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The Risks of Electronic Money and Ways to Protect It in the Digital Environment

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Abstract:

This research aims to study the risks of electronic money and ways to protect it in the digital age, by analyzing the nature of these moneys, and the most important security and legal challenges associated with their use in modern financial transactions.

The results of the research concluded that e-money, despite its speed and ease of transacting, represents a fertile environment for security risks if it is not supported by effective protection measures. The results also confirmed that enhancing confidence in this type of transaction requires concerted efforts between governments, financial institutions, and digital system developers, through updating legislation and adopting advanced encryption technologies. etc., thus contributing to ensuring the safe use of electronic money in the digital age.

Keywords: Electronic money, electronic payment, electronic money security.

JEL Classification: E42 ،G32 ، L86

1. Introduction:

The world has recently experienced many economic and social transformations, and amid these transformations, it was natural for this to affect various transactions. Among the transformations that have taken place is the technological development in the world of the Internet and the widespread use of computers and information technology by individuals and businesses, which has encouraged the emergence of e-commerce. To facilitate the settlement of transactions resulting from this type of commerce, as well as its growth and the creation of a harmonious and integrated electronic commercial environment, many electronic payment tools and systems have emerged that allow those who deal with these modern technological means, whether merchants, consumers, or financial institutions, to use new payment methods in order to maintain their relationships with their customers andstrengthen them, especially in a competitive electronic environment. This technological progress in the field of communications, the development of the banking industry, and the emergence of e-commerce in economic life have led to the emergence of a new form of money called electronic money for settling various transactions. However, this money, in its various forms, poses many risks that must be addressed.

1.1 Study Problem:

In order to understand this electronic money, the mechanisms for dealing with it, and how to secure it, we will pose the following question: To what extent do the risks of electronic money pose a threat to financial security in the digital environment, and what are the most important ways to protect it and ensure its reliable use?

This question includes the following sub-questions:

- What is the concept of electronic money? What are its characteristics and types?
- What are the mechanisms used to issue electronic money? Who issues it?
- How is electronic money handled?
- What are the potential risks of electronic money?
- How is electronic money secured?

1.2 Study Hypotheses:

Based on the research question posed, the researcher starts from the following hypotheses:

- Electronic money is the electronic equivalent of traditional money.
- Electronic money is issued by submitting a request to the central bank, which is responsible for issuing it.
- Electronic money is handled through the possession of electronic cards.
- Electronic money has many risks, which can be addressed by following an encryption system.

1.3 Importance of the research:

The research derives its importance from the technological development that the world is witnessing in the economic field in terms of its connection to digital technology, which has led to the emergence of e-business and e-commerce. With their development, there has been a need to develop means of payment to settle these transactions, facilitate and accelerate payment processes, and secure these operations.

1.4 Research objectives:

The objectives of this study are:

- Identifying the origin and concept of electronic money
- Highlighting the most important characteristics and types of electronic money
- To clarify the source of electronic money issuance and the mechanisms for its issuance

- Explaining the mechanism of dealing with electronic money
- Identifying the risks of electronic money
- Highlighting possible means of securing electronic money

1.5 Study Methodology*:*

In order to answer the research question, verify the hypotheses, and achieve the desired objectives, we will follow the deductive approach through the descriptive method in order to present the concepts related to electronic money and the requirements for securing it.

2. The concept of electronic money, its characteristics, and types

Electronic money is one of the most important means of electronic payment that facilitates e-commerce and contributes to its growth and development.

2. 1 The concept of electronic money:

There are several definitions of electronic money. Some have defined it as follows:

Electronic money is defined as the electronic representation of traditional money, and the unit of electronic money is usually referred to as paper or electronic currency. Therefore, the actual value of digital currency in traditional currency units is irrelevant. Digital currencies are generated by brokers. If a customer wants to buy digital currency, they contact a broker, request a limited amount of currency, and pay actual money. The customer can then make purchases from any merchant that accepts that broker's digital currency. Each merchant can import the broker's currencies obtained from customers. In other words, the broker takes the currecies once and deposits real money into the merchant's account.[1]

It is also defined as a series of numbers representing specific values issued by traditional or virtual banks to their depositors, who receive them in the form of electromagnetic pulses on a smart card or hard disk and use them to settle their electronic transactions. [2]

Among the definitions of electronic money is that it is a set of protocols and digital signatures that allow electronic messages to effectively replace the exchange of traditional currencies. In other words, electronic money is the electronic equivalent of the traditional money we are used to trading.[3]

It is also defined as the payment or transfer of deposits entered and processed electronically within electronic banking systems.[4] The term electronic money specifically includes two forms:[5]

- The first form is prepaid cards designed for multiple purposes, also known as stored-value cards or electronic money wallets.
- The second form is stored value or prepaid payment mechanisms that enable payments to be made using open electronic payment networks, particularly the Internet, sometimes referred to as network money or digital cash.

The European Commission has defined electronic money as monetary value represented by a claim on the issuer, stored on an electronic device, issued in exchange for an amount of regular money not less than the monetary value issued, and accepted as a means of payment by undertakings other than the issuer.[6]

The European Central Bank has also defined it as an electronic store of monetary value on a technical medium that is commonly used to make payments to merchants other than the issuer without the need for a bank account when conducting the transaction, and is used as a portable prepaid instrument.[7]

Based on the above definitions, it can be said that "electronic money is monetary value stored electronically on an electronic medium—such as a smart card or hard disk—and is the electronic equivalent of traditional money, which its owner can use to settle various obligations."

2.2. Characteristics of electronic money

Electronic money has a number of characteristics that distinguish it from paper money, the most important of which are as follows:

- **Payment via an electronic network:** Electronic money can only be used with a computer connected to a private or public electronic network. This characteristic gives electronic money an international character, as the electronic network space is not restricted by the geographical boundaries of a particular country but extends to cover the entire globe, which requires international regulation of this money. This characteristic also means that it is not necessary to be in the same place at the same time when using electronic currency, as it is not required for the payer and the payee to be in the same place at the same time for the payment to be made; the transaction can be carried out by one party alone. [8]
- **Electronically stored electronic files with monetary value:** These are simply small encrypted electronic files with no physical entity, as is the case with banknotes. They are encrypted data stored on electronic media in the form of plastic cards or on a personal computer memory.[9]
- **Heterogeneity of electronic money:** Since each source creates and issues different types of electronic money, these currencies may differ in value and may also differ in terms of the number of goods and services that a person can purchase with them.[10]
- **The existence of a banking system designed for the purpose of dealing with electronic money**

The mechanism used for electronic money requires a special banking system set up by banks, whether real or virtual. In the second requirement, we noted that there are two systems designed for this purpose, the first and the second. Both of these systems require a special banking system based on confidentiality and security, because the Internet is based on the existence of serial numbers that symbolize monetary value, and these numbers are used only once, as we have seen, so that the bank changes the serial number when electronic money is transferred from one person to another, and this requires a special.[11]

- **Two-dimensional electronic money:** The transfer of this money from the consumer to the merchant does not require a third party between them as the source of this money, as the debt is discharged once the electronic money is paid. It is a means of paying for goods and services without the seller having to verify the authenticity of the money or the adequacy of the buyer's bank account, as is the case with other electronic means of payment.[12]
- **Electronic money is private money:** Unlike legal tender issued by the central bank, electronic money is issued by private companies or credit institutions, which is why it is called private money.[13]

2. 3 Types of electronic money

There are several proposed classifications of electronic money, depending on the perspective from which it is viewed, as follows:

2. 3.1. In terms of monitoring and control:

Electronic money can be classified in terms of its monitoring and control as follows:[14]

Specific (nominal) electronic money: This is money that contains information about the identity of the original drawer of the electronic money, which makes it possible to trace the movement of electronic money, thereby enabling the issuing bank to track the movement of electronic money in the electronic market.

Anonymous electronic money (non-nominal): This is money that does not contain information identifying the original drawer of the electronic money, which makes it

impossible to trace the movement of this money, meaning that the issuing bank cannot track and monitor its movement in the electronic market.

2. 3.2 In terms of how it is handled:

Electronic money is divided according to this consideration into the following:

- **Electronic money via the network:**This is called network money, liquid money, or cash online, and the method of acquiring it is called online storage, as it is acquired online, meaning that banks intervene in its circulation.[15] In other words, consumers do not personally hold electronic money, but entrust payments to a third party, namely the bank responsible for this task online, where the bank handles all electronic money transfers and holds the consumer's cash accounts. The online system works by requiring merchants to contact the consumer's bank to receive payment for the consumer's purchases, which helps prevent fraud by confirming the consumer's monetary validity. This is similar to the process of checking with the consumer's bank to ensure that the credit card is valid and that the consumer's name is the same as the one on the credit card.[16]
- **Offline electronic money:** This is called offline cache, or electronic wallet, and the method of acquiring it is called offline storage, as electronic currency units are traded between different parties without the intervention of banks.[17] Offline cash storage is the actual equivalent of the cash you keep in your wallet, The customer possesses it without a trusted third party in the process, and protection against fraud in this case remains a concern. Therefore, all physical elements of hardware and software must prevent double spending or fraud. Smart cards are considered the solution for the physical hardware elements for storing electronic money. Encryption methods and protection against tampering are the software solution to prevent double spending, which is spending a certain amount of electronic money twice by presenting the same electronic currency to different sellers. Over time, the same electronic currency will be given to the bank a second time, and thus the fraud itself cannot be avoided because it is already too late.[18]
- **Open and closed electronic money systems:** The electronic money system can be open or closed. A closed system means that the financial value on the smart card can only be recharged from a bank account, and the money used, which is stored in the smart card reader's memory, will be transferred to the bank account of the person entitled to it. However, transferring money between one smart card and another is prohibited. On the other hand, an open system allows for the direct transfer of funds from one smart card to another. However, because governments are concerned about the possibility of money laundering, most systems are closed.[19]

2. 3. 3 In terms of the medium:

Types of electronic money vary according to the means by which monetary value is stored, as follows:[20]

- **Prepaid cards:**With this method, the monetary value is stored on an electronic chip attached to a plastic card. These cards come in many forms, the simplest of which are cards that record the original monetary value and the amount spent. Examples include:
- **Smart cards:** These are cards that contain a microprocessor that allows money to be stored through security programming. These cards can interact with other computers and do not require authorization or confirmation of the card's validity in order to transfer money from the buyer to the seller. The connectivity of smart cards gives them an advantage over magnetic strips.[21]
- **Telephone banking:** This is a type of banking service provided to customers 24 hours a day, in which the customer can ask the bank to transfer an amount of money to the seller for goods or services purchased online. This is done after confirming the customer's identity by

entering the customer's PIN number, which is provided by the bank, The customer's phone number is also verified by calling the numbers previously registered with the bank.[22]

- **Internet banking:** The internet system based on home banking is a system of great importance both for banks and for customers who have internet access. It takes many forms, as follows: [23]
  - Providing customers with information about their balances.
  - A simple form of electronic advertising brochures about banking services.
  - Providing customers with methods of paying bills drawn on them electronically.
  - How to manage customers' financial portfolios (stocks and bonds).
- **Credit cards:** Credit cards have made us a cashless society. They are cards issued by banks within certain limits. They are used as a means of payment and credit because they allow the holder to obtain goods and services with deferred payment, and a certain amount of interest is calculated on the account statement for the amount exceeded by the customer at the end of each month, as it is considered an advance loan from the banks. Examples of this type of card include Visa, MasterCard, and American Express.[24]
- **Hard disk :** Money is stored here on the hard drive of a personal computer so that the person can use it whenever they want through the Internet, which is why this type of money is also called network money.

  With this method, the owner of the electronic money uses it to purchase goods and services online, with the price of these goods and services being deducted at the same time from the electronic cash stored on the personal computer's memory.

3.2. 4. Hybrid method:

This method is a combination of the two previous methods, whereby the monetary value stored on a prepaid electronic card is loaded onto the memory of a computer, which reads it and transmits it via the Internet to the personal computer of the seller of goods and services.

- **In terms of the amount of cash stored:** We can distinguish between electronic money according to the amount of cash stored in two forms, as follows:[25]
- **Low-value cards:** These are cards that can be used to pay for goods and services whose value does not exceed one dollar.
- **Medium-value cards**: These are cards with a value greater than one dollar but not exceeding $100.

3. Mechanism for issuing and handling electronic money :

In order to understand the mechanism for handling electronic cash, it is necessary to first understand the source of issuance of the currency, then the mechanisms for issuing this electronic currency, and finally the mechanisms for handling it.

3. 1 Issuers of electronic money :

Identifying the issuers of electronic money is one of the thorny issues that any legal regulation of this money will face. There are multiple options through which the government can determine who will be allowed to issue this money. The state may allow one of the following entities to issue electronic money: The central bank, commercial banks, non-bank financial institutions, or non-financial institutions.[26] The issuer is considered one of the parties involved in the process of issuing electronic money, along with the consumer and the payee.

3. 2. Mechanism for issuing electronic money :

Electronic money is issued at the request of the consumer to the issuer in order to obtain this money. The mechanism for issuing electronic money is as follows:[27]

- The consumer submits a request to the issuer for the issuance of electronic money. The request may be verbal or written, although banks generally only deal with written requests. Some comparative legislation allows for verbal requests.

- The next step after the consumer's request is the issuer's response to the request, which means that the request may be accepted or rejected depending on the issuer's conviction of the feasibility and usefulness of the issuance. However, the issuer accepts the request in most cases, especially if there is sufficient coverage for the issuance of money (the consumer's account with the issuer) or if the applicant immediately pays the amount to be loaded onto the electronic card or international network, plus the bank's commission. After the approval decision, the bank issues the electronic money and informs the consumer of the amount of electronic units and how to use them. If it contains the date and how to contact the issuing bank, or the bank loads the electronic units onto the electronic wallet chip with specific instructions on how to use and maintain them, and then the money is ready for use.
- Once the bank has accepted the issuance of electronic units, the consumer may not cancel the request, as the issuance becomes final.
- The consumer can then use the electronic money to pay for goods or services they wish to obtain using the units stored on the card or available in personal computer programs. The consumer can only make the payment if the merchant they are dealing with accepts payment by electronic money.

3.3. Mechanisms for dealing with electronic money :

After the customer obtains electronic cash from the source, when the customer wants to withdraw electronic cash to make a purchase, they log into the bank via the internet or a wireless network and provide proof of identity, which is usually a digital certificate or electronic signature issued by a certification authority. After the bank verifies the customer's identity, it releases the specified amount of electronic cash to the customer and deducts the same amount from their account. The bank may also charge the customer commissions and device fees for the transaction. The customer stores the electronic cash in a wallet on their computer desktop or on a special electronic card device called a smart card.[28]

Since electronic currency is represented by a series of random numbers called the currency serial number, this number is stored on a card or on the customer's device. The customer then uses this money by giving the encrypted serial number to the person they are dealing with, who then contacts the bank to issue new currency in their name or to transfer the cash value to their account. The bank uses its list of numbers to verify that this money was issued by it and that it has not yet been spent. However, this method is criticized on two counts. First, the merchant or the person dealing with the customer cannot verify whether this money has been previously spent or not, and even if they can, it will be too late. Second, this method exposes the serial number, which is supposed to be confidential, when the bank verifies the serial number of the currency. Therefore, the hidden currency technology has emerged, which relies on a serial number multiplied by a mathematical factor (a hidden number known only to the customer). This technology provides the confidentiality and privacy that drives many people to use electronic money technology. As for knowing whether the money has been spent or not, several technologies have been used for this service that make it possible for the merchant to know whether the money has been spent or not, which prevents some people from manipulating the money by spending it more than once.[29]

4. Advantages and risks of electronic money and security requirements :

Electronic money has a number of advantages that contribute to its spread, as well as a number of risks associated with its use. Below, we will mention the most important of these advantages and risks.

4. 1 Advantages of electronic money :

Electronic money has several advantages that make it widely accepted by those who use it. Among the most important of these advantages are the following:

The cost of trading it is low because transferring electronic or digital money via the Internet or other networks is much cheaper than using traditional banking systems, as well as being easy to trade due to its lightness and small size. Paying money via an electronic network means that it is not subject to borders and can be transferred from anywhere in the world to anywhere else at any time.[30] Simple and easy to use, electronic money greatly facilitates banking transactions, eliminating the need to fill out forms and make bank inquiries over the phone.[31]

Confidentiality and privacy: Security means that the money transfer process is carried out in such a way that no one can modify or cancel anything. Confidentiality means that electronic transactions are anonymous and no one can access electronic payment systems. This is due to advanced card technology and modern software that enables secure and confidential electronic communication between users of electronic money.[32] Secure payments are encouraged, as banks that deal with electronic money use servers that support the Secure Electronic Transactions (SET) protocol, as well as web browsers that support the Secure Socket Layers (SSL) protocol, making electronic money payments more secure.[33]

There are two strong reasons behind the popularity of electronic cash: the most important is that many online shoppers are uncomfortable transferring their personal data over the Internet, which attracts people to the electronic cash option, where customers can create their accounts by phone.These customers provide their information once, rather than each time they make a purchase, which reduces the chance of hackers stealing credit card numbers or even customer identities. People also feel more comfortable giving their data to real people than filling out a general form. Another reason for the popularity of electronic cash is that it can be used to pay small amounts.[34]

- Among its advantages are:[35]
- It reduces the chances of fraud and manipulation by including more specific and accurate customer data on the card.
- This card combines in one card all the functions that credit cards, discount cards, ATM cards, and regular prepaid cards can perform.
- It is easy to obtain through electronic exchange outlets, commercial sales centers, telephones, and interactive telephone devices.

4. 2 Risks of electronic money :

Despite the advantages offered by electronic money, it also has a number of risks, the most important of which are as follows:

- Misuse of electronic money by the cardholder. This can take several forms, including obtaining the card based on forged documents, using it after its expiration date, or using it after it has been canceled by the issuing bank. Misuse also occurs when the withdrawal limit is exceeded in collusion with an employee or merchant, or by circumventing point-of-sale terminals that are out of service.[36] Crimes may also be committed using cards by third parties, such as using a stolen or lost card. The thief or finder of the card may use it to withdraw cash from an ATM or to obtain goods and services from merchants.[37] It is also possible to make withdrawals using forged electronic cards.
- The legal risks mainly consist of violating laws and regulations, such as committing the crime of money laundering, as the bank is considered liable for the amounts it receives for credit from the moment they are deposited. This feature has allowed owners of illicit funds to use electronic payment methods to launder them. This highlights the danger of using electronic payment methods, including digital currencies, illegally for the purpose of committing this crime, contrary to their true purpose, which is to facilitate transactions in the field of e-commerce.[38]

Money laundering is the process of converting the illegal source of funds, such as drugs, into funds from a legitimate source, such as car sales. The simplest way to do this is to withdraw large amounts of money in installments from an ATM in a foreign country. The bank branch that withdrew the money from its machine then requests a transfer of the amount from the branch that issued the card. The transfer is made by deducting the amount from the balance of the customer, who has evaded paying the transfer fees and been able to launder their money.[39]

- The possibility of electronic cash being counterfeited, as is the case with real currency. Although it is extremely difficult to find and exchange counterfeit electronic cash, without strong preventive and countermeasures, electronic counterfeiting can occur, and after counterfeiting.[40]
- There are also security risks for electronic money, such as the loss or theft of cards, private key, PIN, or identification numbers, or theft of electronic payment accounts through hacking on the Internet or in real life. Added to these risks is the direct hacking of the systems and accounts of banks, institutions, and systems that issue electronic money.[41]
- The disruption of computers and electronic systems that store, operate, and transfer electronic money, whether the disruption is automatic or the result of criminal acts such as sending destructive viruses over the Internet.[42]

- Electronic theft, where a computer is used to manipulate information by entering false data on the part of the fraudster by fabricating creditors as wages to be paid or bills to be settled, by fabricating fictitious debtors who must pay bills issued by the computer. The victimized debtor will not be able to prove that he is not indebted due to the existence of computerized invoices, and thus the fraudster exploits automated payment methods to obtain illegal funds.[43]

- There are also some risks that hinder the development of electronic money transactions, namely regulatory risks related to the relationship between electronic banks and the central bank, as electronic money will make it difficult to monitor and determine the money supply. Furthermore, the circulation of various forms of money issued by banking and non-banking institutions places many amounts outside the regulatory control of the monetary authority. This also leads to difficulties in tax collection, in addition to the problem of tax evasion, which has become easier due to the ease of transferring funds across borders.[44]

3.4. Means of securing electronic money :

The process of settling payments using electronic money involves several risks. To guarantee the rights of the parties involved in electronic payments, the process must be secured from both a technical and legal standpoint to ensure that the payment process is secure.

4. 3. 1. Technical insurance for electronic cash payments :

This security is achieved through the technical functions and conditions that must be met in order for the payment process to be secure. These conditions are as follows: [45]

- Making the payment order official: In e-commerce, transactions are concluded on electronic platforms that are not traditionally written down, and are signed by the parties to the electronic transaction. While it is easy to refer to paper documents and verify their authenticity and the validity of the transaction, this is not as easy with electronic documents, which contain electronic signatures that need to be authenticated and certified.
- Storing information related to the electronic payment process: This means storing documents or information related to the fulfillment process in a way that cannot be erased and for as long as possible so that they can be referred to whenever necessary... Therefore, during the purchase process, the electronic cash register records the sale value and stores it along with the name of the card issuer. At a later time or at the same time, the seller sends the

recorded transaction data to the bank that owns his account. The seller's bank then requests the payment from the consumer's bank or cardholder. When the consumer's bank sends its approval for the payment, the seller's bank increases the seller's account balance. These transactions are protected by the bank handling them.

● Determining the electronic date: The necessity of the electronic document date appears in several points, including:

- Determining whether there is a delay in the execution of the contract, and then applying the penalties imposed for the delay in execution, and the additional customs expenses resulting from the delay in customs clearance of the goods.
- The method must be covered by guarantees that ensure the merchant receives the full price without bearing the risk of the buyer's insolvency, for example through letters of guarantee or bank guarantees.
- This is to ensure that the payer does not object to the payment on the grounds of its absence or invalidity, which requires the establishment of an effective system of proof.

4. 3.2 Legal insurance for electronic payments :

The payment process for the consumer has two dimensions: [46]

The first dimension: This involves finding a means of ensuring that the consumer's available balance is not debited by the payment method used, except for the agreed amounts. This requires the bank to be held liable for any negligent or contractual errors that may harm the customer and not to burden the customer with the risks of operating the information system, while ensuring the validity of the payment order. In order to protect payment methods, both the customer and the consumer must pay using authorized methods, in accordance with the applicable legislation. This is confirmed by Article 27 of Law No. 18_05 on electronic commerce, which states: Payment in electronic commercial transactions shall be made either remotely or upon delivery of the product by means of payment authorized in accordance with the legislation in force.

The second dimension is the establishment of a system linking the moment of payment to the moment of delivery, as stipulated in Article 28 of Law 18_05, which states: "The website of the electronic supplier must be connected to the electronic payment platform and secured by an electronic authentication system."

Article 29 of the same law states that "electronic payment platforms established independently in accordance with Article 27 are subject to supervision by the Bank of Algeria to ensure that they meet the requirements of interoperability, data confidentiality, integrity, and security of exchange."

Therefore, signing electronic payment methods is a means of strengthening trust and reassurance in the field of electronic transactions in general and e-commerce in particular. For these and other reasons, comparative legislation has rushed to legalize electronic signatures and encourage transactions via electronic payment platforms, highlighting their legal role, which is to first identify the owner of the electronic signature and express their acceptance of payment obligations through electronic payment platforms, which are guaranteed and protected by law through a set of legal texts and secure technologies.

4.Conclusion:

Finally, electronic money has emerged as a result of technological and informational developments related to the emergence of the Internet and e-commerce. Therefore, through this study and in accordance with the research problem that focused on the risks of electronic money and the means of securing it, and by testing the validity of the hypotheses previously proposed, the following **conclusions were reached**:

- Electronic money is monetary value stored electronically on an electronic medium that its owner can use to settle various obligations. Therefore, electronic money is the electronic equivalent of traditional money.
- Electronic money in its various forms has many risks that must be addressed, whether related to information security, which has been addressed by implementing an encryption system, or crimes committed against electronic money, such as fraud, money laundering, and others.
- Electronic money can be issued by the central bank, commercial banks, non-bank financial institutions, or non-financial institutions, after the state allows one of the aforementioned entities to issue electronic money.
- Given the risks that electronic money users may face, the latter has been slow to adopt electronic money as an acceptable payment system.
- Making electronic money an alternative to electronic payment systems requires widespread acceptance.
- The use of electronic money in e-commerce leads to the growth and prosperity of e-commerce.
- There are a number of factors that hinder the success of electronic payment methods and lead to a lack of confidence in these modern methods. Despite the advantages they offer, factors such as crimes committed against bank cards and electronic media have created risks associated with using modern payment methods.
- Some people do not like to use electronic payment methods because they do not want to remember usernames and passwords, preferring the familiar method of writing checks and sending them by mail.
- Electronic money represents a turning point in the history of monetary transactions, which began with bartering and has now reached the point where financial value is encoded in electronically stored data.
- Electronic money needs to be regulated by law to control its use.
- It is no different from paper or coin money in that it pays a specific amount that discharges the payer's liability.
- Electronic money has several advantages, including: it avoids the customer having to carry large sums of money with them, as well as the risks associated with carrying it, and it is simple and easy to use.

5.Recommendations:

In addressing this topic, we have found that:

1. It is important to give importance to electronic payment methods, which have become indispensable in developed countries. Therefore, we must modernize what can be modernized, especially in light of a global system that is gradually transforming into an electronic world. Accordingly, we must pay attention to various electronic transactions and control technology.
2. Countries must enact laws for this technology that clarify and facilitate the use of electronic money to activate its role in the development of e-commerce.
3. People must be made aware of the need to keep pace with developments in payment methods, and those who use electronic money must be reassured by the establishment of electronic insurance contracts that cover certain information risks.

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