The Spanish Review of Financial Economics

www.srfe.journals.es

WILL CRYPTOCURRENCY BECOME A "DIGITAL GOLD" IN THE CONDITIONS OF GLOBAL FINANCIAL INSTABILITY?

SVETLANA V. TUTUNNIKOVA [a] and DMITRIY A. RIABOVOL [b]

[a] Doctor of Sciences (Economics), Professor, Professor, Department of Economic Theory and Economic Management Methods, V.N. Karazin Kharkiv National University (4 Svobody Square, Kharkiv, 61022, Ukraine).
[b] Student, Faculty of Economics, V.N. Karazin Kharkiv National University (4Svobody Square, Kharkiv, 61022, Ukraine.

Abstract

The article is devoted to the problems of the role of cryptocurrencies in the context of increasing financial instability, the intensification of their use in the form of alternative investment assets. Authors analyze the history of the emergence of cryptocurrencies, the reasons for their ups and downs, their potential ability to play the role of investment assets. This article attempts to assess their strengths and weaknesses, the possibility of its transformation into "digital gold" and an effective tool for maintaining the stability of the financial market. It is also indicated that in the context of a multidimensional socio-economic crisis, including social, medical, cultural, moral, etc., a financial crisis was provoked due to the presence and growth of the number of threats (e.g., it is worth mentioning that 98% of financial transactions are speculative). It is impossible not to consider the risks that unverified decisions regarding cryptocurrencies can potentially lead to. Diverse processes of using cryptocurrencies with varying degrees of success in different countries of the world serve as rich material for studying the possibility of institutionalizing this market segment and incorporating new decentralized mechanisms into economic systems.

Keywords: cryptocurrencies, economics, financial crisis, instability, investment assets, speculative capital, blockchain technology, innovation

INTRODUCTION

2020 – early 2021 have been marked by significant, unforeseen, and massive global economic and social shifts. The global pandemic has become a catalyst for many financial processes. It is worth briefly identifying some of them.

The current state of the financial system testifies to its global all-consuming nature, which is reflected in the dysfunction of many instruments and separation from the real sector, along with the growing speculative nature of operations.

In the wake of concerns about the possibility of the spread of unpredictable effects on the global economy, provoked by the COVID-19 pandemic, in March 2020, global financial markets showed a significant recession, literally in a matter of days eliminating the growth of the previous several years.The S&P 500, which reflects the dynamics of the development of the largest US companies, declined 34% from February 19 to March 23, returning to the level of early 2017. In turn, the Dow Jones Industrial Average showed negative dynamics of 13.74% in March, showing the worst result since 2008 (Imbert, 2020). The global decline in prices of the world's biggest corporations (including the technology sector), now referred to as the "2020 stock market crash", marked the end of one of the longest periods of continuous growth in financial markets, which lasted since the end of the 2008 crisis. In the current conditions, which threatened the well-being of both small and medium-sized business owners and millions of workers who, due to their specialty, cannot perform work functions remotely, the government of the United States (the largest economy in the world) made an unprecedented decision to start large-scale stimulus measures (Investopedia). It should be noted right away that since the "Nixon shock" of 1971, the cancellation of the gold standard, and the backing of the world reserve currency, the circulation volumes have gradually and constantly increased – from $273 billion in 1975 to roughly $4 trillion on March 9, 2020 (the so-called "Black Monday") (FRED, 2021).

The measures taken increased the money supply (M1) to $6.5 trillion as of November 2020 (and taking into account the upcoming additional emissions worth more than $1 trillion, it can be stated that about 50% of the total world supply of the US dollar was created in 2020) (the same source). Of course, such measures cannot have a positive effect on the purchasing power of the world reserve currency, which has become the strongest factor in the reorientation of the global capital markets towards the so- called "defensive assets" designed to play the role of a stabilization mechanism during large-scale financial shifts. During this turbulent and controversial period, fearing the high rate of the impending wave of inflation, investment capital suddenly turned to a wide range of assets of this type. One of the traditional ones in this category is gold, the price of which has grown over the year from $1600 per ounce to more than $1900 (goldprice.org, 2020).

In turn, Bitcoin is a digital, completely virtual currency, which is backed only by computing and mining capacities distributed within the global network. It is also considered to be one of the risky assets, but in modern conditions, is more and more often compared to gold (because of the limited supply of 21 million units, despite the fact that about 80% have already been mined). Moreover, the Bitcoin is created with a so-called halving mechanism that reduces the reward for the volumes mined within the framework of the functioning of computing power (which is halved every 210 thousand mined blocks, or approximately once in every 4 years) (BBC News, 2020). This is considered necessary to ensure a gradual decrease in the supply of a cryptocurrency, thereby making it rarer, and therefore a valuable asset. This can be broadly described as a digital anti-inflationary mechanism. One of these phenomena just happened in May 2020, when the world markets were still far from stable, which also became one of the stimulating factors for investors making investment decisions in the face of high volatility in traditional financial markets.Thus, this article has a goal described as such: based on the generalization of the experience of the functioning of cryptocurrencies in modern crisis conditions, to assess the possibility of their performance as investment assets and means of payment.

MATERIALS AND METHODS

In the process of creating this research paper, authors used such methods, as: an interdisciplinary approach to assess the complex phenomenon of cryptocurrencies; systemic – to investigate the problem of scientific knowledge at the stage of general theoretical substantiation of issues related to the possibilities of effective and safe use of cryptocurrencies as investment assets; historical and logical – to comprehend the trajectory of development of virtual currencies in the market economic system. Authors also used some specific methods, such as: statistical – for processing the data necessary to formulate research results in order to confirm the previously made general theoretical generalizations; generalization methods – in drawing up the conclusions of this article. The research is based on modern materials from monographs, articles, and publications of national and foreign authors, data from statistical agencies. The studied information from various sources is summarized and presented in a convenient form for understanding the ongoing processes and justifying the need for directions for further in-depth research. The scientific novelty of the article lies in the fact that it proved the impossibility of fully utilizing the investment and payment potential of cryptocurrencies in conditions of an institutional vacuum. Authors present considerations regarding the possibility of converting cryptocurrency into "digital gold" on the basis of such state regulation, in which its positive characteristics will strengthen and its negative aspects will be leveled.

RESEARCH RESULTS

Global changes in the face of both social aspects in the context of a pandemic (such as lockdowns of entire countries) and the largest emissions of the US dollar led to the fact that investors, looking for alternative assets, turned their attention to Bitcoin, which was created by an anonymous programmer Satoshi Nakamoto after the 2008 crisis, and was conceptualized specifically as a stabilizing asset in response to the largely ineffective actions of financial institutions (that led to a devastating crisis that began with the mortgage market).

In order to illustrate the importance of these factors stimulating demand for the first cryptocurrency (and other projects, so-called "altcoins"), it is worth citing the dynamics of its price growth, the rates of which currently exceeds all other assets of this class, and even surpasses the dynamics of the most actively expanding public companies (e.g. Tesla, Amazon, Facebook, etc.). So, on January 1, 2020 (before the unfolding of significant global financial and social transformations), the price of the first cryptocurrency (according to the resource CoinMarketCap.com) hovered around $7,200, while on December 31 of the same year, its price reached $29,100. Moreover, in order to reach the level of a new historical maximum – more than $40,000, it took Bitcoin only about a week (this mark was already fixed on January 8, 2021) (Seward, 2021). In total, over a period of just over a year, the positive change in the price of the asset was over 450% (Figure 1).

Figure 1. The dynamics of the price of Bitcoin in the period of 2017–2021, in US dollars (CoinMarketCap)

It is worth considering in more detail the reasons for such dynamics, assessing the role of the cryptocurrency asset market in the face of global financial turmoil and the possibilities for high inflation rates of the world reserve currency, along with restrictions on doing business and the movement of citizens. Of course, such a large-scale growth could not be the result of only a chaotic private demand (as, for example, happened during the last "cryptocurrency boom" in 2016-17, which was largely the result of not only justified investment demand, the desire to pay for goods and services using a decentralized mechanism, but also mass coverage of this topic in the world media). So, as demonstrated below, the first and most important impulse in the current growth period was generated by a completely different category of investors.

One of the reasons for such changes in the cryptocurrency market in modern conditions was, beyond any doubt, close attention from large institutional investors. Companies such as MicroStrategy Inc., Galaxy Digital Holdings, and Square Inc., which make up the three largest trusts among institutional investors, currently (January 9, 2021) own 91.5 thousand BTC worth over $3.7 billion (bitcointreasuries.org). Moreover, their purchases of Bitcoin, widely discussed in media, taking place in the conditions of the so-called “bull market” (for example, in mid-December 2020, when its price has already crossed the $20,000 mark – the historical maximum of 2017), are also a stimulating factor for the expansion of the limits of demand for such, as the historical review shows, a speculative asset, presented in a new light of "protective" one.

Based on this example, it can be stated that the investment demand of the largest companies at the moment does not focus on technological solutions, innovative projects, but rather on the opportunity to replenish their portfolio with an asset showing good (even unprecedented) results in the face of unpredictability of financial markets and massive emission of the US dollar.

As for the factor of expanding the availability of cryptocurrency transactions (which for a long time,and even now seem to be difficult for the majority of even active Internet users), it is worth giving an example that one of the largest companies in the sphere of electronic payments, PayPal, made available the function of buying cryptocurrency right in its application for a base of over 360 million users worldwide (Robinson, 2020). This was followed by several well-known companies and investors, such as Visa Inc., Massachusetts Mutual Life Insurance Co. (a company with a 169-year history), Eric Peters and Alan Howard (Brevan-Howard Asset Management), one way or another showing themselves in terms of initiating investments in cryptocurrencies (sometimes for hundreds of millions of dollars), which also served as a sufficient reason for the influx of new players to this market and further "boom" of Bitcoin's price.

It should be noted that the production, maintenance, and storage of cryptocurrencies takes a lot of energy, which does not make them cost-effective. We should also consider the carbon footprint of cryptocurrencies and an increase in the number of companies accepting crypto for payment, – there are already over 250 of them in the world (ICOholder Blog, 2020). Yes, in comparative terms, this number seems to be extremely insignificant (in the United States alone, there are over 18 million employers – from small one-employee organizations to the largest corporations), but it should also be taken into account that among this small group there are such global players, like Domino's Pizza, Microsoft, Shopify.com, Stripe, WordPress, Tesla, airBaltic, etc., which significantly increases the potential for using cryptocurrencies as a routine payment instrument for millions of people (DMDatabases).

According to the currently widespread opinion among researchers in this space, it is these above- mentioned aspects that significantly distinguish today's price rally from the one that occurred in 2017, when the price of bitcoin increased more than tenfold in a year, only to lose about 90% of its value throughout next several months. Refraining from assessing the likelihood of such a scenario in relation to the modern market phenomenon (since this is not the main purpose of this publication), in this regard, it is still worth paying attention to an extremely important aspect concerning the consequences of such a “boom” and unforeseen growth.

The wave of interest generated by large players seeking to diversify their investment portfolios by investing in cryptocurrency as part of carefully planned investment strategies with a reasonable and acceptable level of risk for them also spurs small private investors and ordinary citizens to invest their savings in the hope of quick profits. We can describe the 2017 price rally as a classic phenomenon of the formation of a financial bubble, supported primarily by the *emotions* of the players, and not by strategies based on fundamental analysis. In our opinion, the activation of such a process in today's price conditions may have negative results (proven to be realistic more than once in the past) – the loss of a significant part of their investments for those who sought to enter this market without proper analysis, not understanding its unpredictability and high volatility. Following the mechanisms of global influence in the era of social networks and succumbing to several psychological effects, such as fear of lost profits and a complete commitment to the idea of decentralization (even though Bitcoin itself is not the most anonymous and decentralized asset), many small investors can initiate irrational investment actions. Moreover, this asset, as some studies show, can even be consciously manipulated by large players (Lee, 2021)!

Nevertheless, it is worth noting that the desire to diversify their investment portfolio – for both large and small private investors with the help of investments in cryptocurrencies, – may also have several significant reasons. For example, according to information published in the Bitcoin Investment Thesis study from Fidelity Digital Assets, part of Fidelity Investments (one of the world's largest financial services corporations), Bitcoin has a correlation coefficient with other assets such as gold, stocks, investment trusts in the real estate sector (REIT) at the level of only .11, which means its extremely low dependence on fluctuations in individual areas (Fidelity Digital Assets & Bhutoria, p.8).

In addition, it is worth noting the aspect of the liquidity of this asset. As a rule, investors strive to make their portfolio not only sufficiently diversified but also highly liquid. In the case of investments in cryptocurrency, even despite the large volumes of individual transactions, this is achieved due to the very digital essence of this asset, as well as the high activity of traders working for a very limited time horizon and making large transactions. For example, the daily trading volume of Bitcoin as of early January 2021 reaches more than $100 billion (according to the resource CoinMarketCap.com), although it should also be borne in mind that this indicator also includes those flows that are sent through Bitcoin to buy other, less popular cryptocurrencies. This market has virtually no barrier to entry and is also fairly easy to track in real time, which also provides investors with a fair amount of awareness and flexibility in decision making.

Nevertheless, it is also worth noting once again the high volatility of cryptocurrencies, which continue to be a highly risky and speculative asset, even taking into account the “protective” instrument halo created in the current conditions. The fact is that since its previous price rally in 2016-17, Bitcoin has not undergone significant changes in technological terms – there has only been an increase in the complexity of its mining (which can also be a positive price factor, but still cannot explain significant fluctuations of its price). The role of cryptocurrencies and projects based on blockchain technology is still quite insignificant against the background of the development of the financial technology market. Yes, some projects are already showing certain positive results – in terms of the speed of transactions and their security, the possibility of decentralizing the entire process, but they are still at the stage of initial adoption, and in some cases even of "dispelling overestimated expectations" (the most active phase of which followed immediately after the previous price collapse). It is also worth noting that the blockchain technology itself, which underlies cryptocurrencies, does not always find its main application in this direction. According to a recent survey, the five most promising uses of blockchain technology in organizations can be summarized as follows: digital currencies (33%); data access and processing (32%); protection of personal information (31%); making payments (30%) (De Meijer, 2020). As for the geographic distribution of blockchain innovations, itshould be said that 59% of respondents from China noted that their organization already uses blockchain solutions in one way or another in its core business, while in the United States, this figure barely reaches 31% (that same source). Another important factor for a holistic assessment of the phenomenon of the cryptocurrency price rally in 2020-21, is the presence of sufficient barriers for the implementation of blockchain-based solutions. And one of them is just the psychological aspect, which in the last few months especially showed itself. The fact is that on the scale of public opinion, blockchain technology is closely related to the cryptocurrency environment, which has already presented itself in an unfavorable light of its volatile and speculative nature. In addition, it can be noted that blockchain technology firstly carries the potential to change the company's business processes themselves, and only then its technological basis, which is also a barrier to its further expansion because of the overall complexity of the transition to new operating principles (De Meijer, 2020).

Being in many ways a classic example of "disruptive technology" (according to the terminology of the author of the book "The Innovator's Dilemma", Clayton M. Christensen), blockchain and cryptocurrencies based on it seek not to supplement the existing mechanisms of financial and information operations, but to transform their deep essence, making them more effective and adequate to the current prevailing conditions during the development of the Fourth Industrial Revolution. Like any technology of this magnitude, the blockchain also goes through several development stages that can only be assessed from the "height" of their global and fundamental consideration. In our opinion, the cryptocurrency boom taking place today can be regarded more as a kind of offshoot of this movement, and not as an effective continuation of it, due to both its relatively low degree of technological foundation and due to its inner nature – a reaction to the global financial turmoil, which like any "black swan", can fade away just as quickly. A more complete, detailed study of this issue is needed, along with the use of relevant research methods and assessment of certain solutions in terms of their potential for changing specific business processes, substantiation of the possibilities of transferring blockchain technology from the category of an emerging sphere to a group of tools that strengthen their presence, along with the expansion of the scaleof the influence on the world economy and entrepreneurship.

DISCUSSION OF THE RESULTS

Thus, based on the material presented, it becomes possible to state the extremely contradictory and speculative nature of the currently observed (Jan. 2021) period of expansion of the large investment capital in favor of the virtual cryptocurrency market, backed by software. Fearing the high rates of inflation of the global reserve currency, as well as a possible recession in traditional areas such as manufacturing, services and tourism, investors switched their focus to alternative instruments. Often compared to gold because of its limited supply, Bitcoin, which is currently the largest cryptocurrency in terms of capitalization, has shown significant growth, outstripping almost all alternative investment instruments during the study period, while winning attention from the general public. Because this growth, as shown in this publication, was not a consequence of significant fundamental, technological and innovative factors, it becomes possible to state that Bitcoin has been just "rethought". Its price as an innovative method of paying for goods and services, after the collapse of2017, gradually decreased (mostly because of the high competition) and showed a negative trend of about90%. Nevertheless, in the context of global economic instability that overtook the world financial marketsin March 2020, this instrument was positioned not as an innovative mechanism, but rather as a "defensive asset", while gaining popularity due to its ease of use and low entry barriers.In our opinion, such dynamics can have very contradictory consequences (due to the entry of non- professional players into the market), but it can also stimulate the further development of blockchain innovations and the spread of solutions based on them (including many traditional sectors of the economy) while carrying positive social and economic results.

CONCLUSION

In general terms, the position and arguments given in the article allows us to come to the following conclusions. Today, not a single cryptocurrency has mechanisms, management, and structure that allowsit to perform the role of a mean of payment and an investment asset for an adequately long time (speakingabout 5-10 years or more). Unpredictable behavior of assets, feverish fluctuations in the exchange rate,the desire to get rich quickly or to preserve accumulated resources, maintain interest and lead to highly speculative actions.

Nevertheless, a number of such characteristics of cryptocurrencies as the speed of response to economic conditions and decision-making, decentralization and confidentiality, ease of use, indicates the need to study this phenomenon while creating national digital currencies. Cryptocurrency should become an excellent platform for a deeper study of experience and its extrapolation to the institutional arrangement of digital currencies. The processes observed in different countries of the world related to cryptocurrency are very diverse: from complete rejection in Switzerland to the process of partial (more or less deep) institutionalization and implementation in the financial space of the country (the USA and China).

In Ukraine, for example, since April 2020, a law on "financial monitoring" has been in effect, whichintroduced a norm for checking transactions with cryptocurrencies in the amount of about UAH 30,000, as well as the possibility of blocking crypto wallets and confiscating assets for violations. There is a need for a theoretical generalization that synthesizes various approaches that explain the observed processes in order to develop regulatory recommendations to improve the efficiency of using cryptocurrencies as alternative investment instruments.

References

1. Imbert, F. (2020, March 31). Stock market live Tuesday: Dow drops 410 points, down 23% in 2020, Worst first quarter ever. CNBC. https://www.cnbc.com/2020/03/31/stock-market-today-live.html Coronavirus Aid, Relief, and Economic Security (CARES) Act. (n.d.). Investopedia. https://www.investopedia.com/coronavirus-aid-relief-and-economic-security-cares-act-4800707

2. FRED Economic Data. (2021, February 11). FRED. https://fred.stlouisfed.org/series/M1 https://goldprice.org/

3. BBC News. (2020, May 12). Bitcoin “halving”: What does the much-hyped event mean?

4. https://www.bbc.com/news/business-52628034

5. Seward, Z. C. (2021, January 8). Bitcoin hits a first: $40K. Axios. https://www.axios.com/bitcoin-hits-a-first-40k-47c53667-37e3-48eb-b9ce-a7adc8d67549.html

6. Bitcoin price today, BTC live marketcap, chart, and info. (n.d.). CoinMarketCap.https://coinmarketcap.com/currencies/bitcoin/

7. https://bitcointreasuries.org/

8. Robinson E. (2020, December 17). Bitcoin at $23,000: What Investors Need Know Before Hopping Aboard. Bloomberg. https://www.bloomberg.com/news/articles/2020-12-17/bitcoin-price-what-investors-need-know-before-buying-the-cryptocurrency

9. 250+ Places That Accept Bitcoin Payment (Online & Physical Companies). (2020, October 19). ICOholder Blog. https://icoholder.com/blog/places-accept-bitcoin/#List-of-Well-Known-Places-that-Accept-Bitcoin

10. DMDatabases. (n.d.). USA Business List - Employee Size Profile. https://dmdatabases.com/databases/business-mailing-lists/how-many-businesses

11. Lee J. (2021, January 14) Research Affiliates Quant Warns of Bitcoin Market Manipulation. Bloomberg. https://www.bloomberg.com/news/articles/2021-01-14/research-affiliates-quant-warns-of-bitcoin-market-manipulation

12. Fidelity Digital Assets, & Bhutoria, R. (n.d.). BITCOIN INVESTMENT THESIS. BITCOIN’s ROLE AS AN ALTERNATIVE INVESTMENT [Press release]. https://www.fidelitydigitalassets.com/bin-public/060_www_fidelity_com/documents/FDAS/bitcoin-alternative-investment.pdf

13. De Meijer C. (2020, August 24). Blockchain becomes a reality: growing adoption. Finextra Research. https://www.finextra.com/blogposting/19237/blockchain-becomes-a-reality-growing-adoption#

14. De Meijer C. (2020a, February 29). Remaining challenges of blockchain adoption and possible solutions. Finextra Research. https://www.finextra.com/blogposting/18496/remaining-challenges-of-blockchain-adoption-and-possible-solutions