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## *Introduction to Cryptocurrencies Article Series – 1*

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### *Introduction to Blockchain and Bitcoin*

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#### **I. Introduction**

It would not be unfair to say that the most of the main subject of the world's financial agenda consist of Bitcoin, while we are in the last days of 2017. Although its establishment has shown up by Satoshi Nakamoto's, who is still unidentified, article named "Bitcoin: A Peer-to-Peer Electronic Cash System" dated 2009, we are witnessing that Bitcoin's effect on our daily life has been becoming visible newly.

It is aimed by this article series to explain the infrastructural basis of the terms "Blockchain", "Bitcoin", "Altcoin" and "Cryptocurrencies"; but not to make an assessment about if these are investment instruments. These following topics will be constituted as follows; what are the effects of "Bitcoin and its Derivatives" to real and legal persons daily life, what are benefits of them and what are the issues come up with them.

#### **II. What are Blockchain and Bitcoin?**

Blockchain is a technology and a digital and disordered general ledger, which safely stores the data and holds the list of the transaction of these data among other users. Using this technology is quite simple that: it is enough to download and activate the Blockchain's program in your computer. And Bitcoin is a digital currency, an open source payment method, works with a user to user (P2P) logic.

#### **III. The Working Principle of Bitcoin:**

Bitcoin is network which technically sustained by the connection of the miners over their computers. The users, who are connected to this network by means of its disordered system, confirm the validity of the transactions on the system based on various mathematical functions, using Bitcoin's software. In other words, they exercise a notary's function. These confirmations are made by a lot of computers and by strong hardwares, which are made for this job only due to the difficulties in the system. The transaction is reflected and listed to the system after its confirmation by millions of computers that are connected to the system.

Some Bitcoin is given to whom that exercise an operation to keep the system sustained. These operations are returned as Bitcoins; and so are called "mining". The reason to call them "mining" is that it becomes harder to keep the system as the amount of the data increases, which is like the increase at the cost of the gold mining. The amount of Bitcoin, that are given as a return to the operations made in the system, decreases gradually just like it is at the gold mining.

This makes Bitcoin that safe and secure. All transactions operated on the Bitcoin system are transparent and all stages and the history of the transactions is stored by the system. The number

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of Bitcoin is limited by 21 million. These 21 million Bitcoins are also diverged to sub currencies in itself.

## IV. How to Own a Bitcoin?

Ways to own a Bitcoin are as follows;

- Connecting to the system by its own application and mining,
- By the transfer of a third person in return of a service or a good,
- Buying from Cryptocurrency Stock Markets.

Bitcoin can be sent to someone's account over Bitcoin Stock Markets or to his/her digital wallet.

## V. Why Blockchain/Bitcoin?

One of the reasons for calling bitcoin as a cryptocurrency is that it is claimed to be a digital payment method. Just some reasons of that make Bitcoin valuable and fit to the people are; it is costly to make a money transfer by physical means, the cost-effectiveness of a cryptocurrency transfer between different states in contrary to the cost of bank charges for such transactions, Bitcoin's completely transparent nature and the records therein cannot be corrupted, anonymity of the record despite its transparency, record therein are almost always real-time (current).

Blockchain is an open source software technology that has the possibility to annihilate the need for intermediary institutions as can be seen from the Bitcoin sample. For this reason, Bitcoin increases the possibility of the performance of any bilateral contract, which has the parties' consent, and of the inspection of such performances. Besides, it not required for these parties to be natural persons. Blockchain makes it possible for states to digitalize numbers of transactions/operations by creating their own blockchain systems and to reduce the bureaucracy.

## VI. Future

Nevertheless, Blockchain is not a completely new system created in 2008; but a follow-up system of the user to user (P2P) infrastructures which are also used by Napster and Torrent. It can be seen that expected achievements of Blockchain are not overrated when we consider the fact that the programs like Napster and Torrent are recreated the media sector and lead to the creation of the programs such as YouTube, Netflix, Spotify.

Market value of the cryptocurrencies is almost 600 billion dollars by the end of 2017. It is for sure that there are and will be some issues which will come up with a technology that has such a huge market value and that expected to change the future.

We will be touching on to these topics in the following articles: the usage of Bitcoin as a payment method and as an investment instrument, the questions in law that comes up with Blockchain starting with its definition, the approach of the states and institutions to the Blockchain.

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