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Full Length Research Paper

Economic important of Electronic money

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Electronic money is one of the innovations created by technological advances. Electronic money in various forms will raise a number of legal and regulatory issues to be addressed. This includes finding a range of acceptable methods for documenting and protecting information. The aim of this paper is to clarify the most important issues raised by electronic money and to present some policies concerning the legal and regulatory controls of such money. Chapter I of this paper presents the various definitions of electronic money, its characteristics and its various forms. The second chapter, we devoted to discuss the most important legal and security risks resulting from the issuance and handling of electronic money. In chapter III, we have proposed some legal controls that need to be taken into account when developing electronic legal legislation on electronic money.

Keywords: electronic money.

INTRODUCTION

Technological development plays a vital role in human life and the effects of this development extend to all aspects of economic, legal, social and cultural life. In the late twentieth century, a variety of different phenomena emerged from technological advances such as electronic commerce, electronic payment methods and electronic money.

The banking movement has recently witnessed a major development. One of the signs of this development has been to allow bank customers to purchase and sell through the Internet using the electronic payment methods offered by these banks. Development has not stopped at this point, but there is also what is known as electronic money or digital money. They are electronic cards that contain a cash stock that can be used as a payment method, a tool for discharge, and a medium of exchange. Since electronic money is suitable for the majority of the functions of legal money (ie, issued by the Central Bank), it is expected that this modern money will replace legal money in the long term.

In fact, the spread and use of electronic money will generate significant legal, economic and financial implications. Electronic money is expected to generate a range of security and legal risks that officials should prepare for, such as the risks of counterfeiting, fraud and fraud, and electronic money will create a fertile environment for serious crimes such as money laundering and fraud. On the other hand, it is common knowledge that the central bank is entrusted with the issue of money in most countries, in addition to its role in shaping the monetary policy of the state. The creation of electronic money by others other than the central bank - which is actually happening now - affects the ability of the central bank to maintain monetary stability by weakening its role in controlling the volume of cash and the speed of money circulation.

Moreover, the creation of electronic money can affect the state's fiscal policy by affecting the size of the expected tax revenues. In the absence of a strict and tight legal system, it will be difficult for specialized

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financial authorities to monitor transactions as well as income paid from Through electronic money, and thus would open the door to the crimes of tax evasion as well as to deepen the phenomenon of underground economy.

It is clear from the above the size of the legal, financial and security problems that can arise as a result of the emergence of electronic money. The purpose of this research is to shed light on these problems and to develop a vision of the most important controls that any legal regulation of electronic money should contain.

In this sense, the study plan will be divided into the following chapters:

Chapter One: Definition and Characteristics of Electronic Money.

Chapter 2: Security and Legal Risks of Electronic Money.

Chapter III: Towards a legal regulation for the issuance of electronic money.

Definition and characteristics of electronic money

Humanity has gone through many stages until the money is known in its current form. Money arose as a result of the shortcomings of the barter system that prevailed before money was known. Perhaps the most important of these disadvantages is the difficulty of meeting buyers' desires with sellers, the indivisibility of goods and the difficulty of storing them. Money first took the form of precious metals such as gold and silver, and then mankind was moved to the stage of dealing with paper and banking.

However, the development of money has not stopped there. Technological advances in telecommunications, the development of the banking industry and the emergence of e-commerce in economic life have brought about a new form of money that economists have called electronic money. This chapter will be devoted to the study of the nature and characteristics of electronic money. Therefore, we will address this chapter in two sections as follows:

The first topic: What is electronic money and its forms.

The second topic: the characteristics and future of electronic money.

The nature and forms of electronic money

Before we discuss the electronic money, the methodology of the study requires that we first shed light on the concept of this money and its most prominent images, and this is what we will address in two independent demands as follows:

The first requirement: the definition of electronic money.

The second requirement: forms of electronic money.

Definition of money

The modern literature has used different terms to express the concept of electronic money. Some have used digital money or digital currency, while others have used the term electronic cash (e-cash) [Berensten, Aleksander (1998) Monetary Plicy Implications of Digital Money ", Kyklos, Vol. 51, no 1, P.90]. Regardless of the term used, these different expressions refer to one concept, electronic money Electronic Money and we will use the latter term in our study because of the widespread use and its evidence at the same time on the content and meaning of this money.

As jurists disagreed about the term, they also differed about setting a specific definition of electronic money. The EC has defined it as a monetary value stored electronically on an electronic medium such as a card or computer memory and is accepted as a payment method by non-issuing contractors and is made available to users to be used as an alternative to cash and paper currency to make electronic transfers of value- European Commission (1998), "Proposal for European Parliament and Council Directives on the taking up, the pursuit and the prudential supervision of the business of electronic money institution", Brussels, COM (98) 727, PP.w]. However, this definition is not prohibitive and inaccurate; as it does not exclude the entry of electronic payment methods - which we will see - is different from electronic money - in the same content. The same is said of the definition of BIS (1996) for e-money as it went to consider it "monetary value in the form of credit units stored electronically or on an electronic tool held by the consumer.

Some have expanded the concept of electronic money, knowing it to be electronically transferred [The Consumer Advisory Board of the Federal Reserve Board of the USA, (1996), Federal Reserve Board Consumer Advisory Council Meeting, nov. 2, P. 5.]. Finally, the ECB defined it as "an electronic stock of monetary value on a technical medium commonly used to make payments to non-issuers without the need to have a bank account when the transaction was made and used as a pre-paid portable tool" [European Central Bank (1998) Report on Electronic Money ", Frankfurt, Germany, August, P. 7.]. This definition is the closest to health because of the accuracy and comprehensiveness of the images of electronic money and exclusion of other phenomena that can be similar to them.

In fact, we can know electronic money as "cash value stored on an electronic payment method that is not linked to a bank account, is widely accepted by non-issuers and is used as a payment instrument for different purposes." We can define the elements of electronic money through the previous definition, namely:

Cash value: It includes monetary units with a financial value of one hundred pounds or fifty pounds. As a result,

telephone calling cards are not considered electronic money, since the value stored on the first is a telephone call and not a monetary value capable of purchasing goods and services. The same is true for food stamps (coupons), which are thought to be stored electronically on cards, they are not electronic money because the value recorded on them is not monetary value but But the value in kind gives the holder the right to buy a meal or more according to the value stored on the card.

Stored on an electronic medium: This feature is an important element in the definition of electronic money, where the monetary value is shipped electronically on a plastic card or on the consumer's personal computer. This element distinguishes electronic money from legal and credit money, which is considered to be cash or printed. In fact, these cards are prepaid and purchased from the issuing institutions, so they are called Pre Prepaid Cards.

Not linked to a bank account: The importance of this element in its recognition of electronic money is evidenced by electronic means of payment. The latter are e-cards linked to bank accounts for customers who carry these cards to enable them to pay the prices of the goods and services they purchase for a commission paid to the bank providing this service. Examples of electronic payment methods are Debit Cards, which are cards that are only used to debit customers' accounts in which a monetary value is transferred from one account to another. It is the key to electronic access to bank deposits owned by the holder of this card. Credit cards are electronic payment methods where these cards are used against bank accounts for interest paid by the holder or owner of the card to the banking institution that granted the credit.

It is clear, then, that electronic money is similar to Travelers Checks, which is a free or floating maturity on a private bank or other financial institution, and is not associated with any special account [White, L.H. (1996), "The Technology Revolution and Monetary Evolution" in The Future of Money in the Information Age, Cato Institute's 14th annuity monetary conference, May 23, Washington, D.C., P. 16.]. This has led some to consider electronic money to be a stream of information or a raft [Philips, J. (1996), "Bytes of Cash: Banking, Computing and Personal Finance", First Monday Review, Vol. 1, NO5, November, P. 3.].

Is widely accepted by non-issuers: This element means that electronic money must be widely accepted by individuals and institutions other than those that have issued it. The use of electronic money must therefore not be limited to a particular group of individuals, for a specified period of time or within a specific regional scope. Money, in order to become money, must have the confidence and acceptance of individuals as a viable vehicle and a medium of exchange.

On the other hand, such means shall not be considered electronic money in the case of whether their source and recipient is one person. For example, telephone calling cards are not electronic money because they are issued by the one who accepts them and is accepted by one body (ie, the telephone company), where the work of this card is only in the handsets allocated by that body for this purpose.

Means of payment for different purposes: These funds must be valid to meet obligations to purchase goods and services, or to pay taxes, etc. If the card function is limited to achieving only one purpose, such as purchasing a particular type of goods or telephone, in this case it cannot be described as electronic money, but is called electronic cards of one purpose.

Forms of electronic money

The picture and forms of electronic money vary depending on the way in which the monetary value is stored, and also according to the size of the cash value stored on that technology. There are therefore two criteria for distinguishing the forms of monetary money: the criterion of the medium and the criterion of monetary value.

Standard of means

We can divide the electronic money according to the means used to store the cash value on the prepaid cards, the hard drive, and finally the hybrid medium.

Prepaid Cards: This means that money is stored on an electronic chip installed on a plastic card. These cards take multiple pictures. The simplest forms are the cards with the original cash value and the amount spent, such as the Smart Cards in the United States and the Danmnt Prepaid Cards, which are commonly traded in Denmark. There are also some cards that are used as electronic money and are used simultaneously as Debit Cards, such as Abant Cards in Finland [Thygesen, Christian and Kruse, Mogens (1998), "Electronic Money", Danamarks National Bank Monetary Review, 4th Quarter, P 3.]. Finally, there are multi-purpose cards, which are used at the same time as a debit card, as a telephone card and as a personal card in addition to being electronic money:

Hard Disk: The money is stored here on the PC's hard disk so that the person can use it whenever he wants through the Internet. Therefore, this type of money is also called Network Money. According to this method, the owner of e-money uses it to purchase his goods and services through the Internet, at the same time to deduct the price of these goods and services at the same time of the electronic cash value stored in the memory of the PC.

Hybrid means: This method is a combination of the two previous methods, whereby the value of cash on a prepaid electronic card is loaded into the memory of the computer that is read and transmitted over the Internet to the personal computer of the seller of goods and services.

Second: Monetary Value Criterion:

There is another classification of electronic money based on the standard of monetary value stored on electronic means (plastic card or hard drive). We can distinguish here between two forms of electronic money:

Cards with a weak monetary value Tiny Value Cards are valid cards to meet the prices of goods and services, which do not exceed one dollar only.

Cards of medium value: those that are worth more than $ but do not exceed $ 100.

It is noticeable that electronic money has not yet identified a monetary category greater than $ 100, although it is not unlikely that it will develop in the near future.

Characteristics and future of electronic money

Electronic money - as defined above - is suitable to replace legal money as well as the place of various means of payment, such as cash and check currency, debit cards, tourist check and credit cards. It is necessary to highlight the characteristics and future of electronic money through the following two requirements:

The first requirement: the characteristics of electronic money.

The second requirement: the emergence and future of electronic money.

Characteristics of electronic money

In our previous presentation, we can deduce a set of characteristics that characterize electronic money, which we present in the following lines.

First: Electronic money Cash value electronically stored: Electronic money, unlike legal money, is encrypted data that is placed on electronic means in the form of plastic cards or on the memory of the personal computer, as explained above.

Second: Electronic money two-dimensional: it is transferred from the consumer to the merchant without the need for a third party between them as the source of this money, for example. Electronic money is valid for discharge and means to pay the price of goods and services without requiring the seller to verify the fact of the money or the adequacy of the bank account of the buyer as in the case of electronic payment methods, where the seller is satisfied the adequacy of the balance in the buyer's account.

Third: Electronic money is not homogenous: Each source creates and issues different electronic money. This money may differ in terms of value, and may alsovary depending on the number of goods and services that a person can buy with this money. This money is not identical or homogenous.

Fourth: Easy to carry: Electronic money is easy to carry because of its light weight and small size, and therefore more practical than normal money. This is because they exempt the individual from carrying large cash to buy cheap goods and services such as a newspaper, drink or snack.

Fifth: There are risks of human and technological errors: Electronic money is a natural result of technological progress. Despite the fact that this technology offers humanity comfort and luxury, it remains subject to breakdowns, causing many problems, especially in the absence of trained and experienced cadres capable of managing the risks of such modern technologies. This applies to electronic money, especially those that are handled online. By contrast, regular money is clear and has few errors. However, problems with e-money handling in the future are expected to decrease as they are used and handled.

Sixth: Electronic money is special money: Unlike the legal money issued by the Central Bank, electronic money is issued in most countries through private companies or credit institutions, so this money is called the name of private money.

Having presented the characteristics of electronic money, there is a question raised about the nature of electronic money and the validity of the description of money. Economic literature did not agree on the nature of electronic money. Some considered it a mere method of payment, but it was not valid as a means of discharge, since the holder of this money cannot pay his debts. On the other hand, the ability of electronic money to circulate is limited, as the seller must provide the card stored on electronic money, which represents the prices of the goods and services that he sold, to the source of electronic money issuer and to replace them in return for legal money [Piffaretti, Nadia (1999) , "Theoretical Approach to Electronic Money", Faculte des Sciences Economiques et Sociales Working Papers, No302, Universite de Friborg, Suisse, P. 8.]. By contrast, some have argued that electronic money is no different from all forms of money now as a means of payment and an intermediary of exchange [Ely, B. (1996), "Electronic Money and Monetary Policy: Separate fact from fiction, paper presented at Cato Institute's 14th Annuel Monetary Conference ", May, P. 20.].

In fact, electronic money is similar to regular money in terms of both payment capacity, as well as wide acceptance, although ordinary money has more acceptance given the novelty of electronic money and its reliance on advanced technology that may only be available in developed countries. On the other hand, this technology may vary within a single country, reducing the population's reliance on electronic money as a means of payment and pushing them to use cash money. Also, electronic money serves as a measure of value similar to that of ordinary money.

However, electronic money differs from ordinary money in several ways. The central bank in each country is the public body entrusted with the issuance and printing of legal money in all categories and determine the size of

this money, which is traded to the extent that does not affect the monetary policy of the state. In contrast, the source of electronic money is private credit institutions that may be subject to the control of the relevant government agencies. On the other hand, electronic money - as opposed to ordinary money - cannot be of interest because it cannot be classified as a deposit, which runs counter to the monetary theory of money as a profitable asset.

In fact, despite the formal differences between regular and electronic money, we believe that electronic money is sophisticated and sophisticated money, although it is not the same in form, it agrees with it in content. E-money serves as a tool for payment, and there is nothing to prevent the function of regular money as an intermediary of exchange and thus helps to speed circulation and turnover. When you make a business deal between two people using electronic money, both of them (the seller and the buyer) place their cards in an electronic wallet, which deducts the price of the goods or services from the buyer's card and transfers them to the seller's card. It is then envisaged that the seller will use the proceeds of the electronic money to buy goods and services from a producer or from another seller to sell them afterwards, or use them in the discharge of his debts. The electronic money is then eligible for discharge in the same way as mentioned above.

It is clear, therefore, that electronic money in various forms is suitable for legal money functions. [This applies also to net money, where the seller and the buyer complete the transaction through the use of the Internet. The seller clicks the word "buys" on the seller's site and transfers an amount equivalent to the value of the item or service from the buyer's PC memory to the seller's PC memory. The seller then purchases goods or services or converts them into ordinary money or transfers them to a bank account Place in the world via the Internet]. It is also conceivable in the near future that electronic money will be accepted as a deposit and then profitable. That is why we conclude that electronic money is considered to be sophisticated conventional money.

The emergence and future of electronic money

It is now appropriate to shed light on the emergence of electronic money, then analyze those factors that help to develop it and those that can impede its spread.

We know from the above that electronic money is one of the secretions of technological progress, especially the development of communication science. Therefore, some of the origin of the electronic money came back to the year 1860, where money was transferred using telegraph [Telegraph was invented by Samuel F.B. Morse in 1844. See in detail: Bernkopf, M. (1996), "Electronic Cash and Monetary Policy", First Monday Review, Vol. 1, No1, May, P. 3,]. However, it is notable that the exact meaning of e-money - as we have explained above - does not coincide with this incident, since it is merely a cash transfer from one person to another. Others go back to the origin of electronic money to the invention of cryptography, and the military used encrypted means of communication in the transfer of the secrets of enemies. There are two types of encrypted communication: Symmetric Key Cryptography, and Public Key Cryptography, and the key means the tool used to read the encrypted message. In the first type, the sender and the receiver have the same key, the decoding book, while the second type has a general key for transmission and a special key for reception [Solinsky, J. (1995), "An Introduction to Electronic Commerce", World quest University, Olen Soifer, USA .].

Although the money transfer service began in the United States in 1918, when the Federal Reserve banks transferred money by telegraph, the widespread use of e-money began only in 1972 when the Automated Clearinghouse was founded. It has also provided the US Treasury and Commercial Banks with an electronic check-in-check alternative. Similar systems have existed in Europe, with the result that e-money is commonly used throughout the globe. [Electronic banking systems are implemented electronically through a number of interbank computer networks. One of the most widely distributed networks is the Clearing House Interbank Payments System, a network owned and managed by the New York Clearinghouse, which is used to convert large monetary values. In 1994, CHIPS and FEDWIRE terminated 118 million deals valued at $ 507 trillion.

Electronic plastic cards, the main image of e-money, were only known in 1970 by KunitakaArimura. In 1974, Roland Morens developed this invention by developing the use of this electronic card. In fact, Honeywell Bull was the first to invent the smart card, the main form of electronic money, in 1979. However, this initial image of this card was poorly designed, prompting the French Bank Card Associtionto use more advanced technology for the production of smart cards , And the first traditional smart card appeared in 1986 [Good, Barbara (1997), "Electronic Money", Federal Reserve Bank of Cleveland Working Paper, No. 97/16, PP 6-8.].

The United States of America is one of the first countries to recognize electronic money and the number of electronic cards in which 2628 cards per thousand people compared to Japan, where the proportion to 1945 card, while not exceeding the proportion of 786 cards in Europe. Canadians use this card to conclude more than 50% of their transactions, compared to 22% for Americans and only 18% for Europeans. [Deutsche Bandesbank (1999), "Recent developments in electronic money", Deutsche Bandesbank Monthly Report, p.

By contrast, the volume of e-money usage is still weak compared to the use of electronic payment methods in making deals. In Germany, the volume of electronic money (stored on pre-paid plastic cards) increased from DM 511 million in 1997 to DM 1238 million in 1998.

Electronic money that had already been used did not exceed DM 160 million paid in 12 Million transactions in 1998 against DM 85 million paid in 4 million deals in 1997 [Deutsche Bandesbank (1999), "Recent Developments in electronic money", Op. Cit., P. 46.].

In the United States, the use of electronic money (in the form of smart cards) increased from 51 million dollars in 1992 to 145 dollars in 1996, which increased by 30 percent and is expected to increase by 61 percent in 2001 to Was spent from electronic money to $ 1550 million [Good, Barbara (1998), "Will Electronic Money Be Adopted in the United States", Federal Reserve Bank of Cleveland Working Paper, No. 98/22, PP. 4.].

In fact, these statistics call us to question the factors that influence the widespread use of electronic money and the reasons for the difference from one country to another. The reasons for the spread of electronic money vary, some of which are due to technological factors, some to psychological factors and others to advertising. We will present the most important of these factors in the following lines.

The high cost of using electronic money

Traders still consider e-money to be expensive, with the trader paying 107% of the volume of sales to only 1% if selling with legal money. This is mainly due to the recent use of electronic money and the cost will decrease as the use of this money increases.

The extent of the development of telecommunications infrastructure

Communication is the main pillar that can lead to the spread of electronic money, especially network money. Lack of a strong network will, of course, hamper the spread of electronic money, and the high cost of communication will, of course, reduce reliance on electronic money as a payment tool. This is evident in developing countries, where electronic means of payment and electronic money are virtually eliminated. This is due to the weak infrastructure of the existing telecommunications network in these countries.

Not only is the difference between developed and developing countries in the spread of electronic money, but there is a difference - albeit less severe than the previous - between developed countries each other. For example, the cost of telephone calls is lower than in the United States than in Europe. This allows US merchants to accept debit cards more than in Europe, which explains why Americans are more dependent on online payment cards than their European counterparts. This leads to an increase in European demand for possession and possession of electronic money (especially smart cards), since transactions concluded using these cards do not require a telephone call.

On the other hand, low PC prices and improved performance will be an important catalyst and a key factor in the growth of e-commerce, which will facilitate the widespread use of electronic money. We conclude from the foregoing that technological development in relation to the communications network and computer technology will remain a major pillar and a central factor in the spread and spread of electronic money. Therefore, it is expected to increase in the developed countries in the short and medium term, while it will be delayed in developing countries and may be spread only in the long term.

The progress of the banking and financial industry

The weaker the infrastructure of the financial industry, the more it will hamper the spread of electronic money. The improvement of the financial industry, the training of workers, the provision of necessary expertise and advanced technology will be reflected positively on the circulation of electronic money. On the other hand, improving and developing banking expertise and training e-money issuers on how to manage the risks resulting from the circulation of such money will necessarily facilitate the marketing and spread of such money.

The existence of sufficient publicity

Advertising and advertising are known to play an important role in the marketing of goods and services. As is the case for electronic money, the novelty of its existence and the weakness of publicity that leads to the weakness of the spread and non-interest. Electronic money is needed for advertising, especially in the early stages of dealing with it.

Psychological factors

Psychological factors are especially important in accepting everything that is new, as there is a state of anticipation and caution at first until the emergence and clear advantages and disadvantages. Under the rule of habit, many people may prefer to use electronic payment methods, as well as legal money, to acquire electronic money.

The statistics show that Americans pay more than 20% of their purchases with liquid money, and 58% of retailers prefer to accept cash from other means of payment. On the other hand, 90% of the volume of sales is done without the use of cash in Japan compared to 86% in Europe and 75% in the USA [Good, Barbara (1998), "Will Electronic Money Be Adopted in the United States", Op. Cit,. P. 12.].

Psychological factors are also related to the extent of consumer confidence in the issuers of this money, as well as in the honesty of traders who are willing to accept it as

a payment instrument. This may result in consumers calling for the presence of a trusted third party to legitimize and trust previous parties.

Availability of security controls related to the Internet

Many economists believe that the use of electronic payments as well as electronic money will depend on the evolution of the systems used to ensure the security of credit card numbers as well as different forms of electronic money, especially network money. The vulnerability of existing protection against hacking attempts and the seizure of customer accounts and bank card numbers may lead to reluctance or at least a lack of enthusiasm for electronic money acquisition. That's because retinal money may be an easy target for hackers and hackers. Until the methods of protection and security prove useful and effective against such behavior, the prevalence of electronic money will remain modest.

Security and legal risk of electronic money

Electronic money, in its previous sense, and because of its distinct characteristics from legal money, may raise a range of legal and economic risks, which necessitate the development of a package of regulatory legal controls for such new phenomena. In this chapter, we will present the most important legal risks that can arise from dealing with electronic money. We will focus in particular on the security, legal and finally the personal freedom of individuals dealing with this money. We will devote an independent study to each of these risks as follows:

The first topic: the security risks of electronic money.

The second topic: legal risks of electronic money.

Third topic: electronic money and confidentiality (privacy).

The security risk of electronic money

The security dimension is one of the most important issues that concern the workers in the banking and monetary sector. Electronic money is one of the phenomena that can increase security risks. Although all electronic means of payment can pose security risks, electronic money has a greater ability to create such risks, such as the difficulty of verifying, not recognizing or not accepting them.

Security risks are not just about the consumer, but also for the merchant and the source of the money. Consumer-owned or merchant-owned electronic cards may be stolen or counterfeited and treated as authentic electronic money. Fraud may occur by modifying data stored on electronic cards, on software, or on a personal computer hard drive. The security breach may occur either as a result of a deliberate criminal act such as forgery or counterfeiting, or as a result of unintentional action, such as the removal or destruction of a Web site, or the disruption of the designs of electronic systems and electronic piracy. All such previous actions and threats would have serious legal, security and financial implications.

Based on the above, it is important that the issuer of e-money be assured of the availability of all security guarantees both for the consumer and for the merchant and whether it is related to electronic money, which takes the form of plastic cards or those that are handled online (net money).

It is difficult to have absolute security in e-banking services, yet it is essential that the level of security be commensurate with the purpose to be achieved. Therefore, the security arrangements related to electronic money should be aimed mainly at achieving a set of objectives including the need to limit access to the e-money system to the individuals allowed only, and to ensure the identity of all parties involved in order to ensure the legitimacy of all transactions concluded through the Internet, And to ensure the confidentiality of the information and not to change it in any way as it passes through the network.

It is also necessary to continue to develop security technology in order to maintain the efficiency and efficiency of security measures and its ability to address all threats and threats of the spread of electronic money.

Legal love for electronic money

In addition to security risks, electronic money is also expected to raise some legal risks. These risks stem mainly from violation of laws and regulations such as money laundering, disclosure of customer secrets and breach of confidentiality. On the other hand, legal risks may also arise when the rights and obligations of different parties dealing with electronic money are being codified in an inaccurate manner. Contractual and legal relationships between consumers, retailers, exporters and operators are complex and complex.

Another important issue concerning legal risk is the clarity and transparency of the rights and obligations of each party. For example, the issue of legal liability of different parties will be raised in cases of counterfeiting, forgery, fraud and fraud. Finally, consumer protection is one of the most important legal risks that electronic money can generate. It is also expected that the spread of e-money will be accompanied by an increase in tax evasion crimes, as it will be difficult for government agencies charged with collecting taxes to link the tax to those transactions made by electronic money as these transactions are hidden through the Internet.

Electronic Money and Confidentiality (Privacy)

The proper practice of dealing with electronic money requires the ability to ensure that transactions exchanged through the use of electronic money are only between the parties concerned and that the exchange is focused on those goods and services authorized only. However,

consumers are still apprehensive about the possibility of using information and data on transactions without prior authorization or permission. These concerns will be compounded by the steady increase in the use of electronic money in the conclusion of business transactions.

Maintaining the secrecy of the financial statements of all e-money parties is one of the most difficult issues associated with the growing growth and the expected large spread of e-money. As in the case of maintaining the confidentiality of bank accounts for customers, in which it is forbidden to inform any person other than the client himself of a bank account, it is also necessary to grant the various parties used for electronic money sufficient guarantees that limit the access of any other party meaningless to the concluded transaction On the financial statements exchanged over the network.

In fact, the confidentiality of transactions concluded by electronic money must be preserved from infringement of others, whether they are ordinary individuals or government agencies. In that case, a serious problem would arise: the contradiction between the need to preserve the confidentiality of transactions as a right of individuals and the right of the State to use all available means to eliminate crime. For example, the state may have to monitor various communication networks in order to prevent the crime of money laundering or tax evasion by using electronic money. In such cases, it would be difficult to harmonize maintaining the confidentiality and privacy of individual transactions on the one hand and the need to confront crime on the other.

Towards a legal regulation for the issuance of electronic money

The previous analysis of the concept of electronic money and its security, legal and financial risks requires us to envisage a set of controls that could be formulated in a uniform legal framework to reduce the serious effects of such money. Perhaps one of the most problematic issues that specialists should develop a legal framework is the issue of electronic money issuance and controls that must be available in the issuers of such money.

On the other hand, the state must take some measures to prevent the use of electronic money in money laundering and tax evasion. Any legislation that deals with this phenomenon must be clear and clear, especially with regard to the definition of this money as well as the parties that deal with it, and the extent to which this money can be converted to legal money (ie, issued by the Central Bank). The first part of this chapter will be devoted to the study of the issuer of e-money, while in the second part we will focus on analyzing the most important rules that should be observed in the legal regulation of e-money.

Exporting Corporation for electronic money

The identification of electronic money exporters is a thorny issue that will face any legal regulation of this money. The government may allow one of the following to issue electronic money: the central bank, commercial banks, non-bank financial institutions, or non-financial institutions.

In the case of issuing electronic money to the central bank, this would eliminate the legal problems that may arise from the existence of such money, and the existing legal regulations would extend their application to electronic money without the need to issue legal regulations New. On the other hand, the assumption by the central bank of this responsibility would prevent the State from losing the income resulting from the currency instrument, which it would have been possible to lose if the other party had issued the money. The state can also control the volume of electronic money through the central bank and thus avoid any disturbance in monetary and economic policy that could arise from the spread of these new instruments. On the other hand, the state can control the policies related to this money, which reduces the opportunities for tax evasion and money laundering and also takes measures to protect the consumer. However, this option would eliminate innovation and reduce the competition that was expected to be activated if private enterprises were allowed to issue electronic money. Competition is known to encourage lower costs.

Commercial banks may be entrusted with the process of issuing electronic money. This will not require new legislation, but the umbrella of the current banking law will extend to electronic money. Some minor adjustments may be needed in existing law. Hong Kong has allocated special legal legislation to allow banks to issue electronic money. However, some non-bank institutions have been allowed to issue limited-purpose cards, such as payment cards for transport and communications services. There is a special provision for companies that export such cards (this law is included in the Banking Act).

Similarly, if the issue of electronic money is assigned to non-bank credit institutions, the current legal regulation of the banking sector will extend its impact to electronic money and may require some minor changes that may impose further controls on the institution permitted to issue such money. This option encourages competition and innovation, but it is critical that the state will lose part of its revenue if electronic money emerges as a strong contender for legal money. Germany adopted this trend. The Sixth Amendment to the Banking Law, which entered into force on January 1, 1998, extended banks 'business to prepaid cards and network money. Article 11 of the Banking Law stipulates that banks' business also

includes " For payment purposes, unless the issuer of the card is the same service provider and therefore the recipient of the payments contained in the card (prepaid card business) ". Article 12 of the same Act states that the work of banks also extends to "... the creation and management of payment units in computer networks (the money money network)" [Deutche Bundesbank (1999), "Recent developments in electronic money", Op. Cit., P. 52.]. We conclude that electronic money in Germany is issued by the credit institutions and is then subject to the provisions of the Banking Act, but these institutions are under the supervision of the Bundesbank.

On July 29, 1998, the European Commission adopted a proposal on e-money allowing credit institutions to issue e-money, which would be subject to bank supervision when faced with the issuance process and subject to a certain number of restrictions (European Commission (1998), "Proposal for European Parliament and Council Directives on the taking up, the pursuit and the prudential supervision of the business of electronic money institutions ", Op. Cit., PP. 3.]. It adopted the same meaning in the legislation on electronic money adopted by the European Council and Parliament (see article 3, paragraph 3), "Electronic Money Directive", Directive 2000/46 / EC of the European Parliament the European Parliament and of the Council, Brussels, P. 2.].

In France, the Banking Act

In France, the Banking Act of 1984 limited the collection of deposits and the management of means of payment to credit institutions. Institutions that create money in the form of new electronic means of payment must obtain the approval of the Credit Institutions Commission and respect the legal provisions applicable to these institutions [Ministere de l'Economie, de Finance et de l'Industrie (1999), La Nouvelle Donne du Commerce Electronique ", Les Editions de Bercy Etudes, Paris, P. 142.].

Finally, the issue of electronic money may be entrusted to non-financial and non-credit institutions. In such a case, the existence of independent legislation becomes necessary to avoid the many risks and consequences that can arise from such a subject.

In fact, it is not important to determine the process of issuing electronic money whether banks or a non-bank credit institution or non-financial institution, but the most important is the development of legal regulation of the issue of electronic money or otherwise we have a legislative vacuum of the subject of a complex economic, financial, monetary and legal . Therefore, it is necessary to clarify some of the controls that should be available in those institutions that will issue the issue of electronic money, and this is the subject of the next topic.

Electronic Money Issue Regulations

Any legal regulation of the subject of electronic money should not only determine the nature or personality of the issuer but also set out a set of controls that will ultimately prevent the economic and legal risks that are expected to occur when the money is issued. Such controls may be formal, ie, related to the form and wording of the legal texts governing the subject of electronic money, and may be objective, ie, whether the issuer of electronic money or the regulatory authorities on the institutions that export the money. We will highlight these controls in two separate ways:

First requirement: Formal controls for the legal regulation of electronic money.

The second requirement: objective controls of the legal regulation of electronic money.

Formal controls for legal regulation of electronic money

The provisions of the legal regulation on electronic money must be very clear. The legislature must accurately define the concept of electronic money and distinguish it from electronic means of payment and electronic cards of one purpose or limited purpose.

On the other hand, taking into account the contractual arrangements that may arise between the different parties dealing with electronic money, the legislation on electronic money must clearly state the obligations and rights of each party vis-à-vis the other parties. The obligations and rights of the source of electronic money, customers, traders and other parties used for such money must be transparent and transparent. It must therefore be easy for each party to realize and understand its legal status through clear and easy legal terms.

The proposed legislative regulation should also clarify the losses that could be incurred by each party in the event that the institution issuing the electronic money is declared bankrupt. In addition, the proposed legislation should clearly state whether the debts of the electronic money source have been covered by deposit or other guarantees mentioned in the same legislation. It shall also establish arrangements for the resolution of disputes, specifying in particular the mechanism for resolving such disputes and the competent body or tribunal and the rules of procedure to be followed and applied (eg, the rules of burden of proof) [Report on Electronic Money, Cit., PP. 23-24.].

In addition, dealing with electronic money may be transboundary. Any legislation dealing with the subject of electronic money must contain provisions to address those problems that may arise from the ramification and internationalization of the effects of electronic money through the legal responsibility of each party and the court competent to deal with disputes This money is raised.

Objective controls for the legal regulation of electronic money

Any legislative regulation of electronic money shall have any restrictions on which the issuer of the money is bound. These restrictions are only a set of controls designed to protect the parties involved in electronic money and prevent the exploitation of electronic money exporters to the rest of the parties and the most important of these controls are:

The submission of institutions exporting electronic money for supervision and careful control

If the central bank takes the electronic money issue, in this case there will be no need for supervision on the other hand, where the central bank is the government bank, but the difficulty arises when the order to issue this money to a bank such as banks or credit institutions or non-credit. In such cases, these bodies must be subject to strict supervision and strict control by specialized government agencies such as the Central Bank, for example, to prevent and prevent the risks that may result from the issuance of these institutions for electronic money. The regulatory body shall ensure in particular that the issued capital of the institution is not less than a certain level and that the institution provides sufficient financial guarantees to cover any financial risks expected to occur. Issuers should also follow a strong management policy regarding the risks of e-money activities.

The European Regulation on Electronic Money 2000 requires the issuing credit institution to have at least one million Euros of capital (Article 4) and this amount should not be reduced at any time. On the other hand, this legislation also stipulates that e-money institutions should always maintain an amount equal to or greater than 2% over and above the total amount of the current financial liabilities for unpaid electronic money or the average size of such liabilities in the last six months, Six months after the establishment of the financial institution, such amount shall be equal to or greater than 2% in excess of the total amount of financial liabilities relating to the unpaid electronic money used within six months. This amount shall be evidenced by the financial plan submitted by the issuing institution to the competent authority [Th e European Parliament and the Council of the European Union (2000), "Electronic Money directive", Op. Cit., PP.2.].

The need for security controls

The legislation on electronic money should address the financial problems that are expected to occur, such as money laundering or security issues. Therefore, attention should not be focused solely on the issuer of e-money, but also on the types and forms of electronic money to be issued [Bank for International Settlements (BIS), (1996), "Implication for central banks of the development of electronic money, Op. Cit., P. 9.]. For example, the value of e-money allowed to be dealt with by consumers and retailers must be set, and Operators for e-money may also be obliged to monitor transactions.

On the other hand, e-money planners should provide security controls to detect counterfeit money and allow for preventive and remedial measures if such problems arise. In particular, e-money issuers should be able to monitor the level and size of the institution's debt of electronic money against the volume of money issued. Authorities and specialized authorities should conduct adequate training and arrange for reducing the risk of counterfeiting and fraud in electronic money. A method must be found to maintain specific data for each transaction and parties concluded with the use of electronic money. There must be keeping pace with the technological development in terms of updating the security means necessary to counter fraud, counterfeiting and counterfeiting electronic money.

The obligation of the issuer of electronic money to submit periodic statistical statistical reports

As we have already seen, the issuance of electronic money may affect monetary policy through its impact on money supply. In anticipation of this, it is necessary that the credit institutions allowed to issue electronic money provide periodic statistical data to the specialized monetary authorities, such as the central bank, in order to raise the efficiency of monetary policy. These reports should indicate the amount of electronic money issued or planned to be issued within a specified period of time.

To oblige the exporting institutions of electronic money to accept their conversion into ordinary money Redemption

Any legal regulation of e-money must include a provision for the obligation of e-money exporters to accept transfer to legal money (ie, issued by the central bank of the State) at the rate of parity or equivalence at any time the holder of such money requests it to be changed. This is because, in the absence of a link between electronic money and legal money, this would tempt credit institutions to persist in issuing electronic money without limits, ultimately creating inflationary pressures on the country's economy. On the other hand, the commitment of exporters to accept the transfer of electronic money into legal money would reduce the risk of losing electronic money to the money function as an accounting unit if the credit institutions did not accept a change in the parity price.

Article 3 of the European legislation issued in 2000 states that an electronic money-holder may ask its issuer to transfer it to legal money at the parity price or to transfer it to its own account, without incurring expenses

or fees other than those necessary for the execution of the transaction. This article clarifies that the contract between the source of the electronic money and its holder must contain the conditions for the transfer of electronic money to legal money. The contract may include a minimum conversion [The European Parliament and the Council of the European Union (2000), "Electronic Money Directive", Op. Cit., PP. 2.].

Obligation of the source of electronic money to maintain a reserve with the Central Bank

The central bank must impose limits on the monetary reserve on e-money exporters, in anticipation of any significant increase in the creation of electronic money, which ultimately affects monetary policy and maintaining this commitment will lead to price stability. With e-money issuers subject to this requirement, electronic money stands in line with other forms of money that are subject to cash reserve requirements.

The need for international legislative coordination and cooperation

As mentioned above, electronic money depends on technological progress and it is easy to deal with money across borders through the Internet. This results in several difficulties in determining the legal organization that can be subject to transactions and transactions carried out by electronic money. Even if these countries codify the handling of such money, it is not necessarily that the legal rules governing this matter are similar, Application when a legal issue occurs. In this sense, as a result of the international dimension of electronic money, the national legal regulation of such money would not really be complemented by international organization, coordination and cooperation. It has become necessary, therefore, for States to cooperate through collective and bilateral agreements that spell out the responsibilities of the citizens of each State.

The Basel Committee on Electronic Money has identified a number of issues that electronic money can raise, and international cooperation can solve its own problems, including transparency, privacy and money laundering.

RESEARCH FINDINGS AND RECOMMENDATIONS

Technological progress raises many problems, whether economic, legal or social. In this paper, we discussed the definition of electronic money, its main characteristics and its future, as well as the security and legal risks that are expected to result from its spread. In particular, the research focused on highlighting the most important legal controls that any legal legislation on e-money must comply with.

We have presented this subject in three different chapters. In Chapter I, we have defined the concept and characteristics of electronic money. We have defined electronic money as a cash value stored on an electronic payment method that is not linked to a bank account and is widely accepted by non-issuers and used as a payment tool for various purposes. The importance and accuracy of this definition is reflected in the distinction of electronic money from other electronic payment methods. We then explained the forms and characteristics of electronic money and concluded that electronic money is sophisticated conventional money. This chapter concludes by talking about the evolution of electronic money and its future, noting that the development of electronic money depends mainly on the progress and development of technology and banking in each country.

The second chapter mentions the most important security and legal risks of electronic money. This chapter has revealed that electronic money has been a fertile ground for many serious crimes that will disturb not only the security of society but also its economic and financial stability through money laundering, tax evasion, fraud, fraud and electronic piracy. The chapter also clarified the importance of harmonizing the need to confront society with those crimes that could occur through electronic money and the importance of preserving the freedom of persons and confidentiality of their financial transactions by not allowing non-parties concerned to access such information.

The third chapter deals with the rules that should be included in the legal regulation of electronic money, such as the necessity of clarifying the rights and obligations of various parties dealing with electronic money, and the need for strong supervision and strict supervision by the government banking agencies on the entities allowed to issue such money.

We will now present the main findings and recommendations of the research:

First: Electronic money is sophisticated conventional money, because of the characteristics of ordinary money, they serve as a tool for payment and it has the power of the desert and a means of exchange and a store of value.

Second, e-money is expected to create a good climate for crimes such as money laundering and tax evasion, as well as increasing its ability to increase security risks related to counterfeiting, forgery and fraud and the devastating effects of social security and economic well-being.

Thirdly, the development and spread of electronic money will depend on a number of factors, perhaps the most important of which is the technological development in the field of communications, computer and the Internet, on the one hand, and the extent to which this money is accepted by consumers and sellers on the other hand. It is therefore likely that this money will be delayed in developing and less developed countries.

Fourth: The need to establish strict rules with regard to the body entrusted with the issuance of electronic money as well as the volume of money exported. Therefore, the Central Bank or banking institutions should be entrusted with the issuance process provided they are placed under government supervision.

Fifthly: The legislative authority must establish a legal regulation regarding the issuance and handling of electronic money. Such an organization shall contain the rights and obligations of different parties dealing with electronic money. This law should be formulated in a clear manner and clarify a set of conditions and guarantees that guarantee and guarantee the issuer's ability to manage the various risks arising therefrom.

Sixth: The state should develop training and training programs for employees in banks and public banks to provide them with the necessary expertise to deal with the problems related to electronic money and how to deal with them.

Seventh: Any legal regulation of e-money must preserve the freedom of individuals guaranteed by the Constitution by providing adequate guarantees to maintain the confidentiality of the financial statements spread over the network when the conclusion of commercial transactions between the various parties.

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