

## **Биткоин как способ замещения традиционной формы денег**

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### **Аннотация**

Крипторынок – крайне резонансная тема в наши дни. Почти каждый слышал пару слов о системе блокчейн, биткоине и других криптовалютах. Некоторые экономисты верят, что криптовалюта способна изменить не только банковскую, но и мировую финансовую систему. Однако другие полагают, что криптовалюта не в состоянии показать свою жизнеспособность в долгосрочной перспективе. В этой статье мы попытаемся понять, способен ли биткоин полностью заменить фиатные деньги или его ждет судьба второстепенной валюты или вовсе упадок.

**Ключевые слова:** криптомаркет, биткоин, криптовалюта, фиатные деньги, блокчейн

### **Bitcoin as possibility to replace traditional money**

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### **Annotation**

The cryptomarket is extremely resonant subject today. Almost everyone heard a couple of words about system a blockchain, bitcoin and other cryptocurrencies. Some economists believe that the cryptocurrency is capable to change not only a banking system, but also world financial system. However, others believe that the cryptocurrency isn't able to show the viability in the long term. In

this article we will try to understand whether the bitcoin is capable to completely replace fiat money or it will continue the way of secondary currency or it is going to fail.

**Keywords:** cryptomarket, bitcoin, cryptocurrency, fiat money, blockchain

The first official mention of bitcoin belongs to 2008 when the document has been published on October 31. Since January 3, 2009 implementation of this concept in a program code has begun. The idea consisted in making instant and electronic exchange of coins without any central power and also with the smallest expenses.

To understand whether the bitcoin or any other cryptocurrency is capable to completely replace fiat money, we will begin with theoretical justification - the analysis of structure of a financial system and functions of money.

The financial system consists of four fundamental elements: public finances, finance of households, finance of legal entities and financial market. In normally functioning financial system money is freely circulated in all four groups of participants of the market. At the moment the bitcoin doesn't take part in work all four types of financial agents. Today the circulation of this cryptocurrency is limited only by the use of households and rare institutes of the financial market (generally as means of accumulation and savings).

Nowadays, attempts of use of bitcoin by legal entities are made, but they are always carried out at their own risk since most states in the world haven't adjusted bitcoin and its use legislatively yet, but such countries as China, Iceland, Ecuador and Bolivia have already completely forbidden bitcoin and other cryptocurrencies. What is the reason? The problem is in saving the capital and control of its movement. Not adjustability of cryptocurrencies leads to lack of use of bitcoin in various government institutions. Though use of bitcoin by government officials for personal reasons is very probable.

Other criterion for evaluation of viability of bitcoin in a modern financial system is the possibility of execution by bitcoin of function of money. According to the classical economic theory by K. Marx, money has 5 functions:

- means of accumulation and savings
- measure of value
- currency
- means of payment
- world money

We will consider how today the bitcoin carries out each of these functions:

1. Means of saving and accumulation. The bitcoin is widely used as a store of value and accumulation. The great demand on this cryptocurrency consists of this fact – the Bitcoin is bought as very quickly growing investment asset.
2. Measure of value. Use of bitcoin as measures of value isn't represented reliable as the price of this cryptocurrency is very volatile.



**Fig. 1. Volatility of bitcoin from September 2017 till December 2017 [2]**

3. Medium of circulation. The bitcoin is very attractive as a store of value and accumulation owing to the active and permanent growth: for 3 years from 12/1/2014 to 12/1/2017 the cryptocurrency has grown in price for 3621% - from \$300 to \$10864 (quotation – the Coinbase exchange). This fact induces people to buy this cryptocurrency, but not to spend, and to keep in hope for his further growth. Therefore, as the currency bitcoin doesn't carry out function of money.

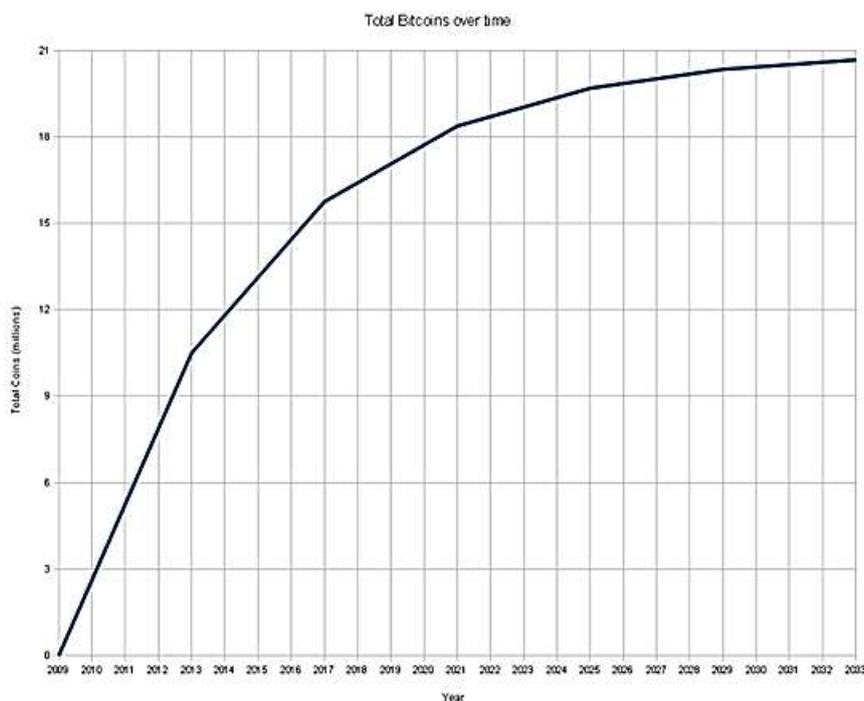
4. Instrument of payment. The Bitcoin price (\$11094 on 12/2/2017, the Coinbase exchange) is too high for his convenient use in purchase of daily goods as it means division of a coin into thousand parts (for example, the t-shirt worth \$30 will be costs 0.0027 Bitcoins).

5. World money. Today the Bitcoin doesn't serve the movement of cost in the international economic circulation and the more so doesn't provide realization of relationship between the countries. He doesn't perform function of world money.

The output follows from the analysis of functions of money that today and in the future, under similar conditions of the market and parameters, the bitcoin as cryptocurrency is not capable to satisfy normal functioning of a financial system.

Nowadays, people see bitcoin as an asset that provides a stable percentage of profit. With the growth of quotations of cryptocurrency, conversations about the so-called "bubble" of bitcoin do not fade away. It is possible to mark that in circles of investors the phenomenon of bitcoin is often considered as a certain analog of a financial pyramid.

One more important parameter of bitcoin which causes negative emotions of economists is a fact that issue of bitcoin is limited. In the standard centralized scheme an issue of currency is carried out by the central bank. Thus, the central bank realizes a monetary policy. The bitcoin is created every time when the user finds the new unit. Frequency of creation of units is a constant: 6 pieces an hour. The quantity of the released bitcoins in the unit decreases geometrically, with reduction of 50% every 4 years. As a result, the algorithm has accurately painted diagram according to which all existing bitcoins will never be more than 21 million.



**Fig. 2. The expected quantity of bitcoins in a turn from 2009 to 2033 [6]**

Due to the fact that the number of bitcoins cannot be increased, the currency will begin to undergo serious deflation if it becomes widely used. Many economists say that the deflationary spiral is bad for economic growth because it stimulates more to postpone, rather than spend money, investing in business and thereby creating jobs.

In general, the world community is positive to the fundamental decentralized system of bitcoin - a blockchain. The reason lies in high potential on optimization of business processes as well as increase in their transparency and reliability.

It is true that the system of blockchain is the revolutionary idea in the world of finance. Though the majority of news about introduction of new technologies have more marketing character and to introduce them in serious processes so far early due to a rather large number of restrictions. But, despite it, the blockchain and smart contracts (the self-executed transactions) based on it remain demanded in the world of business. While there is demand for technology a blockchain, cryptocurrencies will live because this technology can't exist without the valuable asset tied to it.

For maintenance of base of transactions large capacities are necessary. In order for the system to remain decentralized, capacities have to be distributed more or less evenly. These capacities need some remuneration that to motivate them for work. Not to concern the outside world rewards have to be within this base. There is also a need for currency for maintenance of a blockchain.

On the basis of our analysis about the system of bitcoin, we can say that nowadays it is closer to gold as an asset than to real money. But it doesn't mean that other cryptocurrencies are also expected to become the next investment and speculative tool.

In the world there are a lot of cryptocurrencies that it is possible to choose that which seems to the most technologically perfect to the specific person from this set. For example, people who are not ready to accept the limited issue of bitcoin pay attention to the second for popularity cryptocurrency Ethereum because it has no limits in release as well as includes a possibility of creation of smart contracts based on its principles.

Cryptocurrency communities try to create decisions for optimum work of the financial system based on cryptocurrency worldwide. One of such alternatives can become the so-called cryptocurrency of Tether which completely repeats dollar exchange rate, keeping at the same time all advantages of digital currency.

The business which is already hooked for technology of smart contracts won't miss a chance to implement blockchain and cryptocurrencies into their business operations. We suppose that people will be able to make cryptocurrency the most convenient currency in the conditions of a financial system. And if it is not bitcoin, then it is quite possible that any other cryptocurrency will become such currency. In some countries government have begun to fight against cryptocurrencies, explaining it with care of people, warning them against investing money in "monetary substitutes" and their possible loss if the bitcoin collapses. Nevertheless, physically it is almost impossible to forbid operations with cryptocurrencies on the Internet. It is possible to limit their exchange for real money, by prohibiting the activities of such exchangers, but to forbid production of cryptocurrencies, including bitcoins, the possibility of access to each computer device will be required. However such operations are still forbidden by legislation of the majority of the countries as intervention in private life.

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