

# **Cryptocurrencies in Romania. Cryptocurrencies Pose Risk for Central Bank and for Economy?**

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## **Abstract**

*The cryptocurrencies are important topics in economics literature because their significance for the monetary system as innovations in information and communication technology are impacting the conventional thinking about currency, money and payments as they are used over the internet outside existing banking systems. At the same time, all innovations in payment systems come with risks associated with cyber security, speculative investments and money laundering.*

*In present due to their little usage comparing to the total amount of cash and other legal tenders they do not pose risks to financial stability, but as they will increase in volume, they may impede "the central banks' core functions: monetary policy, financial stability, payments and currency" and the safeguards of investors in cryptocurrencies.*

*One opinion expressed in economics is that in order to mitigate some of the particular risks entailed by cryptocurrencies' circulation on global financial and monetary system the central banks should considering the issuing of "central bank digital currencies".*

**Key words:** cryptocurrency, money, central bank, risk.

**J.E.L. classification:** E40, E42

## **1. Introduction**

Wikipedia, the free encyclopedia, defines a cryptocurrency as "a digital asset designed to work as a medium of exchange that uses strong cryptography to secure financial transactions, control the creation of additional units, and verify the transfer of assets. Cryptocurrencies are a kind of alternative currency and digital currency. Cryptocurrencies use decentralized control as opposed to centralized digital currency and central banking systems.

The decentralized control of each cryptocurrency works through distributed ledger technology, typically a blockchain, that serves as a public financial transaction database.

In this article we present the impact of cryptocurrencies on financial system and on financial stability regarding the fact that their circulation is worldwide and that they could pose different types of risks on global economy. We also present different points of view expressed by several central banks regarding the possibility of issuing "central bank digital currencies". In last chapter we present the movement of cryptocurrencies in Romania.

## **2. Theoretical background**

Bitcoin, first released as open-source software in 2009, is generally considered the first decentralized cryptocurrency. Since the release of bitcoin, over 4,000 *altcoins* (alternative variants of bitcoin, or other cryptocurrencies) have been created."

(<https://en.wikipedia.org/wiki/Cryptocurrency>)

The cryptocurrencies are not guaranteed or recognized as legal tender by any central bank or by any government around the world but central banks are interested in analyzing the evolution of cryptocurrencies because they have liabilities in issuing banknotes and coins, in ensuring and monitoring the stability of prices and also the financial stability of the national economy.

Due to the fact that the cryptocurrencies could be issued without any legal constraint from national authorities and their on line circulation (via internet) all over the world is not restricted, were carried out scientific researches, studies and statistical surveys regarding: the number and the value of cryptocurrencies issued and commercialized on line; the evolution of their price in time and the potential risks they could entail for economy.

Also were conducted chunk samplings of the owners of cryptocurrencies in order to identify what was the main reason for them to buy cryptocurrencies. For example a lot of Canadians who bought bitcoins in 2017 said into a response to a survey conducted by the Bank of Canada that "they did so for investment purposes - and that really means speculation" or bull transactions. (Bank of Canada, 2018)

Central banks could emit digital currencies in order to mitigate the possible negative side effects of cryptocurrencies on the economy and on the monetary and financial system.

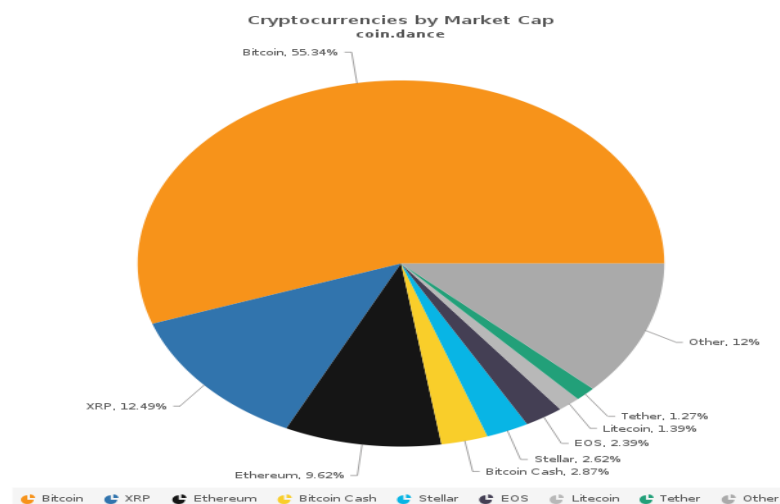
### 3. Cryptocurrencies around the world

The main findings of the studies and surveys conducted by several central banks regarding the evolution of cryptocurrencies and their possible impact on global economy are presented below:

#### 3.1. The risks identified related to the use on a large scale of cryptocurrencies are:

- **Absence of legal status** due to the fact that their circulation is not regulated or supervised and the result is that their users are not legally protected by authorities and will not benefit from the right of redemption or a deposit guaranty scheme, and are more exposed to the various risks that regulation usually mitigates. "There is a risk of illegal activities and deception of investors (similar to financial pyramids)". (Bank of Russia, 2018)
- **Concentration risk** appears because the easy issuance of cryptocurrencies over the internet. In present are in circulation over 1.000 types of cryptocurrencies around the globe, the most important currencies used and their market share are presented in Figure 1.

Figure no. 1 Cryptocurrencies by Market Cap



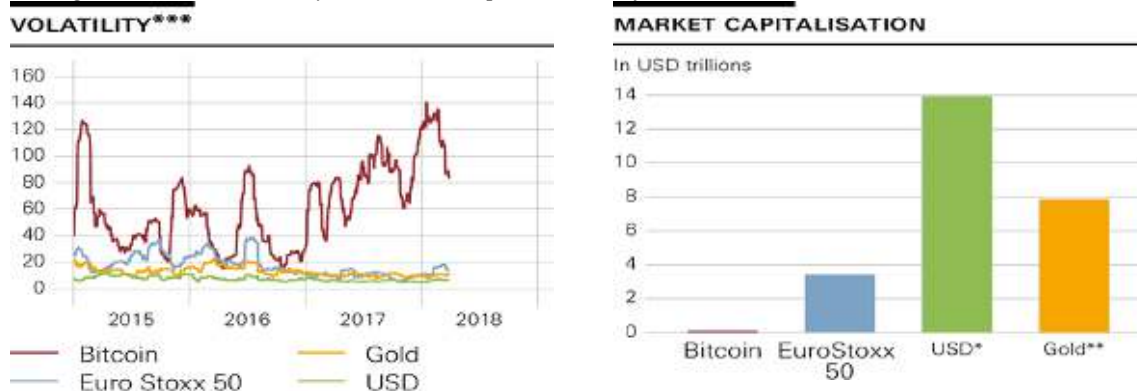
Source: <https://coin.dance/stats>

The top three cryptocurrencies, Bitcoin (55,34%), Ripple-XRP (12,49%) and Ethereum (9,62%); have more than 77 percent of market share, which represent a high concentration risk in cryptocurrencies market.

- **The uncertainty regarding the continuity of their circulation and potential lack of liquidness.** The life expectancy of the cryptocurrencies are not guaranteed and their users could remain with no unit in their virtual accounts for different causes (the bankruptcy of the maker or a possible fraud committed by the issuer etc).
- **The fees of using the cryptocurrencies are very high.** The Bank of Canada concluded in a survey that “the transaction costs were high in 2017 - as much as \$55 per transaction - compared with almost zero for cash.”(Bank of Canada, 2018).
- **Anonymity.** The history of cryptocurrencies’ transactions is kept in the blockchain and the users are identified only by their virtual currencies addresses, which play the role of pen-names (it is almost impossible to connect the pseudonyms with the real persons behind it), so the users could be misinformed about the real beneficiary of their payments and fraudulent activities and fictitious payees could appear.
- **High IT and network dependency** of cryptocurrencies could rise operational risks, such as: technical failures, hacking or lack of electricity etc.
- **High volatility** of cryptocurrencies represents a knotty problem for users and investors in because they will in future either convert into money their virtual currency holdings or they will use them to buy goods, the price of which is usually quoted in currencies and therefore unstable in the case of payments in virtual currency.

In opinion of Swiss National Bank’s representatives the cryptocurrencies “that have no link to a conventional currency (the Swiss franc for instance) display a high level of price volatility. Compared with exchange rates, commodities and equities, cryptocurrencies are subject to very high volatility, and investors must be aware of the financial risks they are taking on when buying them”. The volatility of Bitcoin, which is the first cryptocurrency used around the globe, with a market share over 55% of cryptocurrencies’ market, and its market capitalization compared with the volatility and market capitalization of EuroStoxx50, of USD and of Gold are presented in Figure 2, below.

Figure no. 2 The volatility and market capitalization of: Bitcoin, EuroStoxx50, USD and Gold



Source: Maechler, A.M., 2018. *The financial markets in changing time*, Swiss National Bank, Zurich, pg.10

From figure 2 results that the oscillation in the worth of the Bitcoin is higher compared with the volatility of other assets analyzed, which are more stables and if we consider the low share of market capitalization of Bitcoin, it could be drawn a conclusion that if, in near future, market capitalization of Bitcoin will expand then the use of Bitcoin could pose risks on the financial stability of the financial system.

- **The leverage effect** resulted from purchasing the cryptocurrencies with borrowed funds from banks (for example credit card or other types of bank loans) could enhance risks for investors due to the high volatility of their value (they could have suddenness oscillations of their worth into a short period of time).

### 3.2. The positive aspects of cryptocurrencies are:

- regarding their worldwide circulation: the speed of transfer between virtual accounts and the development of alternative settlement solutions.
  - the cryptocurrencies were created with the purpose that they will replace in the future the money. "The great benefit of crypto cash is seen to be the elimination of the need for public institutions like a central bank or large commercial banks. People using this system don't have to trust an individual or institution but they do have to trust the technology." (Bank of Canada, 2018).
  - the resiliency of a blockchain "that can may enable a network to continue to operate even if some of the nodes on the network are compromised because of the ability of the other nodes in the network to pick up the slack and continue processing transactions". (Federal Reserve, 2018).
- "If these technologies are successfully combined with the existing trust and credit of sovereign currencies, they could contribute in enhancing the efficiency of economic transactions and payments. In this regard, many central banks have embarked on research and experiments of these new technologies. The Bank of Japan has also engaged in the joint distributed ledger technology - related research "Project Stella" with the European Central Bank". (Bank of Japan, 2018).

### 3.3. Central Bank Digital Currencies

From the analyses conducted by the European Central Bank "digital base money already exists in terms of the reserves of the banking sector held at the central bank, but the more recent question is whether central banks should make digital base money more widely available (for example allowing non-banks, including households, to hold accounts at the central bank)." (European Central Bank, 2017)

The decision making on emission of the central bank digital currencies must analyze its impact on the entire financial system. For example "during a systemic banking crisis, holding risk-free central bank issued digital base money could become vastly more attractive than bank deposits. There could be a sector-wide run on bank deposits, magnifying the effects of the crisis.

Overall, there is currently no convincing motivation for the Eurosystem to issue Digital Base Money to the general public". (European Central Bank, 2017)

One of the Bank of Canada' objectives is to examine the conditions, if any, it might recommend to the government that Bank of Canada to issue digital currency.

"The design of a central bank digital currency has important implications on its risks and benefits. Unless the risks identified could be managed through appropriate design, the Bank of Canada would not recommend issuing such a currency." (Bank of Canada, 2018).

The central bank of Norway conducts qualitative analyses in order to determine if a central bank digital currencies' emission would be necessary or unnecessary.

"The use of cash is relatively low in Norway compared with other countries and is declining. It must be considered whether cash has any important characteristics that are not shared by bank deposits and whether there is a need for other forms of central bank money in addition to cash.

Cash has a number of unique characteristics such as: it is a credit risk-free alternative to deposit money; it is an independent back-up solution if electronic systems fail and it is legal tender that can be used by all.

For the Norges Bank, the question is whether a central bank digital currency could supplement cash to maintain confidence in the monetary system and ensure that Norway's future payment system is safe and efficient". (Norges Bank, 2018)

The Swiss National Bank considers that is not necessary the emission of the digital central bank money because the cashless payment transactions made through the monetary system are efficient and innovative.

The opinion of the Federal Reserve is that is not proved yet the need for a Fed-issued digital currency taking into account that "a central bank digital currency could overcome the volatility risks associated with an unbacked asset with no intrinsic value by substituting a digital instrument that is the direct liability of the central bank". (Federal Reserve, 2018)

The Bank of Japan does not have a plan to issue its own digital currency that can be widely used for payments and settlements at this moment.

"Despite cracking down on privately-issued cryptocurrencies, China's central bank, the PBOC, is reportedly considering issuance of its own digital currency. According to a March 2018 interview with the governor of the PBOC, the PBOC has been conducting a study of digital currency for over three years and has set up an Institute of Digital Money within the PBOC." (<https://www.loc.gov/law/help/cryptocurrency/china.php>).

#### 4. Cryptocurrencies in Romania

In Romania cryptocurrencies are not recognized as a legal tender and are not guaranteed by the Romanian government or by the National Bank of Romania.

The National Bank of Romania is not responsible for regulating cryptocurrencies but its "primary objective is to ensure and maintain price stability and has also the task to promote and oversee the smooth operation of the payment systems with a view to ensuring financial stability".

The National Bank of Romania is not taking into account the issuance of its own digital currency.

In Romania the first cryptocurrency used since 2014 was Bitcoin. The Automated Teller Machines of Bitcoin operated by Zebrapay allow the purchase of Bitcoin and of Ethereum, two important virtual currencies worldwide, with cash but the sale of cryptocurrencies in Romanian currency (Romanian leu) is forbidden in Romania.

In October 2018 was launched the first token Roncoin, with an exchange rate of 1 to 1 with romanian currency - leu offering, according to the issuer, protection against price volatility to the users of Roncoin (the slogan is "Keep your money in the most stable crypto asset").

On the official site of Roncoin, <https://roncoin.to/ro>, the Roncoin is presented as:

- a stable cryptocurrency due to the fact that every Roncoin is linked with Romanian currency, Leu, (1 Roncoin is equal to 1 Romanian Leu on Roncoin platform's reserve account);
- a trustworthy cryptocurrency because "Roncoin enables businesses, including exchanges, wallets, payment processors, financial services and ATMs, to easily use fiat-backed tokens on blockchains, using the ERC20 Token Standard Interface. Roncoin offers legal protection with Escrow accounts."
- a transparent cryptocurrency due to the fact that on the Roncoin' internet platform could be seen the values of transactions made. The amount of Roncoin issued will always be less than or equal to the amount of the Roncoin' fiat currency reserves. "Every Roncoins is pegged at a one-to-one exchange rate with a matching fiat currency, the Romanian Leu (e.g., 1 RONC = 1 RON) minus processing fees (which are calculated as follows: Ethereum network mining gas fee + partners exchange fee + bank wire fee) and is 100% backed by actual assets in Roncoin Romania reserve account." The reserve account of Roncoin is regularly audited and is promised a full time access of the users to Roncoin balance. At the same time on the Roncoin site is guaranteed the application of the procedure of know your customer form and approval process is required to issue and redeem Roncoin.

The first regional currency in Romania will be launched at the end of November 2018 in Sibiu (the future European Gastronomic Region in 2019) and the name of it will be SibCoin.

The purpose of issuing the SibCoin is to enhance the community development through the local trade especially with traditional products and will be used only in purchasing the local products.

In the world exists nowadays around 300 local currencies, all of these being listed in Complementary Currency Resource Center, which is an international multi-lingual resource for those interested in local, community, complementary, electronic, commercial barter and alternative currency systems. (<https://community-wealth.org>)

The transactions with Sibcoin will be made using the Community Exchange System (CES) based on the distributed ledger technology system.

In our point of view the Roncoin and the Sibcoin, being new cryptocurrencies, launched in October 2018 and respectively in November 2018 on Romania' monetary market, must be examined closely because the cryptocurrencies are subject to wide variations in their value over time and the users of or investors in cryptocurrencies are exposed to multiple risks presented in chapter 2.

Therefore, the Romanian policy makers, regulators of payment systems needs to permanently monitoring the volumes commercialized and dynamics in value of the Roncoin and of the Sibcoin, even if on the official internet page of Roncoin it is presented as a stable fiat currency.

## 5. Conclusions

The cryptocurrencies could impact negatively the financial stability of payment systems around the world because, in spite of their little share in total of payments made in global economy, they have a large circulation through the internet and their existence is not guaranteed by any legal institution (government agency or central bank) and relies only on the blockchain and the identities of the owners are not known.

At the same time cryptocurrencies can have positive aspects in terms of financial innovation and the provision of additional payment alternatives for consumers.

Given the risks identified (presented in chapter 2), cryptocurrencies seem to be used more for investments or in speculation purposes, due to their volatility, rather than a secure payment method.

For the tasks of central banks, such as ensuring price stability, financial stability and promoting the smooth operation of payment systems the materialization of risks depends on the volume issued, the connection to the real economy, the volume traded and user acceptance.

The central banks, the legislators of payment systems, the policy makers and the researchers from academics should monitoring the development of money and finance and should analyzing the impact of growing circulation of cryptocurrencies on financial systems and financial stability and take adequate measures in order to mitigate the side effects of risks identified taking into account the suddenness oscillations on the value of cryptocurrencies in a short period of time.

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