



УДК 339.72:336.744

## BITCOIN: IS IT GOOD OR BAD FOR A CONSUMER?

Stud. A. Matuschak, gr. BEK-1-16

Research supervisor N. Syromlya

Kyiv National University of Technologies and Design

**Aim and task.** The aim of the paper is analyse factors that influence on bitcoin for finding it's stability. To achieve the aim the history of the origin of this cryptocurrency was investigated and factors influencing the beneficial use of bitcoin were studied.

**Object and subject of the research.** The object is functioning of cryptocurrencies in the modern world financial system. The subject of the research is the conditions and properties of existence of bitcoin.

**Research methods.** During the research the following methods were used: analysis, synthesis, comparison and generalization.

**Scientific novelty and practical value of the obtained results** concern the problem of analyzing and forecasting the details of the emergence and development of a new currency for consumer. The electronic cryptographic currency is replacing the traditional money emitted by the state. This payment tool is already gaining momentum in use in the developed countries of the world.

**Research results.** Bitcoin has been hailed by some as the future of currency – but its volatile price and questionable safety is something to keep in mind.

Bitcoin is a digital currency or algorithm-based mathematical construct – a unit of measurement invented to quantify value. Bitcoin's creator was a coder and cryptography enthusiast who communicated on the cryptography mailing list under the name Satoshi Nakamoto. Nakamoto designed the network and launched Bitcoin in June of 2009, mining the first 50 bitcoins to form what became known as the genesis block.

It's sort of like the dollar in that way – but unlike the dollar (or any other form of fiat money, really), bitcoins are decentralized – there's no government, institution (like a bank) or other authority that controls it. No bills to print or coins to mint. Bitcoins are completely digital: You'll never lay hands on a physical bitcoin unless you purchase a physical facsimile like this. Owners are anonymous; instead of using names, tax IDs, or social security numbers, bitcoin connects buyers and sellers through. And it isn't issued from the top down like traditional currency; rather, bitcoin is "mined" by powerful computers connected to the internet. You can make transactions by check, wiring, or cash. You can also use Bitcoin (or BTC), where you refer the purchaser to your signature, which is a long line of security code encrypted with 16 distinct symbols. The purchaser decodes the code with his smartphone to get your cryptocurrency. Put another way; cryptocurrency is an exchange of digital information that allows you to buy or sell goods and services. The transaction gains its security and trust by running on a peer-to-peer computer network that is similar to Skype, or BitTorrent, a file-sharing system. Because bitcoin is decentralized, it can't be shut down by anyone. Instead it is underpinned by a peer-to-peer computer network made up of its users' machines, akin to the networks that underpin BitTorrent, a file-sharing system, and Skype, an audio, video and chat service. Bitcoins are mathematically generated as the computers in this network execute difficult number-crunching tasks, a procedure known as Bitcoin "mining". The mathematics of the Bitcoin system were set up so that it becomes progressively more difficult to "mine" Bitcoins over time, and the total number that can ever be mined is limited to around 21 million. There is therefore no way for a central bank to issue a flood of new Bitcoins and devalue those already in circulation. Individual bitcoin exchanges can be targeted by financial regulators —but since nobody runs bitcoin, it can only peter out from lack of interest.

Cryptocurrencies can be a fast and inexpensive way to pay for goods and services. They have value because users agree they have value. Bitcoins can be used to buy merchandise anonymously. In addition, international payments are easy and cheap because bitcoins are not tied to any country or



subject to regulation. Small businesses may like them because there are no credit card fees. Some people just buy bitcoins as an investment, hoping that they'll go up in value. People can send bitcoins to each other using mobile apps or their computers. It's similar to sending cash digitally.

Bitcoins are stored in a "digital wallet," which exists either in the cloud or on a user's computer. The wallet is a kind of virtual bank account that allows users to send or receive bitcoins, pay for goods or save their money.

Also bitcoin has poor qualities. The value of cryptocurrencies rises and falls –sometimes sharply – depending on demand. If the value goes down, there's no guarantee that it will rise again. Unlike bank accounts, bitcoin wallets are not insured by the troubleshooting: servers have been hacked, companies have fled with clients' bitcoins, you can accidentally delete them, viruses could destroy them. Security can be a concern: Lear Bahack, in the article "Theoretical bitcoin Attacks with less than Half of the Computational Power" stated that a widespread security claim of the bitcoin system, presented in the original bitcoin white-paper, states that the security of the system is guaranteed as long as there is no attacker in possession of half or more of the total computational power used to maintain the system, but this claim, however, is proved based on theoretically flawed assumptions. Bitcoin transactions are irreversible. Once a bitcoin transaction is broadcast to the network it can't be revoked. So a hacker who accesses the PC that stores your bitcoin wallet can send your entire bitcoin fortune to another wallet – and there's nothing you can do about it. Of course, if the PC that stores your bitcoin wallet is owned by a third party that insures it against theft – say, a respectable bitcoin wallet hosting service – you might be able to recover the value of some or all of your stolen currency.

A hacker could theoretically destroy the bitcoin network by tampering with the code in an exploit to end all exploits. However, since its inception, the bitcoin code remains uncompromised. Individual users and exchanges may be hacked, but the bitcoins themselves have so far proved unassailable.

For now, it's probably a good idea for most consumers to keep a safe distance from virtual currency: The wild fluctuations in value make bitcoins so interesting to study because it could make you a millionaire one day, and a pauper the next.

Bitcoin is an experimental new currency that is in active development. Each improvement makes bitcoin more appealing but also reveals new challenges as bitcoin adoption grows. During these growing pains you might encounter increased fees, slower confirmations, or even more severe issues.

**Conclusions.** We analyzed factors that influence on bitcoin for finding it's stability, investigated the history of bitcoin's origin, defined factors impacting on beneficial use of bitcoin. It doesn't have authority that controls it, owners are anonymous. But it isn't reliable and you can lose money. As your account can crack or bitcoin price could collapse. We tend consider bitcoin to be an experiment. And it is an interesting experiment, but it's not a permanent feature of our lives. So we agree with that point of view which doesn't recommend using it.

**Keywords:** *cryptocurrency, bitcoin, payment, financial system.*

#### REFERENCES

1. Justin Jaffe. What is bitcoin? Here's everything you need to know // The guardian [Electronic resource]. – Mode of access: [www.cnet.com/how-to/what-is-bitcoin/](http://www.cnet.com/how-to/what-is-bitcoin/) (viewed on March 24, 2018). – Title from the screen.
2. Lear Bahack. Theoretical Bitcoin Attacks with less than Half of the Computational Power. – New York: Springer, 2013. – p.868.
3. Tal Yellin. What is Bitcoin? / Tal Yellin, Dominic Aratari, Jose Pagliery // CNNMoney [Electronic resource]. – Mode of access: [/money.cnn.com/infographic/technology/what-is-bitcoin/](http://money.cnn.com/infographic/technology/what-is-bitcoin/) (viewed on March 23, 2018). – Title from the screen.