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**Robert Poskart\***

### **The emergence and development of the cryptocurrency as a sign of global financial markets financialisation**

#### **Abstract**

*The article presents one of the most important, in the author's opinion, manifestations of further intensification of the processes of financialisation of global financial markets, which was the emergence of decentralized digital currencies (so-called cryptocurrencies) based on blockchain technology. Their creation and existence on the global financial market have been widely considered as one of significant effect of the global financial crisis, which symbolic beginning is September 15, 2008, when one of the largest US investment banks Lehman Brothers collapsed. The worldwide COVID-19 pandemic has only highlighted the importance of this effect of financialization. The purpose of the article is to present the impact of cryptocurrencies, including bitcoin, on the deepening of the processes of financialisation of modern financial markets. Author analysis is based on statistical data, on the literature review and documents of world financial institutions.*

**Keywords:** cryptocurrency, financialisation, global financial markets

**JELL Clasification:** E44, G15

**Paper type:** Theoretical research article

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\* Ph. D., University of Opole, Institute of Economics and Finance, Department of Finance and Accounting

## Introduction

The new monetary system, with the US dollar at the forefront as the world's main reserve currency, was created in 1944 on the basis of the post-war order in *Bretton Woods* and ultimately failed to stand the test of time and collapsed on August 15, 1971, when the then president of the United States, Richard Nixon, gave a famous television speech in which he announced that the US was closing the so-called "golden window", which was tantamount to breaking the exchangeability of the US dollar for physical gold. This decision was made as a result of the real threat of total exhaustion of the huge American gold reserves accumulated during World War II. This was caused by the ever-increasing trade deficit of the United States, which in turn was responsible for the huge arms expenditure associated with the need to bear the burden of financing the war in Vietnam. In making this unilateral decision, which was surprising to the financial world at the time, the US authorities also confirmed that they were unable to manage the internal crisis caused by the domestic trade deficit alone, thus recognising the primacy and superiority of capital in private hands. From that historical moment on, a new and very important player has emerged in the architecture of the global financial system, in the form of private capital, which has benefited from diversified financial activities, until now completely ignored by the post-war order set up in *Bretton Woods* (Dembinski, 2008; Galbraith, 1994; Griffin, 2002).

From the moment the United States closed the previously mentioned "golden window" and the exchangeability of the US dollar for gold ceased, the historical era of fully gold-covered money (1 oz gold = USD 35) came to an end and a completely new era began, governed by different laws, namely the era of paper money, the so-called fiduciary money, based only on society's trust in the solvency of state institutions and the stability of the entire financial system (Rothbard, 1983; Selgin, 2017). The consequence of this was that contemporary money took on the character of merely symbolic money, i.e. money whose cost of production is many times lower than the value it represents - denomination (purchasing power) (Skawińska, Sobiech-Grabka, Nawrot, 2010). In the current financial system, parallel to money in paper form, there is also non-cash (intangible) money in the form of electronic money.

The fact that money did not have to be covered by gold bullion from now on has caused changes over the years consisting in the loosening of bilateral relations between the financial sphere and the real world economy. This resulted in the emergence of opportunities for the unrestricted creation of money by the banking system, the emergence of innovative but also risky financial engineering products in the form of complex derivatives, the abolition of capital flow controls, the globalization of corporate activity

and the pressure of shareholders to maximize stock market capitalization and the rate of return on the capital of transnational corporations (Mishkin, 2006; Stiglitz 2003). This has enabled an explosive increase in the value of global financial assets in relation to non-financial assets, manifested by the dynamic growth of the former's share in global GDP. Serious and at the same time irreversible changes has been triggered in the entire global economy, it has been called the process of its financialisation (Dembinski, 2008).

According to Paul H. Dembinski, the progressing financialisation of the world economy consists in a permanent increase in the share of the financial system in the process of creating global GDP. The consequence of this is an excessive increase in the importance of markets and financial institutions (the financial sphere of the economy) compared to the constantly decreasing importance and shrinking potential of the real sphere, where specific goods and services are produced for the needs of real investments and current consumption. In the case of some countries (USA, UK, Switzerland) the financial sector has even become the main engine of economic growth (Stanislawski, 2013). The financial sector itself has evolved from a bank-based system model to a financial market model. The unrestrained development of the latter, combined with the ever-present temptation to abuse the global financial system - *moral hazard* - resulted in a dramatic drop in confidence, not only in the financial markets but also in the very essence of money, which was one of many serious consequences of the global financial crisis that erupted in 2008 (BIS, 2009; Roubini, Mihm, 2010; Schiff, 2012). Despite a gigantic crisis of confidence in the ubiquitous fiduciary currencies - fiat, based only on faith in their so-called value, the system did not return to the gold standard that had been known for centuries, and there was a certain revolution not so much in the system itself, but on its "periphery". It resulted in the creation of independent from the main system, at the same time completely uncontrollable from the outside and independent in its essence cryptocurrencies, based on blockchain technology. According to the author of the article, it even revolutionized the process of financialisation and pushed its development in a completely new, so far unpredictable direction, which is part of a slightly broader framework of the increasingly common phenomenon, the so-called virtualization of money (Gilder, 2015).

Decentralized digital currencies started to have a significant impact on the future of the traditional financial system, becoming its successor or an important (key) complement (Laboure, 2020), as they have the properties to compensate for the significant shortcomings of the traditional system, thanks to the use of new technologies such as blockchain and IT ecosystems built on its architecture,

revolutionary in their capabilities (Poskart, 2020). In the global financial system, classical banks are beginning to play a smaller and smaller role, slowly losing their market position to FinTechs. The current capitalization of the latter, together with non-bank payment institutions, already represents about 30% of the value of the 500 global financial institutions (Dimon, 2020). The processes of the inevitable transformation have been further amplified by the emergence of the so-called "black swan" – the COVID-19 pandemic and the subsequent lockdowns implemented by governments of the most developed countries of the world. Authorities of monetary institutions, such as central banks and international regulators, in all developed countries seem to be concerned about this development out of fear for the future of the legacy financial system (D'Urbino, 2021; Lagarde, 2018, Carstens, 2018).

There have been some scientific studies devoted to the subject of the evolution of money as such and its future (Bitros, Economou, Kyriazis, 2020). There are a few scientific studies focused on the possibilities of achieving higher-than-market-average profits as a result of trading on this market and its level of efficiency (Kyriazis, 2019; Stosic, Stosic, Ludermir 2018). There is a block of literature that examines the cryptocurrency market as a speculative bubble or cryptocurrencies as a means for money laundering, drug trafficking and terrorist financing (Geuder, Kinateder, Wagner, 2018). In existing literature has been highlighted cryptocurrencies acquisition, so-called mining (Eyal, Sirer, 2014). Nevertheless, there has been very little research on the emergence of cryptocurrencies as an evolution of the system and its financialization.

The article presents one of the most important, according to the author, manifestations of the global financial markets financialization process further intensification (deepening) which was the emergence of bitcoin and its subsequent explosive development, as well as other decentralized digital currencies (the so-called cryptocurrencies) based on blockchain technology. The fact of their emergence and appearance on the global financial market is widely regarded in the literature as one of the global financial crisis many significant effects for which the symbolic beginning is assumed on September 15, 2008, when one of the largest American investment banks, *Lehman Brothers*, was declared bankrupt.

The aim of the article is to show the influence of cryptocurrencies, including bitcoin, on the financialization processes of contemporary financial markets deepening. Thus, I develop the hypothesis that the emergence of cryptocurrencies is another manifestation of the financialization of the global economy. The structure of this article is as follows. The first part of the article describes what structural factors had to be present in order to create a favourable environment for the private market of cryptocurrencies

with bitcoin at the forefront. Further, the definition considerations on the notions of cryptocurrencies and bitcoin are presented and it is shown how they differ from money in the traditional sense. Then, the reasons for the explosion of interest in the cryptocurrencies market and its entry into the mainstream media were described followed by a summary and conclusions.

### 1. The creation of bitcoin and other cryptocurrencies

The emergence of bitcoin and other cryptocurrencies phenomenon was considered to be one of the many significant consequences of the crisis on the global financial markets (Poskart, 2015). The actions taken then by the central banks of the world's leading economies, headed by the US Federal Reserve System (*FED*), the most influential regulator of financial markets, aimed at rescuing the global financial system, resulted in the application on an unprecedented scale in the post-war financial order, on a mass scale, of non-standard monetary policy tools known as *QE- quantitative easing*. The intention was, in a nutshell, to print huge amounts of money (initially at a rate of USD 60 billion per month) and "pump" it into the world monetary system. It caused a justified increase in inflation concerns of investors majority, while at the same time causing a drastic crisis of confidence not only in institutions acting as market regulators, but also in the entire global financial system (Mises, 1953; Paul, 2009). The "need of the moment" has forced, in a way, the existence of bottom-up innovation processes, aiming in a longer perspective at overthrowing the monopolization of the money emission process, so far reserved for central banks. The sign of those times was the appearance of the first private cryptocurrency in the world, known as bitcoin (BTC)<sup>†</sup>. It was initiated by publishing in the Internet, on November 1, 2008, a manifesto signed by an anonymous creator (or a group of creators) under the pseudonym *Satoshi Nakamoto*. The manifesto contained both, the explanation of the cryptocurrency mechanism itself, and the entire architecture of the so-called *blockchain* system. It has many "advantages" over the classical money system architecture, among which the leading one seems to be decentralization, preventing any "manual" control of the *blockchain system* (Nakamoto, 2008), not to mention the "empty money printing", used on a mass scale and in a coordinated way in the current money system by central banks of the leading world economies (FED, ECB, BOJ). The rapid growth in the valuation of the entire cryptocurrency market, is expressed, among other things, in the ever-increasing number of digital currencies, of which there are now more than

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<sup>†</sup> The name bitcoin itself refers to both the unit of digital currency (cryptocurrency) and the IT system for making transfers in this currency, written in capital letters- Bitcoin.

10,000, which, compared to about 180 (according to UN data) national currencies, means that there are now about fifty-five digital currencies per national currency. It is not without significance to observe the relatively large market capitalization of digital currencies, currently exceeding USD 1.6 trillion (Coinmarketcap.com 2021), which, on the one hand, testifies to the enormous potential of this market (Kyriazis, 2019) and its constantly growing importance in the so far, as a rule, conservative financial world. On the other hand, this phenomenon may also be related to the declining trust in centralized financial markets, regulatory institutions, supervision combined with a simultaneous increase in inflationary fears and the desire of investors and other money users to escape negative interest rates. It seems that in the current difficult situation in which the world economy found itself: in the era of the global COVID-19 pandemic and lockdowns of the world's largest economies, the search for answers to questions about the future of the global financial system has become even more urgent than before.

## **2. Bitcoin and cryptocurrency definition**

Until the creation of bitcoin, the concept of cryptocurrency was unknown to the world. The most important cryptocurrency of the world – bitcoin, which seems obvious, was defined at the very beginning by its creator – *Satoshi Nakamoto* in 2008. He described it as "a fully-fledged version of electronic money, based on *peer-to-peer* network communication models, allowing online payments to be sent from one entity to another without the need for transactions to flow through financial institutions". In other words, the Bitcoin network functions without any intermediaries, i.e. without the participation of the trusted third party, which until now had been banks with their transaction systems (Nakamoto, 2008).

The first definition of virtual money - cryptocurrency included in an official financial institution document appeared four years later in the European Central Bank, published in October 2012, entitled *Virtual Currency Schemes*. Virtual money is defined there as a type of unregulated digital money, which is issued and usually controlled by its creators and used and accepted by members of a specific virtual community (European Central Bank, 2012). Such money has no physical (material) representation, it functions only in the digital universe.

A slightly different definition of digital currencies was proposed by the European Banking Authority (EBA). According to this definition, virtual currencies are digital representations of value, not issued by a central bank or public authority, not necessarily linked to the currency of a specific country, but recognised by natural and legal persons as means of payment that can be transferred, stored or traded electronically (NBP, KNF, 2017).

Very interesting approach to the treatment of the essence of virtual currencies (cryptocurrencies) was presented in Poland in the Act of 1 March 2018 under the revealing name of anti-money laundering and terrorist financing. According to this act, virtual currency is understood as "a digital representation of a value that is not:

- a) legal tender issued by the NBP, foreign central banks or other public administration bodies,
- b) an international unit of account established by an international organisation and accepted by individual countries belonging to or cooperating with that organisation,
- c) electronic money within the meaning of the Payment Services Act of 19 August 2011,
- d) a financial instrument within the meaning of the Act of 29 July 2005 on financial instruments trading,
- e) a bill of exchange or cheque

– and is exchangeable in the course of trade for legal tender and accepted as a means of exchange, and may be stored, transferred electronically or may be the subject of electronic commerce" (Dz.U. 2018 poz. 723).

This definition shows the great caution shown by the central authority, which constitutes a generally applicable national law, with regard to a decentralised, unregulated and unmanageable block-chain system that is able to „value digital mapping". The name of the act suggests the government's lack of support for a system that could compete not only with central banks but also with the entire global banking system in the future.

All the quoted definitions, especially those published by significant institutions of the world of finance and the bodies constituting the law specifying what digital (virtual) currencies really are or are not, prove that bitcoin and other cryptocurrencies ceased to be a niche phenomenon at the moment of their publication and it was impossible to continue to ignore this phenomenon pretending that it simply does not exist. It had to be somehow systematized, outlined, matched and placed against the background of the contemporary understanding of the money phenomenon. Since then, bitcoin and other leading currencies, such as the ethereum, ripples started to appear in official documents of the Bank for International Settlements (called the Central Bank of Central Banks) and the International Monetary Fund (IMF, 2016), the World Bank (World Bank 2014), which deal with the challenges of the global financial system future (BIS, 2018).

### **3. Spectacular increase of bitcoin and other cryptocurrencies popularity in the mainstream as a cause and effect of financialisation**

The advantage of bitcoin and other cryptocurrencies is that they cannot be printed in any quantity as it is the case with the classic fiduciary currencies. Unlike traditional money, the supply of bitcoin is not controlled by any central unit and, moreover, it is predefined - as a result of the algorithm built into the system it will never exceed 21 million pieces, which is likely to occur around 2140 (Nakamoto, 2008). It is growing systematically, although at an increasingly slower rate, which is the result of the increase in the BTC „extraction” difficulty i.e. cryptographic calculations that must be carried out by computers with ever-increasing computing power - the so-called "excavators" - in order to cope with the increasingly difficult degree of new currency units "extraction". In this way BTC imitates with its behaviour physical gold, the supply of which is also constant, growing slowly and steadily as a result of the ore new extraction on the Earth<sup>‡</sup>. Another attractive feature from the user's point of view, which distinguishes bitcoin and other cryptocurrencies from traditional money, is the fact that its market, unlike traditional markets, is decentralized, with no geographical or time restrictions, operating 24 hours a day, 7 days a week and 365 days a year.

Initially, bitcoin was a completely unknown digital asset functioning only in a closed community of computer scientists, computer *geeks* (enthusiasts), it remained for the majority of society as a complete avant-garde. Later on, it began to be used more and more widely by criminal circles for the purposes of the so-called *dark economy*, i.e. for trading in legally prohibited goods and services on the famous *Silk Road* platform, among other things, and then it began to gradually reach the *mainstream*, it was primarily due to its constantly rising price, which in turn encouraged further growth in its value. As information about spectacular increases in value began to appear on the Internet, on social networking platforms and in the so-called mainstream media, this additionally fuelled interest and thus further price increases not only in this asset but also in the broad market of other digital currencies. This inflamed the imagination of potential investors, which resulted in the emergence of the so-called speculative mania, already known many times from history (and not only the latest), causing an explosive increase in bitcoin prices. At that moment, it was driven by the capital flowing from beginner investors, who had no experience

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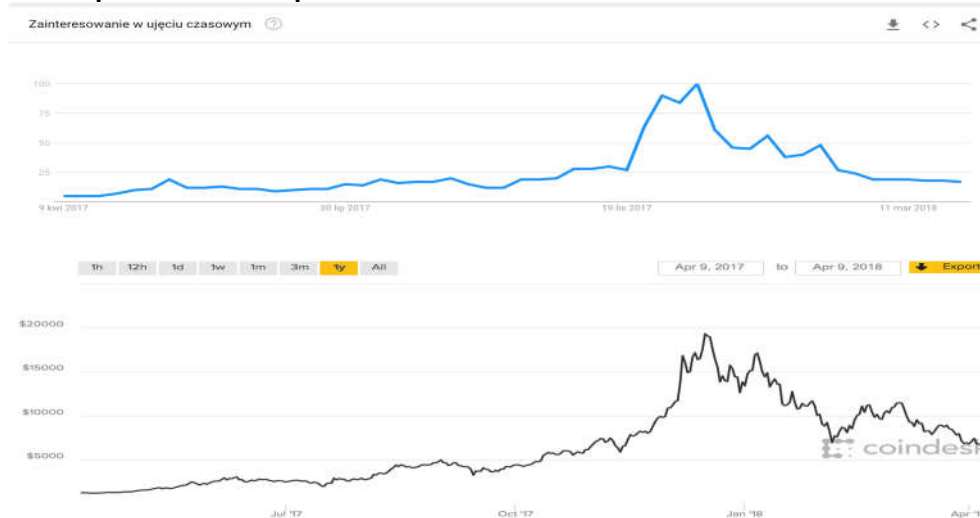
<sup>‡</sup> Bitcoin is also divisible to the eighth decimal place, i.e. it is divided into as many as 100 million parts, called satoshi (the equivalent of the grosz in the case of PLN). There is therefore no reason to fear that the currency may run out in the future. For comparison, traditional currencies are quoted to four decimal places and physical cash to two.



at all, wanting to benefit from a hypothetical future increase in the price of bitcoin, which was only supposed to be more and more expensive.

To present the above described situation, the frequency of entering the phrase "bitcoin" in the world's most popular web browser google was compared with the bitcoin (BTC) rate expressed in USD (Figure 1).

**Figure 1. The popularity of the phrase "bitcoin" on google trends in comparison to BTC price in USD**



Source: <https://trends.google.com/trends/explore?q=bitcoin>, <https://www.coindesk.com/price/>, 2019-11-20.

Analyzing both graphs a perfect correlation of the increase in Internet users' interest in bitcoin is shown, which always appeared when its course had spectacular increases. The interest in this digital asset grew, which resulted in a further increase in its price. Parallel to the rise in prices, the bitcoin interest increase on the Internet proves that non-professional capital, belonging to beginner investors, often without any knowledge and experience, started to invest in bitcoin, thus providing fuel for further increases and pumping it to sky-high values, reaching several thousand USD for one BTC. Most investors believed that in the near future bitcoin will be worth even USD 1 million, as many influencers, the so called "reprimanders/ shills" in Polish, convinced many of them. It did not take much to break through this bubble.

It can be assumed that an additional reason for the popularity of digital currencies among the mainstream media is the ubiquitous and widely advertised affirmation of consumerism, which results in a desire to quickly enrich oneself, preferably without any work, but through speculation -

previously on the stock exchange or the Internet platform for currency exchange, called Forex (Foreign Exchange Market), and nowadays on cryptocurrencies. All this combined with speculative mania and "bandwagon effect" caused the speculative bubble on bitcoin to inflate at the end of December 2017, when the price of bitcoin rose almost instantaneously to an incredible USD 20,000 per 1 BTC, which was then equivalent to almost 14 ounces of gold<sup>§</sup>. At the beginning of January 2018, when the price reached its peak, most investors wanted to make profits and started selling their bitcoins. It turned out then that there was a shortage of people willing to buy at such price, and the bubble burst. This was the time when there were sudden and powerful price drops in the market. The drop in the price of bitcoin stopped only at USD 8,000 per 1 BTC - which meant a 60 % drop in its price from the peak of the bull market. In this spectacular way, bitcoin became a speculative bubble of all time, breaking even the famous 17th century Dutch Tulip Mania and the 18th century British Southern Seas Company bubble (Monaghan, 2018). The value of bitcoin has risen to \$68,000 in September 2021 before drop nearly about 50% to \$36,000 in December 2021.

Another, in the author's opinion, obvious reason for a huge increase in interest in this new, revolutionary carrier of values – digital assets such as bitcoin and other cryptocurrencies, which is one of the manifestations of financialisation, the progressing phenomenon of contemporary money virtualization, performs more and more often its functions not in the physical form, i.e. classic, old-fashioned physical cash, but electronic money, which is only an electronic record on a carrier that can be both a payment card and a smartphone, and recently even a smartwatch (Maciejasz-Świątkiewicz, 2017). The dynamic development of the Internet in recent years has caused a significant part of human activity to move to the Internet. Thereby, there has been a process of their migration from the real world to the digital (virtual) sphere, thus creating a completely new, previously unknown in human history, artificial (synthetic) reality, the so-called virtual reality. For the whole young generation of users, the so-called Z-generation, money is usually identified almost exclusively with the electronic (virtual) record in a smartphone, and not with physical cash. For a user with such an advanced level of absorption of modern technologies, cryptocurrencies are (become) the next stage of money evolution. Sometimes they become even better money, because they are not subject to the control of the financial system with central banks at the forefront and can be traded without time limits. It should be stressed at this point that for many representatives of the current new generation of young investors who grew

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<sup>§</sup>It is worth noting that Bitcoin debuted on MtGox for the first time on 17 August 2010 with a price of USD 0.063/BTC.

up in a bitcoin bull market, traditional investing in the stock market is simply boring and not very exciting, and the commissions required for intermediation by financial institutions are not among the lowest either. Moreover, it is empirically correct that every new generation entering the investment market has less risk aversion and chooses more risky - variable instruments than their predecessors (Malmendier, 2007).

The previously stated theses should be confirmed by the American service Cryptoradar research conducted in September 2019 in the USA. They proved that users interested in cryptocurrencies are younger than the age of 35, mainly men, while total sceptics are people over 65 - as many as 74.3% of respondents in this age group declare unwillingness to engage in this type of investment. The research also showed that 6.2% of the adult population = 20 million Americans declared that they had bitcoins. A similar study conducted by ING Śląski Bank in Poland in 2018 indicated that the percentage of Poles owning bitcoins was 10%, but these results were considered to be slightly overestimated by experts ([www.bankier.pl](http://www.bankier.pl), 2019).

#### **4. Summary**

This article presents the impact of the emergence of a completely new class of assets, i.e. digital and related cryptocurrencies assets, on the intensification of the constantly evolving financialisation process for several years.

The emergence of bitcoin, as this paper attempts to prove, was a kind of precursor – an impulse that started the development of digital cryptocurrencies in the world, thus giving an impulse to create a completely private, denationalised, independent of any central banks and governments, uncontrollable global value transfer system as an alternative to the current monetary system.

Bitcoin and other digital currencies, by gaining extraordinary popularity, especially among the young generation Z, which has grown up in the Internet world, have contributed to the deepening of further processes of money virtualization and financial markets financialisation thus becoming a future competitor, not only for all fiduciary currencies, ubiquitous in the modern world financial system, but also for the existing transaction systems (networks) in the traditional banking system.

Another important factor intensifying the further financialisation of the system is the fact that for the new generation, which grew up on bitcoin bull market, cryptocurrencies are simply another form of money. Variability of this market does not frighten them as much as others, because you can make above-average profits and losses on it, of course, can also be more severe, but as research shows, investors who achieved above-average rates of return in the past (e.g. on cryptocurrencies) are not afraid to take above-average risks.

The ubiquitous digitalization of social relations, trade relations and further virtualization of modern money and the financialisation of markets will, in the far or near future, lead to the entry into the so-called *cashless society* era, and this in turn will create completely new opportunities, as well as completely new threats with the loss of anonymity at the forefront. The worldwide COVID-19 pandemic has only strengthen this trend.

The author is aware of the fact that the topic has not been sufficiently exhausted in the article, however, it is a signal of the problem and a contribution to further discussion on the changes progressing on the financial markets. The processes analysed in the article are the subject of the author's current research conducted in several countries. The results of this research will provide material for a publication which will present more clearly the signalled research problem.

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