

# *The Macrotheme Review*

*A multidisciplinary journal of global macro trends*

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## The impact of electronic money in Albanian economy

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### Abstract

*Over the years, money has taken various forms, ending to paper money, and finally to the electronic one. The development of the banking system and technology, everywhere in the world, has made it possible to make different payments in the absence of cash. Although the core and the main function of money which are measurement and storage of value, remained unchanged. Regardless of the form, still the main form of making payments remains money. Although electronic transactions pose some risks to users, people believe that these transactions will be the future, while the paper money will become obsolete. The level of use of the electronic money is related to the degree of country's development, the more developed a country is, the higher is the level of electronic money usage.*

Keywords: electronic money, cash, ATM, POS, bank cards, banking system

### 1. Entrance

According to the Central European Bank (1998), electronic money is defined as: electronic cash value market determined in an electronic device, which can be widely used for making payments without necessarily involving bank accounts in the transaction, but acting as a prepaid bearer instrument.

According to the Bank for International Settlements (1996): the term electronic money refers to a variety of retail purchase mechanisms. Electronic money is defined as a "market value" or prepaid product in which there is a free available amount to a client, while maintaining an electronic equipment, which is owned by the client.

In 1993, the Central European Bank studied the phenomenon of electronic money, but considering prepaid cards only. In the report drawn up for this case, the Central Bank welcomed the development of electronic products to money, since they would improve efficiency in operations of payments for all involved parties, but for many reasons, only credit institutions would be allowed to emit prepaid card multi-use.

Electronic money differs in several ways from other existing forms of money. Compared to physical money (which only use physical security features), electronic money products use cryptography to protect the confidentiality and integrity of data. Electronic money doesn't need to be expressed in the form of banknotes or coins, thereby facilitating the payment process at

great distances. Also, unlike physical money that can be reused, electronic money received by the beneficiary cannot be used again.

## **2. Types of E-money**

There are many types of e -money that exist in the world of electronic payments. According to the Bank for International Settlements (1996), they can be classified as follows:

1. Identifiable E-money - identifiable money allows the extraction of information about the persons who participated in the transaction process. This enables the tracking and injection of the money in the economy of a country.
2. Unidentifiable E-money - does not allow the identification of the data for the person conducting the transaction. It is almost the same as cash, at the moment withdrawn from the bank account, it becomes enable to be traced.
3. Online Payment Method - this method requires interaction with a bank or another institution authorized to make the transaction possible from one party to another.
4. Payment Method offline - on this basis, the payment can be done directly without the involvement of the other party. This becomes possible with the presence of cards equipped with the chip, containing all relevant information for the person who uses it.
5. The scheme based on the account - by this method, the owner has an electronic account and payments are made by third parties on his behalf.

## **3. Risks posed by the e-money**

Electronic money, although it is expected to be the future money , carries many risks, of which consumers feel threatened. The Basel Committee for the supervision of banks shares the following risks:

1. Operational risk - stems from the possibility of incurring losses due to significant deficiencies in the reliability and integrity of the system. This type of risk is influenced by the fact that banks can be subject to external attacks or internal, also influenced by customer misuse.
  - a) The risk of security: Electronic money depends on electronic systems and history has shown that these systems being connected with the Internet, have fallen prey to the hackers. In this way, customer information has been misused, causing major damage. Although electronic systems and the security of the banks are being sophisticated year after year, still cannot completely eliminate this type of risk. Another element of operational risk are scams that come from employees of commercial banks.

About hackers, an example can be taken: the establishment of micro-cameras and cloning means of cards, in ATMs, thus the group of hackers cloned the cards, along with its data and through camera they recorded the pin's user. While the scams that come from the employees, occur when the information provided by the client is used or taken in secret, to intervene in the client's

account in order to benefit. Over the years it has been greatly reduced the possibility of fraud by employees, given that throughout the work areas are located security cameras and security element in the cards, where the card itself comes independent from PIN and each person has a different security element on his card.

b) design systems, implementation and maintenance: banks are being faced every day more and more with the risk of not having a well, secured designed or implemented system. This exposes the bank from many potential risks, such as: a non suitable system causes slowdowns or interruptions to its users, delays, also the outages can be caused by the employees themselves, maliciously ; banks may have difficulties, mainly financial, to implement modern electronic systems; bank adaptation with rapid technological changes may cause problems to the employees, not everyone can adapt to frequent changes. In connection to the failure or slowdown of the system, it causes dissatisfaction to customers, or can create problems, eg during a loan issue, while keeping the interests of credit or overdraft etc. In our country, the largest banks and most powerful too have implemented the most modern systems also most sophisticated, it certainly relates to the financial capability of each bank.

c) Misuse of products and services by customers, it can happen when banks do not raise awareness of their customers about the importance of data storage. The risk posed by this abuse comes as a result of providing information that is confidential and accessible only by the customer of the bank. For example a case of this abuse can be mentioned: writing the PIN on the debit card or credit. Sometimes people, even though they know the PIN and card should not be held in the same place, they appear to be careless, which can cause major problems in case of loss.

2. The reputational risk - Operational risk is the risk of a negative public opinion, which can cause loss of funds or clients. This type of risk can be established by the bank itself or by third parties. Is caused by the bank itself when placed on the market other products or services, which do not work properly or that for different problems, consumers cannot get a solution by the bank, another case is the theft by the bank employees. This causes problems with the reputation of a bank. The reputational risk is caused especially by third parties, for example, robbery of a branch of the bank, causing uncertainty among the general public, this has happened in the banks of the second level through years, although recently marked less theft than before; attacks against members of the board of a bank, can cause an operational risk, as happened for example with the murder of the founder of one of the commercial banks, some time ago in our country, etc. The banking system is the most linked to the economy of a country, so if a bank has problems with its reputation, it can also adversely affect other banks.

3. Legal risk - legal risk relates to activities that banks do and are contrary to the laws of a country. This type of risk is associated with other risks mentioned above. For example, intervention by the employees in customer's account is operational risk, as well as legal. However, as the main example of this type of risk is the use of the banking system as the most important element of money laundering. It is known that once the money is inserted into the banking system, so it is transformed into electronic money, claiming that its source is not part of illegal activities. World history has shown that this is not always true, however many countries have strengthened the laws dealing with this problem. Even in our country, there are laws that prohibit money laundering. Banks, too, are more focused towards this goal, having a growing department for the prevention of money laundering

#### 4. E-money in Albania

Even Albania, as well as other countries, more and more is directing to e-money. In this direction a very high role have had the second-level banks. They have created the appropriate infrastructure that already almost all the cities of our country have a main bank branch. Also, the commercial banks are consistent with banks and countries in the region or in the world, with the product and services that they offer. Today in Albania, consumers have the opportunity to make purchases with debit, credit or prepaid, they are able to view their accounts online, businesses are able to obtain physical and virtual POS devices, etc.

#### 5. The performance of E-money in Albania

According to the report published by the Bank of Albania, in November 2014 noted such allocation for POS and ATM:

**Table 1: No of ATM**

	Total	Tirana	Shkodra	Korca	Gjirokastra	Elbasani	Lushnja
2011	805	443	84	63	53	41	121
2012	823	470	84	55	54	39	121
2013	822	462	87	55	57	40	121

**Table 2: No of POS**

	Total	Tirana	Shkodra	Korca	Gjirokastra	Elbasani	Lushnja
2011	5126	4011	155	241	186	119	414
2012	5307	4149	210	245	135	114	454
2013	5668	4438	243	240	215	122	410

**Table 3: The number of customer's accounts**

	Total accounts	Individuals	Companies
2011	2.634.971	2.473.417	161.554
2012	2.724.668	2.572.286	152.382
2013	2.919.352	2.757.669	161.683

As seen from the tables above, it appears that the market has had a repletion with the elements of electronic money. This is underlined by the fact that there is no increase in these two elements, even in some areas there is also a declining. However, we say that is increasing the use of electronic money in our country. This can be explained by the fact that the transactions carried out have been increased, as well as POS ATM, both in number and value. According to the annual report of the Bank of Albania, in 2013, the number of accounts has increased with 7.1%

and the number of accounts that can be accessed from the Internet has undergone a doubling, it is also accompanied by an increase in the number of "home banking" transactions with 37%.

During 2013 the number of cards was increased by 5%, with a higher increase of credit card, although in total, debit cards occupy a higher weight (92%). This growth has been accompanied by increased card transactions, where were processed 13.2 million of which have a total circulation of 130 million all. In total bulk transactions (88.7%) goes for cash withdrawals at ATMs and only 11.3% are customer payments with cards at POS. While in 2014, according to the Bank of Albania, the number of cards has had an increase in the amount 11% (or about 900,000 cards in total), of which about 74,000 are credit cards

## **6. The advantages of using electronic money**

The use of electronic money brings positive effects to consumers as well as to banks that are issuing this kind of money. Lack of cash reduces the risk of loss or theft of money, so people have cards equipped with more security elements, especially on trips. Electronic money management is easier, because everyone can see all the movements that are performed in his account via their print or online, through internet banking services that many banks offer. A form of electronic money, credit cards, allow customers to use money they do not own and the ability to not pay the interests of the amount of use, returning a portion of the amount or the whole (this depends on the type of card) within a certain limit days. The use of electronic money saves people a lot of time, it becomes possible by: avoid queues in the bank to withdraw money; make purchases online, thus avoiding the hours spent in shopping centers; making utility payments, either through periodic payment orders, either through the Internet; etc.

Electronic money has positive effects on the banking system. Increasing the use of this form of money, the banking system increases opportunities to develop and its role in the economy of a country becomes more important. Products and services are offered by this system against certain committees. With the increasing use of electronic money, also increases the income of banks and opportunities also to provide the most innovative products on the market.

The third party which benefits from the electronic money, it's the economy of a country. This becomes most evident in the case of our country, where the informal economy remains in substantial numbers.

## **7. Disadvantages of electronic money**

Unlike the issuance of cash, which has expressed a zero cost to the user, the issuance of electronic money causes a cost to the consumers. This could be an advantage for the bank, because the income increases but it is a disadvantage for consumers.

Disadvantages of electronic money are particularly high in the case of our country, as the Albanians have little faith, because it is intangible and cannot be seen. This mistrust increases even more by the possibility of intervention by the bank's employees and theft by third parties. Years ago these interventions and theft had a higher frequency of occurrence, and now this kind of risk is significantly reduced almost to zero, as the banks have invested heavily on increasing the security elements.

Another important issue is the fact that electronic money legislation remains unclear in some important element.

Under (Claudio Sardonì Alessandro Verde, 2002) another effect is the fact that being removed from circulation Cash, central banks may decide even negative rates of interest, thus customers will not be able to withdraw their money so from the use of electronic money, consumers will suffer real losses.

## **8. The impact of electronic money in our country**

In Albania, the number of companies that pay their employees through the bank is growing. Although most companies declare only the minimum wage, again this is a step towards formalization of companies. In this way employees are insured and pay contributions in the social and health insurance. Thus, by not working in the "black", their rights grow, this increases their awareness and of the employers to improve working conditions.

When businesses in Albania are equipped with a bank account, this means that they are registered with the NRC, from table No. 3, above, the number of accounts of companies has undergone a slight increase from 2011 in 2013. The increase in the number of businesses equipped with POS devices and increased use of electronic money also causes increased revenue that businesses report to the tax authorities. Under conditions where the use of electronic money will completely replace the physical one, opportunities for tax evasion will be almost zero. Also, opportunities for money laundering would be reduced too, since the source of any amount of money injected into the bank would be recognized, in the beginning and further, into the real economy. Through electronic money, becomes possible the increase of the revenues coming from taxes and fees. Thus, by increasing the income of the state budget, the opportunities for investment in the country will be increased, something that would bring the growth of the economy. This explains the fact that most developed countries have a higher percentage of use of electronic money. According to Zandi (2013), it has a high correlation between a country's economic growth and the use of electronic money.

## **9. Conclusions**

In recent years, along with cash, is being used considerably the electronic money. Risks that accompany the use of electronic money are numerous, the most important are: operational risk, which includes the risk of fraud by hack-wind producers online, the risk of failure of the electronic systems of the bank, the risk of misuse of the elements of that money by customers; reputational risk related to negative public opinion, being caused by the bank itself or by a third parties; legal risks associated with some of the gaps that exist in the legislation of our country. Although the major part of people use cash, there is an increment in the use of credit and debit cards, and POS, ATM and other elements of electronic money. This form of money has its advantages and disadvantages. As advantages we can mention: this money is safe from loss or theft, saves time for various payments, increases the income of banks etc. As disadvantages we can mention: the fact that the emission of the money causes a cost to the customers, users have a lower level of confidence since it is intangible and cannot be seen, the central bank can reduce the negative rate of interest and customers won't be able to withdraw money from banks etc. The impact of electronic money is direct in the real economy of a country. There is a positive correlation between the level of use of electronic money and the development of a country. In the

case of our country, the level of informality is at relatively high levels. The increment of the use of electronic money would mitigate this informality.

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