Криптовалюта: финансовый пузырь или технология будущего?

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Аннотация

В статье рассмотрена актуальность проблемы финансовых пузырей в настоящее время, изучена история данного явления. На примере криптовалют проанализированы предпосылки появления финансового пузыря и угрозы, которые он несёт. По результатам исследования были предложены меры борьбы с пузырями.

Ключевые слова: финансовый пузырь, криптовалюта, блокчейн, биткойн, тюльпаномания, пузырь Интернет-технологий.

Cryptocurrency: the financial bubble or the technology of the future?

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Annotation

In the article the relevance of the problem of financial bubbles at the current moment and the history of this phenomenon is studied. Cryptocurrencies are taken as an example and the prerequisites and threats of the emergence of a financial bubble are analyzed. According to the results of the study, measures to combat bubbles were proposed.

Keywords: financial bubble, cryptocurrency, blockchain, bitcoin, phenomenon of Tulip, Dot-com bubble

Today, there is a lot of talk about the fact that we live in a world of "bubbles" which are inflating in the financial system constantly. Only their scope and growth rates differ, and, of course, the information background, which accompanies this phenomenon. This funny, as it at first seems, term “bubble” refers to the characteristic of quite serious processes taking place both in the stock market and in any other.

The bubble is the excessive overvaluation of the market of the asset, and high demand, which has no serious fundamental reasons. When the market is euphoric about a certain asset, there is a bubble inflating, the price of the asset rushes up, because the demand for the asset acquires an avalanche character-everyone wants to buy it, the psychology of the crowd works. This is what is happening today with the cryptocurrency. This is a particularly popular area of investment, which many experts call a financial bubble. The relevance of the topic is that financial bubbles are arising in the history of mankind constantly, although it sounds paradoxical, but to determine what a bubble is not so easy. Most often, it is very difficult, if not in retrospect, to talk about that the fact of the financial bubble inflation takes place. In this regard, it is necessary to study the prerequisites for the emergence of a financial bubble, the threat it poses, and to propose ways to deal with bubbles.

Alan Greenspan, who in his memoirs, published in 2007, wrote: “The question I abstractly asked myself in 1996 is how to recognize that markets are gripped by “irrational excitement,” and then I had no answer to that question. I think I have the answer now: it's very difficult to judge ... if the stock market ... falls 30 or 40% for weeks or months, I can assure you that the bubble was» [7, p. 116]. The decline of 30-40% is about 43-67% of the revaluation at the time of the peak in comparison with the level after the reduction in the value of an asset. The same is observed by Kindleberger, defining the bubble as "a substantial price increase, followed by a collapse" [6] So, for example, during the period of blowing up the Internet bubble in 2000-2003, even the S&P index, which mostly includes the companies of the old economy, fell by 50%.

Thus, experts agree that any bubble is based on a very good idea. Later this idea may not justify itself, but it will happen only when the bubble bursts. However, the idea in fact should be at least initially reasonable, profitable and fresh. And the brighter it is, the severer it will be able to inflate the bubble before the explosion. Definitely, without such revolutionary innovations as personal computers and the Internet, there would be no NASDAQ collapse in 2000, without radio and cars — the collapse of 1929, without CDS and real estate deals – financial bubble of 2008.

For a better understanding of the financial bubbles nature, let us turn to some of the largest examples in history.

One of the most famous bubble in history can fairly be named the phenomenon of Tulip 1634-1637. Tulips had an excellent reputation not only as a business — it was also a kind of bitcoin

during the Thirty years war. Rare bulbs cost so much that sometimes they were used as gold for large transactions in those days. When in the 1630s the bulbs were able to become the subject of the exchange transactions, in the Netherlands everything went exactly as it would go in the future in other countries. Of course, we should replace the tulips on shares, dress the market participants more modernly, and it will be a picture of any stock bubble, for instance, in 1929 or in 1999.

If we talk about the recent past, it is worth mentioning Dot-com bubble, which existed in the period from approximately 1995 to 2001. The bubble was formed as a result of the Internet companies shares' surge (mainly American), as well as the emergence of a large number of new Internet companies and the reorientation of old companies to the Internet business at the end of the XX century. Shares of the companies, which offered to use the Internet to generate income, soared in price. Many commentators and economists justified such high prices claiming that the "new economy" had come. In fact, these new business models have happened to be ineffective, and the money spent mainly on advertising and large loans has led to a wave of bankruptcy, a strong fall in the NASDAQ index, as well as a collapse in prices for server computers.

The example of the economic bubble in the US real estate market, the growth of which reached the highest point in 2005-2006, causing the mortgage crisis of 2007 in the country, which in turn marked the beginning of the global economic crisis of 2007 – 2008, is also indicative. It also began with a sharp rise in prices for residential real estate, after which they began to fall rapidly. At the same time, interest rates on floating-rate mortgages began to increase, resulting in higher monthly payments and an abrupt jump in the number of loan default cases. Derivative securities, including sub-Prime mortgages, which were widely traded on the financial market, had almost completely depreciated. The bubble burst.

These events are not a complete list of financial bubbles in the history. We have demonstrated only the most revealing of them from our point of view.

As for now, many experts in the field of economics and finance point to the emergence of a large number of bubbles at the very moment. There are such possible bubbles as cryptocurrency, real estate, stock market, corporate credit ones. It has been talked for some time that the new bubble is inflating right now. Nevertheless, no one can say exactly what is going to be its basis. However, judging by how successful the idea of blockchain seems, cryptocurrencies can become the one. We would like to discuss them in more detail.

Based on the history of financial bubbles, we can highlight some of their features, almost always accompanied by this phenomenon in the economy. And also we will try to apply these features to the current situation with cryptocurrencies to approach the answer to the question whether they are a financial bubble or a breakthrough technology of the future?

The first sign of a financial bubble is a sharp (non-linear) price increase in a short time or an acceleration in the rate of growth of an asset price. A very illustrative example is the well-known cryptocurrency bitcoin, which appeared in 2008. In 2010, the first purchase was made, the ordinary pizza, using bitcoin. The cost of pizza was 10,000 bitcoins or $25 at the time. Just a few months after that, the value of the cryptocurrency has demonstrated a rapid growth, becoming $0.080 per bitcoin. In November of the same year, the rate was already set at $0.50 per "digital coin". In 2013, the value of bitcoin reached $ 266, but it was only the beginning. Despite the fact that further prices of cryptocurrency was repeatedly falling and soaring, reaching $950 in 2014, and then again falling to $177 in January 2015, at the end of 2016, the value of bitcoin exceeded $1000. In March last year, it was already $1,290, and in December 2017 - $20,000. So, from the beginning to the end of 2017, the value of bitcoin increased in 20 times: from $1000 to $20,000, which fully demonstrates the first feature of a possible financial bubble.

Fig.1. Bitcoin price chart in the period 2013 - 2018

The second feature of the bubble is the involvement of non-professional investors in the process of “investing” on a massive scale. Here, more than ever, Bernard Baruch's statement is relevant, that a bubble is when a beggar gives advice about what shares you should buy. Indeed, over the past couple of years, cryptocurrency began to interest more and more people, including those, whose professions are far from the economy and finance. Students, working class and housewives began to invest in cryptocurrency in 2017. This trend was noticed during the blow-up of financial bubbles of the past. For example, during the Tulip period, tulips were speculated not on the

Amsterdam stock exchange, but by small artisans who wanted to quickly enrich themselves on the trade of this magical flower of that time.

Therefore, the third feature of the financial bubble appears - a large number of investment assets purchases for a short-term resale. As noted in the previous paragraph, people began to invest in cryptocurrency, who at first glance should have been far from this, and it should be said that such popularity of investing in bitcoin and other cryptocurrencies is often done not for long-term prospects. Most of these investors expect to earn on the resale of these assets while the process of their growth is on.

Speaking of short-term resale investments, we are moving to the fourth feature of the bubble in the financial market, which is the outflow of investments from the real sector, due to the fact that it is more profitable to speculate than to engage in real production. In our situation, we can note that many investors who previously invested in the shares of real production companies, now preferred to invest in cryptocurrency.

Another sign of the financial bubble, the fifth in our case, is the rejection of traditional methods of valuation during the boom period. As Marc Faber said, “at the peak of mania traditional assessment methods throw out of the window” [5]. This attitude is usually explained by the fact that the alleged former canons and principles have changed, that the old rules no longer apply, and therefore, they are no longer an indicator of the financial position of an asset. However, this trait cannot be applied to cryptocurrencies, as there have never been any traditional valuation methods for this financial instrument.

The sixth sign of the bubble is ignoring the bad news by the market or interpreting them as good ones, ignoring the danger signals. Returning to the example of bitcoin, it should be noted that at the stage of development there were observed significant fluctuations in the price, so in the middle of June 2016, the rate of coins have fallen from $ 3000 to 2500 due to the fact that the industry experts called the bitcoin an unreliable asset. But in 2017, the trend changed to a sharp increase in the price of cryptocurrency, despite many negative forecasts regarding its further dynamics. But it is worth noting that, although the negative predictions partially came true, as in 2018 the exchange rate of bitcoin is significantly decreased in comparison with the peak in December 2017 (in may 2018, the price of this cryptocurrency is about 5,600 USD), we cannot say with certainty that the cryptocurrency bubble has burst, or even that such a bubble exists. Since the coin’s value is still high comparing to the previous years, it may indicate stabilization of the asset, which has the right to occupy a certain niche in the market. If its quotes in the future continue to fall and turn to zero, then it will be clear to all that the financial bubble has taken place, but unfortunately, by this time the information will be useless for investors.

The seventh sign of the bubble is the spread of various investment funds and companies. In the case of cryptocurrencies, various courses and trainings have become widespread, promising to teach their clients how to invest in virtual money and easily get rich. Such classes are often conducted not by professionals, but by amateur investors, who managed to catch the trend and learn about this opportunity of promising short-term investments before the majority of the residents.

The eighth feature that is often marked is a sharp increase in the number of IPOs and deterioration of quality of the placed papers. In 1991 Jay Ritter, a well-known American financier-academic specializing in IPO, published an important article, in which he presented the results of an analysis of IPOs dynamics in the bullish market in the period of 1977 - 1983, it was during the oil and resource boom. As it turned out, 61% of all IPOs were made in 1983 (at the peak stage), while in the first five years, when the quality of issuers was the highest, only 6% of companies in the sample made IPOs [4]. This feature, like the fifth in our list, cannot be applied to cryptocurrencies.

The ninth feature of the bubble is the spread of financial fraud. However, this symptom may be of little help in diagnosing the bubble rise as the fact that some fraud has taken place is usually revealed after the bubble explosion. Thus, the bubble on the stock market in the United States at the end of 1990 is associated with such well – known frauds as the fraud reporting by American companies Enron and WorldCom, European companies Ahold, Parmalat and others. With regards to cryptocurrencies, we can mention cases of fraud on the web sites where it is proposed to buy this financial asset. Investors may come across a fake website – an exact copy of the website - a virtual exchanger that provides services for converting cryptocurrency into real money. But the scale of fraud in this area is relatively the same as in other sectors related to the Internet, so we can not call this fact a sign of a possible cryptocurrency bubble.

So, despite the fact that more than half of the signs of a financial bubble coincide with the present situation with cryptocurrency, we still are not able to say confidently that this bubble exists now. Undoubtedly, the cause of the financial bubble often becomes something new, that has not existed before and people are unfamiliar with it (otherwise they would know in advance that they should not make this investment). But it can also be a technology of the future, something that will come into our lives tomorrow as a necessity. As history shows, there have been cases when breakthrough technologies like Amazon and EBay have been unfairly treated as financial bubbles.

It should be said that many market participants are inclined to the fact that in the case of cryptocurrency a financial bubble is observable [3]. Nevertheless, none of them has an accurate answer to the question whether it will blow off, and if yes then whether it will happen in a form we used to think about financial bubbles or not. But there are signs that do not allow to consider this bubble to be ready to explode tomorrow:

- in the Internet industry in the late 1990s – early 2000s a lot more investors ' money were put in the bubble than it is now in cryptocurrencies. This suggests that the process of inflating the bubble is still far from completion;
- the crypto economy does not yet have a developed derivatives market, which usually rises with the bubble. The market is still small, the exchanges are young and have not created the appropriate tools.
- there are no analogues of cryptocurrencies in history, so there is simply nothing to compare with. How to assess the quality of management of the company "Bitcoin Ltd", if it does not exist, and its development is determined by the community? Internet startups, on the contrary, were real companies with their own structure and owners.

But not every bubble should necessarily explode. A financial bubble, if it is neither too large nor too sustainable, is even useful and desirable for the economic health. In general, any attempt to create a bubble is motivated by the desire to make money easily and is an essential stimulus for economic activity. If one imagines an ideal economy in which bubbles have been completely eliminated, it will be either stagnant or deteriorating.

It should be noted that there are no guarantees, this digital money market is too young and unstable. Therefore, there are different opinions about whether the Central banks should try to eliminate bubbles in financial markets or whether it is better to wait until the bubbles end up themselves. The traditional view, that is shared by former Chairman of the USA Federal Reserve Alan Greenspan, is that any attempt to pierce financial bubbles will fail. Only the Central banks can try to restore order. However, the former head of the London school of Economics Howard Davies is sure that piercing the bubble may restrain additional economic growth and deteriorate the level of country's social welfare. At the same time, the economists of the Bank for international settlements (BIS) share the opinion that the costs of all previous crises were too high, and the fight against their consequences is a rather long process. In their view, it is already necessary to look for methods and opportunities to prevent crises through targeted "blowing bubbles".

Perhaps the first thing that is required when there are signs of a growing bubble is to determine what is the cause of it: speculation or the reason is deeper and it is necessary, for example, to cut funding, making the bubble industry more efficient. But it is not known what can be result of the market control. You can also limit the minimum purchases, the number of players, the time, but the result is not obvious, the market may suffer more than if it could in case of a bubble. In addition, there are assumptions that markets should develop without any interference and control. However, in modern society there are some areas that are impossible to control. Among such areas can be cryptocurrency - everyone can participate in speculation, but no one can control it. This causes such

fluctuations in its rate. But since this market is closed, it is unlikely that a bubble in it can cause serious consequences, but it can be considered as an ideal one.

Talking about the ways to deal with the bubble in the digital economy, we can refer to the example of the sensational Pokemon game. "Nintendo, which owns the Pokemon brand, made more money per week than the Central Bank prints per year." [1]. Nintendo belongs to the digital economy since it does not need anything except the Internet: no metal, no energy, no work. Then is Pokemon game better than any pyramid scheme? Is it allowed for games to concentrate so much money so quickly? For example, on the stock exchange in the case of extreme price fluctations or panic the trading is stopped. Why not to stop the distribution of the game in this case? Or not to introduce special taxation? Or not to restrict the use of funds in bubbles? All these measures may control bubbles, like Nintendo.

This can be done through monitoring the “share of the financial bubble”. This concept was introduced by Ross G. V. (Professor of the Finance University under the Government) and Liechtenstein V. E. (Professor of MTU MIREA) in the article "Management of financial bubbles as a technology of digital economy management"[2]. Share of the financial bubble measures the proportion of the secured portion of the face value of a currency or security. For example, if the share of the financial bubble of the dollar is 97%, it means that the real price of the it is 3 cents. The rest 97% is a bubble or financial nothing.

It makes sense to give the task of monitoring the share of the financial bubble to the statistical services, rating agencies and the Central Bank, respectively to their activities. They should be obliged to publish data about share of the financial bubble openly and regularly. They have to develop and approve the calculation methods and the use of share of the financial bubble in the evaluation of business value of currency. It is fundamentally important that the methods of calculation of share of the financial bubble, sources of information for the calculation, the software as well as free access online were also open, which should be guaranteed by the law. Everyone should be able to calculate share of the financial bubble for himself/herself, for the competitor, for the individual transaction. Otherwise, the calculation of share of the financial bubble, the assignment of share of the financial bubble to business or securities will immediately become a way of unfair competition, pressure, blackmail and another way to inflate bubbles.

Thus, we can conclude that the issue of the financial bubbles emergence is relevant for today. Indeed, it is impossible to say with certainty that the cryptocurrency bubble exists now. We believe that nowadays it is of high importance for the society to study the blockchain process in detail and try to take measures to prevent the transformation of this breakthrough technology into a destructive force that will lead to a new financial crisis.

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