also allowing an electronic money institution that is licensed in one EU member state to issue electronic money throughout the European Union either establishing a branch in another member state¹⁷ or by through cross-border distance services or both.¹⁸

Directive 2000/28/EC creates a two crucial definition of “credit institution”. They are inserted as Article 1.1.a and 1.1.b into an existing Directive, The Banking Co-ordination Directive 2000/12/EC. The way, in which this regime is set up, might be seem confusing.

¹³ op. cit. W.R.M. Long, J.M. Casanova, *European Initiatives for...*, p. 245-7 and they provide a detailed account of the Directive's genesis.

¹⁴ O.J. L 275, 27.10.2000.

¹⁵ Directive 2000/28/EC which in turn amends Directive 2000/12/EC, O.J. L 275, 27.10.2000.

¹⁶ “Electronic money institution” is defined in Art. 1.3. of Directive 2000/46/EC to “mean an undertaking or any other legal person, other than a credit institution as defined in Article 1, point 1, first subparagraph (a) of Directive 2000/12/EC which issues means of payment in the form of electronic money”.

¹⁷ It is referred to as a “single passport” or “European passport”

¹⁸ op. cit. G. Bamodu, “The Regulation ...”, p. 2-3.

If we take into consideration, for the sake of simplicity, the first type of credit institution, which includes banks and building societies and we call them “type (a)” and to the second type of credit institution and we call it “type (b)”. We can see a distinction between Article 1.3.a of the E-Money Directive, which proclaims that it shall apply to “electronic money institutions” (which are defined as an undertaking) and Article 1.1.a of Directive 2000/12/EC which issues means of payment in the form of electronic money, where a credit institution is defined.¹⁹

The result of this is that “type (a)” credit institutions, such as banks and building societies, may issue electronic money, but are regulated under existing conditions of provisions. The E-Money Directive 2000/46/EC itself applies to new “type (b)” institutions solely. This converse makes inclusion of “type (b)” institutions under the Banking Co-ordination Directive’s definition of “credit institution” slightly arbitrary²⁰ (we can say somewhat awkward²¹).

The E-Money Directive get the information about the prudential operation of business, money laundering, since many provisions pertaining to reserve requirements, which are already enacted in existing regulations that apply to credit institutions in general.

Article 1.3.a is exhaustive: paragraph 4 stipulates that any institution that does not fall under either type (a) or type (b) is to be prohibited from issuing electronic money.²²

In the E-Money Directive 2000/46/EC, the electronic money is defined in Article 1.3.b as monetary value as represented by a claim on the issuer which is stored on an electronic device and issued on receipt of funds of an amount not less in value than the monetary value issued as well accepted as a means of payment by undertakings other than the issuer.

We can observe that the second claim is designed to deter issuers from creating artificial value by giving out more e-money than customers pay for. The expression (“funds ... not less in value”) allows issuers to give out less e-money than customers pay for however. This was present earlier, as one of the ways for an issuer to make a profit. We can say that the third criterion is designed to demarcate “electronic money” in the EU’s definition from similar products such as ski passes, photocopy cards, phone cards, and tube tickets. It is so, because most of them are only accepted by the issuer herself. It means a one party.

¹⁹ op. cit., M. Kohlbach, Making Sense of ..., p. 3.

²⁰ M. Vereecken, Electronic Money: EU Legislative Framework, European Business Law Review, p. 419-420 and compare G. Bamodu, The Regulation of..., p.3 [in:] G. Bamodu says that he offers a cynical explanation of the paradoxical integration of electronic money institutions into Directive 2000/12/EC. He suggests that the European Central Bank, operating from behind the scenes, wanted full control of the reserve holdings of electronic money institutions; this necessitated their inclusion within the definition of the latter Directive.

²¹ Awkward: as will be seen later on, one of the things type (b) credit institutions are not allowed to do is actually extend credit. This is confusing and unnecessarily complicates matters.

²² op. cit., M. Kohlbach, Making Sense of ..., p. 4.

We can notice that the Directive 2000/46/EC next covers the possibility of application the Banking Directives 2000/28/EC and asserts, in Article 2.3 we read that a receipt of funds will not constitute a deposit within the meaning of Article 3 of Directive 2000/12/EC, but we have to add “if the funds are immediately exchanged for electronic money”. In other case, we could assume that it is a short time deposit. This provision seems to be important because special requirements (within special insurance covers) pertain to deposits under the latter Directive. Some scholars have suggested that more guidance is needed with respect to the meaning of “immediately exchanged”²³.

The Directive is silent and reticent when goes on about immediacy. It does not answer how immediacy affects for instance, if there is a time lag between a consumer purchasing a smart card and the electronic money tokens being activated, or if what to do if e-money issuers wish to wait for payments to clear before they issue tokens return and what really immediate is “immediate”.

The most reasonable proposal to answer these questions could be a functional one.²⁴ It means in case a delay and a purchase the exchange should be considered as “immediate” within the meaning of the provision. In this way, a time lag between purchase and activation should have effect on Article 2.3 if the lag is not a result of technology in use. It should be applied the same, if any waiting period for payments (e.g. cheque) exist to clear.

Not received funds by the electronic money institution can be a reason for such a delay. Again, do not go the payment through and not to receive the funds are effecting the delay function of the act of purchasing, and the exchange is ‘immediate’ in that (and as long as).

The Directive 2000/46/EC has a lot others restrictions and requirements. For example, the Article 1.5 restricts all business activities of electronic money institutions outside of the issuing of e-money to the provision of closely related non-financial services and the storing of data on behalf of other undertakings or public institutions.²⁵

We can say more, that electronic money institutions are not allowed to have any holdings in other undertakings except where these undertakings perform operational or ancillary functions

²³ op. cit. J. Chuah, *The New EU Directives...*, p. 183; see also op. cit., W.R.M. Long, J.M. Casanova, *European Initiatives for...*, p. 241

²⁴ op. cit. M. Kohlbach, *Making Sense of ...*, p. 5.

²⁵ Despite the Directive’s technologically neutral definition of e-money in Article 1(3)(b):

“‘electronic money’ shall mean monetary value as represented by a claim on the issuer which is:
stored on an electronic device;

issued on receipt of funds of an amount not less in value than the monetary value issued;
accepted as means of payment by undertakings other than the issuer.”

and in Article 1 (5)(b):

“The business activities of electronic money institutions other than the issuing of electronic money shall be restricted to: the storing of data on the electronic device on behalf of other undertakings or public institutions”;
seems to have been devised with mainly offline, smart card based systems in mind.

related to e-money, what is reasonably connected to the requirements in the Article 4, which strict initial capital and ongoing funds of not less than EUR 1 million.²⁶

If we look at investment limitations, we come to conclusion that they are stricter than for common institution. The total amount of investments of electronic money institution can not be less than their financial liabilities, which are strictly related to outstanding electronic money. These investments have to be in assets with a zero credit risk weighting and with sufficient liquidity.²⁷ As well, the assets are valued conservatively at either cost or market value, whichever happens to be lower.²⁸ It is obvious that all this severely restricts are at an issuer's potential return on investments, which was identified as an important source of income.

If we look at about other sources of income, we can identify a discount at redemption as a possible source, but it turns out that this is restricted under the EU regime. At Article 3 we find that redemption must be at par value in bank notes or coins, or by transfer to an account. The electronic money institution may specify only two conditions. At the first glance, it might charge for any costs necessary to carry out the operation (as we saw it above). Than the second matter, it might set a minimum threshold for redemption (up to a maximum of EUR 10).

We can also identify other source of possible income, which is credit lending. But we have to remember that electronic money institutions are "credit institutions" within the meaning of Directive 2000/12/EC and despite this fact credit lending can not to take into consideration. The relevant provisions in the Banking Directives are expressly excluded at Article 2. The E-Money Directive is said directly that electronic money institutions are not allowed to extend credit.

These presented severe restrictions show us something, what is paradoxical, that within the same framework electronic money institutions should benefit from what is known as the "single passport"²⁹. It almost seems as if the conjunction of investment restrictions, funds requirements and passport freedoms give e-money issuers who can't turn a profit in their own Member State, a "licence" not to make a profit in the rest of the Union either.³⁰

The Directive stipulates an exception at Article 8 to this thoughts, in which is expressly allowed for a Member States to waive the application of some or all of provisions. This Article includes the application of Directive 2000/12/EC to electronic money institutions, which provided a

²⁶ The other details seem to be clear and complex. The two percent are calculated from (a) current financial liabilities or (b) average liabilities of the preceding six months of business operation. Special rules exist for companies in their first six months in business. See Article 4 (2) and (3) in particular. Directive 2000/46/EC

²⁷ These articles show how much electronic institution is restricted Article 5 (1) and (a), but we find also a number of tightly regulated exceptions exist; see Article 5 (1)(b) and (c), (2) and (3).

²⁸ *ibidem*, at paragraph (5).

²⁹ This is a mutual recognition arrangements that enable a credit institution established in one Member State to operate throughout the EU.

³⁰ *op. cit.*, M. Kohlbach, *Making Sense of ...*, p. 5-6.

maximum storage capacity of EUR 150. The storage is restricted for each the electronic device. Electronic institution should also do not exceed EUR 5 million and never exceed EUR 6 million in her total business activities of the issuer. The e-institutions can not issue e-money, which is only accepted by the issuer's subsidiaries, by the issuer's parent undertaking or any subsidiaries of that parent undertaking. There is also forbidden to issue of e-money which is only accepted by a limited number of undertakings (which are within a limited local area or in a close financial and business relationship with the issuer). The flip side to this waiver is that the single passport is not available to those (smaller) e-money issuers that benefit from a laxer regime³¹.

The Directive 2000/46/EC has the remainder articles less important but more common. For example, Article 6 stipulates checks at least twice a year for competent authorities on own funds and investments. Article 7 order electronic money institutions to be managed soundly and prudently. The same requirements have already Directive 2000/12/EC, so it seems to be superfluous given. Article 9 stipulates for example rules on how Member States are to treat electronic money institutions that commenced business activity before the Directive's entry into force. Finally, Article 11 stipulates that the Directive 2000/46/EC is to be reviewed by the Commission to European Parliament no later than end of April 2005.³²

The Directive 2000/46/EC tries to achieve three main purposes. It is numbered among them the most important an assist for electronic money to deliver its "full potential benefits". This Directive should fulfill also some task for consumer and it has to "ensure bearer confidence". Third level where Directive has a lot to do is area of issuing of electronic money and "preserving a level playing field between electronic money institutions and other credit institutions issuing electronic money"³³

We can state that the Directive successfully achieves the second and third objective.³⁴ Strict investment regulations give more confidence³⁵ for potentials bearers as well as redeemability on par value. A strong own funds requirements and others restrictions on business activities cause that establish of e-money institution is compare to set up a credit institution. It is not ideal in a law creation (in conceptual sense) an incorporation into the larger framework of the Banking

³¹ *ibidem*, p. 6, Kohlbach quoted J. Chuah, The New EU Directives to Regulate Electronic Money Institutions – A Critique of the EU's Approach to Electronic Money", *Journal of International Banking Law* 180, 2000, p. 184. Kohlbach writes that he rightly notes that this approach "appears incongruous with the EU's push for interoperability in payments systems".

³² Directive 2000/46/EC of the European Parliament and of the Council of 18 September 2000 on the taking up, pursuit of the business of electronic money institutions, O.J. L 275, 27.10.2000, Article 11, p.16.

³³ Compare Vereecken, 2. Objectives of the E-money Directive [in:] *Electronic Money: EU Legislative Framework*, European Business Law Review, 2000, p. 417.

³⁴ *op. cit.*, M. Kohlbach, *Making Sense of ...*, p. 7,

³⁵ Strengthened confidence does not necessarily equal strong legal protection.

Directives.³⁶ Other very important issue is that large credit institutions are much more flexible in their investments and have a large and established customer stock to work with. Small-scale e-money issuers will be exempt from many of the onerous restrictions and may be successful on a local level. It could turn out that someday a framework that provides financial incentives for launching Euro-wide payments product would be very serious obstacle. We could say that the Directive would fail the first objective, which is “to assist electronic money in delivering its full potential benefits”.³⁷

3. Regulation of electronic money concerning Poland

The electronic money definition is explained in many legal acts from which the most important are directive EU 2000\46\EC in the case of making supervisor at running action by electronic money institutions, Poland implemented E-Money Directive in act that is called Act of 11 October 2002 on electronic payment instruments³⁸. This Act lays down the rules of issuance and use of electronic payment instruments, including electronic money instruments, the rights and obligations of parties to the contracts for electronic payment instruments and rules of establishment, organization, operation and supervision as well as liquidation of electronic money institutions. Other important law for electronic money in Poland is The Banking Act. I will write about it in further part of this paper.

The Polish Act on electronic payments defines an electronic payment instrument in Article 2, paragraph 4 as:³⁹ “every payment instrument, including that with remote access to funds, enabling the holder to perform operations by means of an electronic device or making possible the electronic identification of the holder, necessary to perform an operation, in particular a payment card or an electronic money instrument.”

A qualification a payment unit as a kind of electronic money can only happen, if we fulfill accumulated circumstances, which are defined by the Polish legislator in the act above. A specification of it has closed characteristic and allows us to eliminate any doubts that are connected with distinction the electronic money to other products with a comparable characteristic. Those

³⁶ It is confusing to define e-money issuers as “credit institutions”, yet issuance them the one activity that would seem to make a “credit institution” a credit institution. See more op. cit., M. Kohlbach, Making Sense of ..., p. 7,

³⁷ Compare op. cit., M. Kohlbach, Making Sense of ..., p. 7,

³⁸ Dz.U. Nr 169, poz. 1385. The Act entered into force 12 October 2003,

³⁹ Article 2 § 4 the Act on electronic payments defines an electronic payment instrument, (As published in *Dziennik Ustaw* No. 169, item 1385)

products might be e.g. ski pass, pre-paid telephone card, where instead money units, a role of measure issuer use impulses.⁴⁰

The unit of electronic money⁴¹ should fulfill five conditions to be recognized as the electronic money. It should be stored on the electronic carrier of information and issued to disposition on the basis an agreement in exchange for money legal tender with nominal value no less than this value. The next following two conditions are accepting as a legal tender by entrepreneur others than issued it to disposition and exchanging by issuer on every demand to legal tender units. The last one says about a necessary expression electronic unit in unit of money.⁴²

The Banking Act does not answer a question about law nature of electronic money unit.⁴³ In according to the Article 4, point 5, liter e., the electronic money should be expressed in money units. The money unit is abstract unit of value, which was introduced or recognize by a state like the legal tender.⁴⁴

Other very important definition we find in the same Act on electronic payment instruments but in Article 2, point 5 is “electronic money institution”, which is a legal person other, than bank, functioning in form of a joint stock company, established and functioning on the basis of permission issued by appropriate authorities or provisions of the law, whose object of activity is to carry out, on its own behalf and for its benefit, the activity consisting of issuing for disposal and redeeming electronic money, and clearing the transactions performed by means of an electronic money instruments;

But the most important is “electronic money”⁴⁵, which is not defined in this Act, because the act on electronic payment instruments sends us to The Banking Law to Article 4 Paragraph 5, letter e. But this definition, like I said above, does not decide about his law’s nature, because there exist many controversies in law’ doctrine. We are finding problems on the ground principles yet, which

⁴⁰ Look at T. Targosz, Pieniądz elektroniczny [in:] P.Porecki, Prawo Internetu, Warszawa 2004 p. 272; J. Masiota, Elektroniczne instrumenty płatnicze. Komentarz, Warszawa 2003, p. 173; M. Świerszczyński, Wykonanie zobowiązania pieniężnego przez zapłatę pieniądzem elektronicznym [w:] J. Barta, R. Markiewicz, Handel elektroniczny. Prawne problemy, Kraków 2005, s. 309; J. Gołaczyński, Pieniądz elektroniczny jako przedmiot świadczenia pieniężnego [w:] J. Gołaczyński, Umowy elektroniczne w obrocie gospodarczym, Warszawa 2005, s. 130-131.

⁴¹ The Banking Act (Ustawa prawo bankowe z dnia 29 sierpnia 1997 r), Article 4, point 5, letter e., (As published in 2002 in *Dziennik Ustaw* No. 72, item 665).

⁴² This last point was added by Article 74 point 1 letter b in the Act on electronic payment instruments. How it is announced in the justification the main reason its introduction was for eliminating doubts associated with differentiation electronic money with reference to existing in use some products similar character for example pre-paid telephone cards. It was necessary whilst point c definition of electronic money in the Banking Act, Dz.U. z dnia 2002 r. Nr 72, poz. 665 z późn. zm. because nothing stand in an issuer of pre-paid telephone cards to use the unit money measure. The things distinguish electronic payment instrument like above pre-paid card is foremost ability to meet specific’s obligation and meeting them with relation to the entity that is providing telecommunication services. Look more T. Targosz, Pieniądz elektroniczny [in:] Prawo Internetu, Warszawa 2004 in footnote 14.

⁴³ Compare A. Stosio, Pieniądz elektroniczny – cywilnoprawna analiza pojęcia (II), PPH, June 2002, p. 18; W. Rokosz, Istota prawna pieniądza elektronicznego, Prawo Bankowe, numer 12 grudzień 2002, p. 70 and op.cit. T. Targosz, Pieniądz elektroniczny..., p. 281,

⁴⁴ Z. Żabiński, Jednostka pieniężna jako przedmiot praw majątkowych [in:] *Krakowskie studia prawnicze* R. I (1968), Z. 1-2, p. 69.

⁴⁵ At Article 2 point 10 in Act on electronic payment instruments, we find that electronic money is the money in the meaning of Article 4 Paragraph 5 of the Act of 29 August 1997 – Banking Law (*Journal of Laws* 2002 No. 72, item 665, No. 126, item 1070, No. 141, item 1178, No. 144, item 1208 and No. 153, item 1271), herein after referred to as the “The Banking Law”;

are currently in force between cash money and without cash money, and electronic money. A decision, what is real nature of electronic money we should take after demonstrating definition, features and function of cash money (“traditional”) and without cash money (it means “banking” and “account” money).

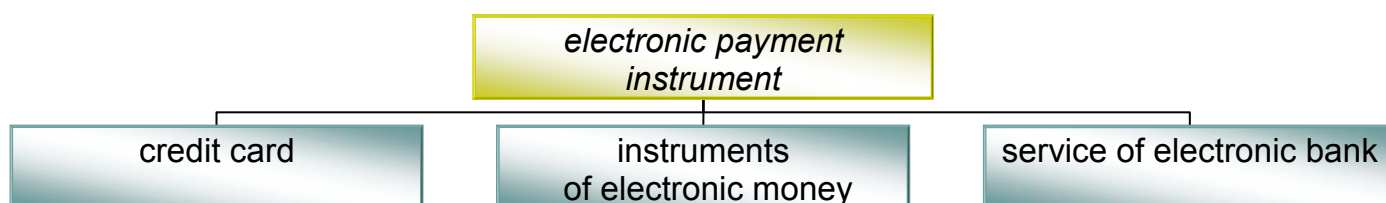
From the Act on electronic payment, we can quote a definition of electronic payment instrument that plays a crucial role in using electronic money. The definition is as following:

“every payment instrument, including that with remote access to funds, enabling the holder to perform operations by means of an electronic device or making possible the electronic identification of the holder, necessary to perform an operation, in particular a payment card or an electronic money instrument”.

On the definition base, we can distinguish a division of electronic payment instrument⁴⁶.

Graph 1

Divisions of electronic payment instrument



Source: Own work.

Before we answer to a question what function as electronic money in Polish system law does play and where situates him doctrine, we should acquaint us self with Polish doctrine that distinguish concept of money in two basic meaning. It says about money in narrow and wide meaning. According to S. Grzybowski,⁴⁷ the money in wide meaning is any kind of finance resources which have following functions; it is as measure value, tender of payment, meeting one’s obligation, savings and accumulation function.

As an example of belonging to mentioned features above, we can enumerate cheque, coins and notes national and foreign, bonds, bills of exchange.

⁴⁶ We can observe that the definition of electronic payment instrument from Article 2, point 6 of the Act on electronic payment instruments is consistent with point 3 of Preamble and Article 2 the Commission of the European Communities (Commission Recommendation of 30 July 1997 concerning transactions by electronic payment instruments and in particular the relationship between issuer and holder (97/489/EC)), O. J. L 208, 02/08/1997, p. 52-58.

⁴⁷ S.Grzybowski [in:] W. Czachórski, System prawa cywilnego, volume 1, Wrocław-Warszawa-Kraków-Gdańsk-Łódź, 1985, p. 444.

In narrow meaning, they are such legal tenders⁴⁸ which law grants an opportunity fulfilling enumerated above functions.

However, cash money is described in doctrine like money in strict meaning. It fulfills two major functions: it is a tender of payment and exchange.⁴⁹

The function of payment is realized during transferring an ownership right amount of money signs by obliged to the creditor's thing.⁵⁰

Money without cash is defined often a name of bank money⁵¹. It characterizes a specific value, which is saved in bank's books⁵² (but sometimes without books)⁵³ as well as in full isolation from money signs (which are expressed in coins and bills), but combine only with money's sign.⁵⁴ Existing of money in this form is possible only making a payment into account⁵⁵ and giving credits by banks. As we can easily observe operations doing by banks are carried out without physical using of money, because it was created a concept of money without cash⁵⁶, which poses also the name of banking money⁵⁷

Between the cash money and banking money, exists one important difference at law ground. The money turnover bases on making law actions in law things' forms⁵⁸, however the banking money turnover consists in changing a level of money units.⁵⁹

Graph 2

Concept of money

⁴⁸ Own translation "środki płatnicze" compare with S.Grzybowski, [in:] System prawa cywilnego, op. cit., p. 444.

⁴⁹ Look at W. Czachórski, Zobowiązania. Zarys wykładu, Wydawnictwa Prawnicze PWN, Warszawa 1995, p. 60.

⁵⁰ J. Grodziski, Karty płatnicze i pieniądz elektroniczny a pieniądz gotówkowy, Glosa, numer 1/2002, p.9.

⁵¹ ibidem, p.9.

⁵² ibidem, p.9. and op. cit. Z. Radwański, System prawa cywilnego. Część ogólna, Wrocław-Warszawa-Kraków-Gdańsk-Lódź, 1981 r., p. 121.

⁵³ Look at A. Stosio, Pieniądz elektroniczny – cywilnoprawna analiza pojęcia (II), ibidem., p. 17.

⁵⁴ Look at S.Grzybowski, [in:] System prawa cywilnego, tom 1, cz. ogólna pod red. W. Czachórski, Wrocław-Warszawa-Kraków-Gdańsk-Lódź, 1985, p. 447.

⁵⁵ Compare ibidem, S.Grzybowski, [in:] System prawa..., p. 447, A. Stosio, Pieniądz..., p. 1 and J. Grodziski, Karty..., op. cit., p. 9.

⁵⁶ Own translation „pieniądz bezgotówkowy”.

⁵⁷ op. cit. Z. Radwański, System prawa cywilnego. Część ogólna, Wrocław-Warszawa-Kraków-Gdańsk-Lódź, 1981 r., op. cit., p. 121.

⁵⁸ Own translation "w formach prawnorzeczowych".

⁵⁹ op. cit., J. Grodziski, Karty..., p. 9.

Source: Own work.

According to Constitution,⁶⁰ a basic legal tender in Poland is cash money in form of banknotes and coins issued by NBP⁶¹. They have legal force to write off payment commitment. If we see more deeply we find out for both cash money and without cash money four major functions. They are measure of value, a tender of circulation and accumulation and as well as a legal tender⁶².

Whereas the Polish doctrine and law as we saw above divide “true money” into two kind of moneys, the definition of electronic money,⁶³ which is contented in amendment in the Banking Law, does not divide directly electronic money. It makes only a set of features, which the electronic money system should fulfill in order to become recognized and through that separate them from instruments, which are not electronic money instruments.

There is no doubt that including some concrete technical and systems solutions can be useless for longer time. In case of continuous and fast developing digital technologies (including even Internet) would become out of date concrete division of electronic money. Apart technical part electronic money systems would turned out that a valid law would needed changes in order to new needs and opportunities, which follow from continuously changes in reality.

Actually, we can split schemes of electronic money into two types in respect of which instrument bases on: plastic card and software. The instrument bases at card consist of microchip that is not the part of card. Within is stored his electronic value. Adequate value of electronic money is written on chip that is situated on plastic card, which does not differ from shape and form chip payment cards.

The instrument bases at software stores electronic worth of electronic money at a computer's hard disk

⁶⁰ The Constitution of Republic Poland, 1997, Article 227, (As published in 1997 in *Dziennik Ustaw* No. 78, item 483).

Article 227 point 1 “The central bank of the State shall be the National Bank of Poland. It shall have the exclusive right to issue money as well as to formulate and implement monetary policy. The National Bank of Poland shall be responsible for the value of Polish currency.”

⁶¹ NBP – Narodowy Bank Polski – National Bank of Poland. It has got solely legal issue money and possibility to establish and execute monetary policy. Polish National Bank is responsible for value of polish money.

Act about redenomination of złoty:

Art. 1. 1. From the 1st of January 1995, NPB made equivalent redenomination of złoty and introduced a new polish money unit.

Art. 2. New money unit called złoty will be divided by 100 groszy.

Act about National Polish Bank :

Act. 31. Money signs in Poland are banknotes and coins to amount to złoty and grosze

Act. 32. Money signs issued by NBP are legal tender in Poland.

⁶² I am giving behind W. Rokosz, *Istota prawna pieniądza elektronicznego*, Prawo bankowe, numer 12, Grudzień 2002,

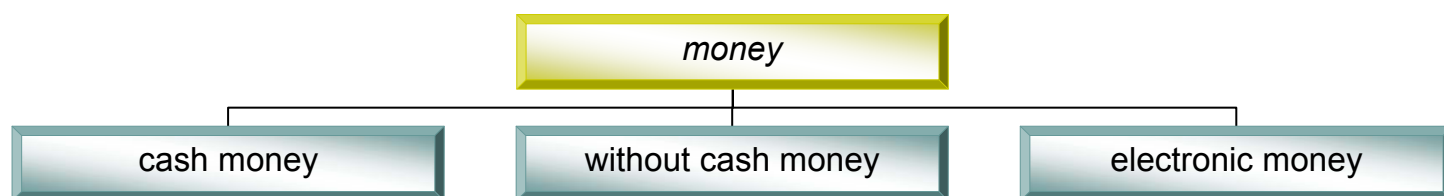
⁶³ Compare R.W. Kaszubski, P. Widawski, *Pieniądz elektroniczny – znaczenie pojęcia*, Głosa, marzec 2004, p. 10. Authors ascertain, that legislator has not apprehended up to the end the essence of electronic money with electronic carrier associating this new payment instrument, that it bases on, that is microprocessor card.

Even though division of electronic money, in respect to technical progress that happened and goes on, the mentioned category of electronic money (chip and software money) has devalued. In aftermath of it is arising the new group of electronic payment instruments that possess features of electronic money but differ from created definition and their conceptions as true electronic equivalent of money.⁶⁴

At the end of electronic money consideration on Polish law systems, we can come to point that cash money, money without cash money and electronic money are a form of money, but only cash is the legal tender in transaction at the time. It is generally accepted and as the only one possesses a very important feature – full anonymous. In addition, we can add that payment with cash money has got character of assets exchange in contrast to without cash money, while paying him has character of bond redeeming. To the common feature of without cash money and electronic money, we add their lack of anonymous and necessary to obtain additional agreement with the third subject (cash without money) or sign the contract with EML⁶⁵. Another common feature for them is being not legal tender from law point of view. Just only one feature of electronic money does not occur in other form of money, which is limited issue pro electronic money instrument (what in reality mean pro bearer).

Graph 3

Other division of money



Source: Own work.

4. Summary and motions / conclusions

⁶⁴ Look at and compare R.W. Kaszubski, P. Widawski, Pieniądz elektroniczny..., op. cit., p. 9 i 10.

⁶⁵ Electronic money institution in short EML

The electronic money schemes and diverse formats under their operate seemed to be ready remedies to many problems that appear in electronic commerce since developing Internet in ninety years, strictly speaking transactions with using electronic money. For years, ruling paradigm was seen as electronic money's defining application that try to establish a right answer according to technical solution. Sometimes it was structure that base on the form "identified e-money" and other times the identities of the parties, which are revealed "each other" as in the case, where payer would have obtained the money from originator or service provider. Now we can rather say that the early electronic money schemes are twilight. They failed in spite of very technological non-neutral definition and variety of schemes based on them. It does not interfere with the important fact that this twilight contributes to interest in electronic money through financial services and telecommunication industries, even by regulatory authorities, what could be as interesting and important law issue for further research but not in this paper.

At the present we can observe how the technology is squeezing and going around the "old electronic money paradigm". The law does not fall behind with very quick changing technological progress, therefore from one side we see that electronic money has come age through new online and predominantly account-based services and payment systems, which are offered via mobile phones. That is becoming the electronic money's new paradigm. From other side the electronic money's definitions require to keep neutral attitude to technological progress, which will be still going on. The example of the new electronic money focuses on structural characteristic of electronic payment system, which allows issuer sells tokens of electronically stored monetary value upon receipt of funds from a bearer and by using any payment system other than electronic money.

The embarrassing issue or electronic money is a question for who it should be subjected and how controlled. It seems that better solution is treating electronic money no more restrictive as traditional money by central banking institution in every European country. Creating very strict law restrictions do not favor of developing electronic money schemes but on the contrary led to fail the "the old electronic money paradigm". We can add that the differentiation of two kind electronic institution like in the Directive 2000/46/EC a) regulated under existing provision and b) "new" institution, provide to strengthen the banks' position in law and economics in comparison with building electronic money institution from the basics. These strong law restriction and requirements related to electronic money caused impossibility to set up "the new electronic institution" and perform other ancillary functions related to electronic money, what confirms also the thesis about twilight electronic money.

The existing formulations in the Directive 2000/46/EC do not answer about immediacy and how it affects for delay in payments. One possible solution would be applying the same behavior as

in the case of cheque, any waiting period for payments exist to clear. That unregulated issue maybe I will add also to one's reason, why electronic money schemes in European Union failed. In the Directive 2000/46/EC we find much more other restriction regarding a maximum storage capacity (150 EUR), doing business by electronic institution (not exceed 5 million EUR and never 6 million in total business activity), what caused a blockade interested subjects before using electronic money and setting up the electronic institution.

If we consider electronic money in Poland, we can affirm that Polish's Acts concerning electronic money do not answer for question about nature of electronic money. The Polish laws make rather schemes that as we see they are devaluated. The reason for fail the electronic money in Poland could be also does not enumerate electronic money among money in wide meaning. In Polish and another law systems exist currently one true concept of money. We can notice also that the definition of electronic money institution in the Act on electronic payments instruments has been copied by Polish legislator. Through making enormous demands with respect to the potential founder the electronic money institution we can not wait till know to set up so kind institution in Poland. Lack of infrastructure for micro payments and using of electronic money daily are reasons low interest in comparison with potential benefits.