

# New Means of Payment in a Rapidly Changing World - Case Study: Bitcoin

MSc Aleksandar DJORDJEVIC\*  
University of Niš, Serbia

## Abstract

*During the history there have been many different ways of dealing with the international payment. In the ancient history we remember the barter system functioning. Then came gold and silver, before the bank notes appeared. Afterwards came the national money, from the year 1973. Gold standard became history, and in the recent time we are talking about some “digital” money. But what is happening nowadays? We have the rising need for some new means of payment. Internet trade is on the rise, social media rule the contemporary world, and so we have the inception of so-called crypto currencies. The most famous one of them all is undoubtedly the Bitcoin. What is conceived under the veil of secrecy is its very origin. Satoshi Nakamoto, the name under the original paper about Bitcoin, remained a secret person ever since the article saw light back in 2008. Another strange coincidence is that the paper appeared just after the world financial crisis took place. One of the frequently asked questions is definitely: Is the value of Bitcoin consistent? And we see from the fluctuation that it is not. Is this a commodity, a currency or an international mean of payment? Can you make profit by investing in Bitcoin? Does Bitcoin have the functions that regular money does, especially here we mean the function of saving value. Are we going back to the history where every ruler, king or landowner had his own currency? It looks like that Bitcoin is going towards decentralization of the monetary system known now. Is it that now every person, each individual will have his own currency? How is it going to be valued? To all of these aforementioned questions and some more we would try to give answers in the full paper using the facts and a lot of gathered articles that have been written about Bitcoin. Our goal in this paper is to raise the awareness of the changes happening in today’s economy and in economic science as a whole.*

**Keywords:** means of payment, virtual currency, Bitcoin, international economics

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## Introduction

The main characteristic of the 21st century is certainly a dominance of information technology. After three industrial revolutions and a fourth upcoming, technology becomes an integral part of our daily lives. The fourth revolution is going a step further as it mentions the integration of technology and humans and embedding technology into human beings. In addition to technology the culture of individualism is highlighted, speed of execution of work, as well as the primary goal of making a

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\* **Corresponding address:** Aleksandar DJORDJEVIC, University of Niš, Faculty of Economics, Belgrade, Serbia. **Email:** djaleksandar91mail.com, aleksandar.djordjevic@eknfak.ni.ac.rs

profit. Also the end of the 20th and beginning of the 21st century is coloured with the process of globalization. In short it is the demolition of all barriers, free movement of people, goods, services and capital. Globalization sets in all aspects of social and economic development. Removing the barriers that existed in the communication, promotion of English as a foreign language, the emergence of the Internet, social networks, personal computers, smartphones, all of these contribute to absolute connection and communication between people regardless of their location in the world.

In the previous century, international finance recorded a rapid development. National financial markets are losing the basic attributes and becoming a part of the global financial market. As a result, economic growth and the development of a single economic entity did not depend only on the actions taken by policy makers in national financial markets. New, more complex relationships in the international finances are being established as a result of a continuous process of development of financial globalization and financial integration of national economies. The international monetary system has also seen significant changes. Changing economic mechanisms, rules, rapid development of the world economy causes changes in the functioning of the international monetary system.

Throughout the history colonialist tendencies of some world powers have been seen, first militaristic then political, technological and informational colonization of underdeveloped and developing countries, and also the "ecological" colonialism is being mentioned. The novelty of the Internet, social networks and entire communities that are formed in the virtual space create an opportunity to develop a new type called "virtual" colonialism.

The technology used to be centralized as old computers occupied entire rooms of large companies and were reserved for use only in corporate and business purposes. Today, almost every one of us carries a supercomputer in the palm of our hand or in our pockets, has daily interactions with it, but does not notice the amount of technology that is built in it. This refers mostly to smartphones whose processors and components are more powerful than the old computers which were once used in companies. We also have personal computers that are used for different purposes. Information used to be limited to traditional media: television, newspapers, the daily press. The information market mainly appeared as oligopoly or monopolistic competition in its structure. But with the advent of the Internet, especially with the growing popularity of social networks, market information is becoming increasingly similar to perfect competition. In fact anyone who has an account on any of the social networks has the ability to announce a specific news and it will be seen instantly around the globe. In the past this would be like if everyone had owned their own television network, or a publishing house in which he printed his own news.

There is an analogy between the computer and the method of communication on one side and the international payments on the other. Exclusivity and monopoly that once possessed the global television companies or large companies that used computers, global financial institutions currently enjoy in the performance of international payments. But also in this field appeared a tendency towards the

individualization and the overtaking the role of the banks. The desire of end-users to take on the role of emission of money from central banks and the control over payments with significantly reduced fees is becoming stronger and stronger. It can be said that the technological revolution, the availability of modern technology, the popularity of the Internet and global communication are necessary prerequisites for the creation of a new phenomenon.

Just like this arises the idea of a currency which would be completely independent of the central and commercial banks, monetary authorities, various rules and regulations of the countries. The birth of the idea of virtual currencies can be characterized as a kind of globalization of the international payment system, where perhaps it is more accurately to use the term individualization and privatization instead of globalization. Does, however, this phenomenon of virtual currency carry a new latent form of domination of world powers with the aim of achieving virtual colonization? Are virtual currencies only seemingly exempt from national characteristics? Also, with the emergence of a large number of new virtual currencies there is a comparison with the Middle Ages, when almost every ruler had its own currency, its own money and means of payment. Do we move toward individualization and privatization of the currency?

The main objective of this paper is to raise the awareness of the existence of virtual currencies, a more detailed explanation of their creation and functioning, their identification in the international monetary and financial system, as well as pointing the way of making a profit with the help of the most famous and the first virtual currency - Bitcoin.

## **I The Bitcoin phenomenon**

### **1. Defining and functioning of the Bitcoin**

Bitcoin is what is known as a virtual currency. A virtual currency is a means of payment that is, units of the virtual currency represent a value. It is intended for use in payments within a specific virtual community, such as a particular website, or in a network of users with special software for managing the virtual currency and making payments. This type of virtual community can thus be said to resemble a voluntary agreement to use a specific item as a means of payment.

There are a large number of virtual currency schemes that have been built up, and function, in different ways. They can be broken down into different categories depending on the extent to which it is possible to buy and sell the virtual currency. Here, we divide them into virtual currency schemes that are closed, with unidirectional flow and bidirectional flows. In closed virtual currency schemes, the virtual currency can be neither bought nor sold, but only earned and used on certain websites (such as World-of-Warcraft Gold). If the virtual currency can be bought for national currency but not exchanged back, the scheme has a unidirectional flow (such as Amazon coins). When the virtual currency can both be bought and sold and used outside of a certain website, the scheme has bidirectional flows. As explained below,

Bitcoin is an example of a scheme with bidirectional flows. However, these categories can overlap.

A further distinction that can be made is whether the virtual currency is centralised or decentralised. As with banknotes and coins, payments with virtual currency units are made by means of them changing ownership. The ownership structure must therefore be registered somewhere, otherwise it might be tempting for a virtual currency unit holder to duplicate it and use it multiple times. A centralised virtual currency scheme has a centralised

Bitcoin was created with the appearance of the original article on the 30. October in 2008. issued by the pseudonym Satoshi Nakamoto. It was never found out who exactly that person or those people who created Bitcoin were. There are doubts about the coherence of the global financial crisis that took place in 2007. and in 2008 spilled over to the real sector and turned into a global economic crisis. However it is unlikely that such a complex system of codes could be created in such a short period of time. It is more likely that this system was created and was waiting for adequate time to appear on the world stage and that the crisis created such an environment. Due to the uncertainty and mistrust in the banking and financial system, an electronic crypto currency appeared that according to the original published article is not controlled by any institution but only by the users themselves. This seems tempting for the investment of capital.

First and foremost it is an open source code that is always available to everyone. Bitcoin is designed as an electronic crypto currency that has a final offer of 21 million Bitcoin. There is a complex system of creating these currencies, the term used is „mining“ the currency. During a period of 10 minutes a block of 25 Bitcoins can be formed. The block size is reduced to the amount already "dug" (Eng. Mined) e-money, and retrieving data for the new Bitcoin-e is more difficult.

Emissions of Bitcoin are fully planned and programmed, and its management is assigned to the network itself, i.e. those computers that perform verification transactions. This algorithm was chosen because it largely approximates the growth rate of extraction of certain minerals such as gold, having a limited amount of Bitcoin that at some point may exist in the system and the maximum amount that can be "excavated". It is assumed that Bitcoin should evolve like gold. At the moment when the excavation is very difficult, its value will be determined by the amount of transactions, as well as the demand for the currency. Bitcoin as a currency is independent of the central banks, the governments and the financial establishment.

Some believe that this is an important financial innovation in recent years, and what most definitely attracts attention is the spiraling price of Bitcoin. Bitcoin's ultimate goal is to become the alternative to existing payment systems. It enables cross-border transactions without interference from the state or central banks and commercial banks and without a fee.

There are two ways to become the owner of Bitcoin, the foregoing one is the mining, while the other is to purchase already created (excavated) Bitcoins on many markets that operate around the world and trade Bitcoins.

## **2. Benefits and risks of Bitcoin for users**

For individual users, there are both benefits and drawbacks in Bitcoin, depending on the payment situation. The benefits mainly relate to anonymity or integrity, convenience, rapidity and costs. The drawbacks mainly relate to the lack of any kind of protection for users. In certain situations the benefits can outweigh the drawbacks, and vice versa in other situations. Normally, the benefits should weigh heavier in situations in which there are no simple, cost-efficient traditional payment services. Depending on the situation can sometimes outweigh the benefits and sometimes disadvantages:

Bitcoin protects user identity; The stated purpose of Bitcoin is to enable anonymous payments online and make them independent of governments, banks and other institutions. So, for users, the benefit of Bitcoin is that the network in which payments are mediated is global, and that certain payments that were not previously made for integrity reasons can now be made, both locally and globally. If a payment on a website is reduced to the push of a button instead of requiring entering a volume of payment information such as card numbers, etc. the time(cost) of the paying party for a payment is reduced. The risk of fraud can also be perceived as lower unless card numbers or account numbers need to be disclosed to the recipient. Personal integrity can then also be perceived as higher. A virtual currency can also allow users to make payments to new groups of recipients that are otherwise hard to reach, especially for payments for which the sender and recipient are in different countries. For some cross-border payments of this kind, Bitcoin can also prove a much cheaper and more convenient alternative to more traditional payment services.

Bitcoin is not regulated by any national legislation; There is no central Bitcoin issuer because the value units are created automatically in the network. Bitcoin thus does not come under any national legislation, neither is there a body to which any claims can be directed. The payments are also anonymous and as a rule it is not possible to show that a payment was made to a certain recipient. The exception is if the parties involved know each other's identities and it is possible to demonstrate who owns a certain wallet. Individual users thus only have a narrow possibility of asserting their rights in the event of a payment going wrong.

Sharp fluctuations in the Bitcoin exchange rate; Bitcoin does not represent a claim on another party rather its value consists entirely of an expectation that it can be used in future transactions. The value is thus highly sensitive to changes in such expectations. Depending on the point in time at which somebody buys or receives Bitcoin, major exchange rate gains or losses can be made. Whether this is bad or not depends on the purpose of holding Bitcoins. If it is purely for transaction purposes, the exchange rate risk is considered to be negative because it makes the payment more risky; that is, the sender and recipient of the payment find it more difficult to set prices in Bitcoin. This is perceived as an increased transaction cost. For the Bitcoin holder, there is also a risk of losing value, either by fraud or accident. This is because the wallet and encryption keys are stored in some type of medium, such as on a hard drive. Should the hard drive be destroyed for some reason, the information would also

be lost and hence so too access to the Bitcoin registered in the wallet. Through hacking, an external party can also access the value by initiating a payment to another wallet he controls. Fraud has occurred, the primary example being that which happened to exchange company Mt Gox, in which several hundred thousand Bitcoins were lost. In this way, Bitcoins are more like cash than funds in bank accounts. If one loses or inadvertently destroys cash, its monetary value is lost. It can also be stolen. Funds in banks accounts are more protected. If the bank acts negligibly, it is liable to pay compensation. If the customer acts negligibly there is a statutory limit to his liability to pay compensation, and if the bank goes bankrupt there is a state deposit guarantee scheme that protects funds in accounts up to a certain value.

### **3. Benefits and risks for society**

There are three main types of benefit that a virtual currency like Bitcoin brings to society.

First, payments in Bitcoin can be more cost-efficient than traditional payments in certain situations. Bitcoin can thus, in some cases, involve savings and hence a more efficient payment system. Second, a virtual currency like Bitcoin can contribute over time to a more robust payment system by not all payments passing through the traditional financial infrastructure that constitutes hubs around which the payment flow is concentrated. If the functioning of such a hub were disrupted for some reason, the related payment traffic also comes to a halt. The mere fact of there being alternative routes for certain types of payment is positive from a contingency point of view. Third, there is a potential benefit in the form of innovation of new payment services and financial services that can be built around Bitcoin. Another important aspect is that the Bitcoin protocol is publicly available online, and that it can be modified if a majority of the network's computing power supports such a modification.

There are essentially two types of risk that Bitcoin could pose to the payment system. First, there is a risk that potential distrust of Bitcoin could spread and lead to more extensive distrust of other participants in the retail payment market too. This could lead to consumers and companies also rejecting safe payment services and participants in favour of perhaps more costly and slower payment services. The market would then not function as well. Second, if key participants in the retail payment market, such as banks and financial infrastructure, were to have major Bitcoin holdings, this could expose them to substantial financial risks. It is they who provide payment services to households and companies, and if a few such participants were to fail at the same time, this could lead to a deterioration in the functioning of the market, at least temporarily. At the same time, risks to financial stability could theoretically arise if important financial institutions are directly exposed to the virtual currency, or if credit losses are sustained because the institution's customers are heavily exposed.

## **II Bitcoin in the international monetary and financial system**

### **1. International payments and Bitcoin**

It is very difficult to classify Bitcoin in a particular area. There are indications that it can be marked as international payment given that it is being exchanged between residents of different countries. Foreign payments or international payments include all payments and collections between individual persons and legal entities of a country with the persons and entities who are in other countries, regardless of the basis on which the payment is made. In the international payment operations, as opposed to the payment transactions that take place within one country, there are no universal legal tender that is accepted in all countries. Given that there are a large number of currencies, there is a need of conversion, interference of a large number of banks and financial intermediaries, each of them requiring a certain commission. However, the characteristics of international payments that they represent the counteract of an actual economic flow, are being carried out between residents and non-residents in the funds of international liquidity and they cause changes in the balance of payments. Therefore, the basic characteristics of international payments are:

- they represent the counteract of real economic flows;
- they are performed between residents and non-residents;
- they are performed with means of international liquidity and
- they cause a change in the balance of payments.

If the order goes on to consider which of these characteristics Bitcoin has we will see the following. As to the first characteristic in exchange for Bitcoin it is possible to obtain certain real economic goods or services subject to the restriction that accepting Bitcoin as a substitute for money is still at an early stage and there are still a small number of companies that accept payment with this "currency". The fact is that Bitcoin works at the international level and that payments can be made and that is precisely executed between residents and non-residents, this is even one of the reasons of its inception. In the third characteristic there appears to be a certain overlap of terms regarding that a system in which Bitcoin works does the payment using this "currency", but that just shows that Bitcoin itself represents the means of international liquidity, if it is considered that it is used for settling international obligations and it can be said that the means of international liquidity must be accepted by the participants in international trade, or by an international financial institution. It remains an open question whether the exchange of Bitcoin between residents of the two countries leads to changes in the balance of payments and is that in some way recorded. From the analysis of the Bitcoin system it cannot be classified with certainty as a system for carrying out international payments.

### **2. Bitcoin as a Currency**

The main economic debate surrounding Bitcoin is on whether it is a currency or not. The definition of currency is straightforward: a system of money in general use. In

order for tender to be considered a currency, it must meet three criteria(Kiyotaki and Wright 1989):

- (1) it must be able to be used for transactions,
- (2) it must be able to be used as a unit of account, and
- (3) it must be able to store value

The first requirement of a currency is that it can be used for transactions. There are thousands of websites that accept Bitcoin: in December of 2015, there were approximately 200,000 daily Bitcoin transactions per day (Tiller 2015), but this volume is tiny compared to other currencies. However, there are still many smaller recognized currencies that have far less daily volume. Furthermore, the number of Bitcoins being used for transactions has been increasing for the last 3 years (Ibid). There is no generally accepted volume or value that a currency has to be used in transactions for it to be considered a currency. For example, Cambodia, Lao, and Uganda's currencies are less active than Bitcoin, but they are still considered currencies—they are weak currencies, but currencies nevertheless. Although the daily volume of Bitcoin is relatively small, it is still being used on a consistent basis and has seen a drastic increase in use. Overall, it is unclear whether Bitcoin meets the transactional requirement of a currency—this depends on the interpretation of this requirement.

The second requirement of a currency is that it can be used as a unit of account. This is also debatable for Bitcoin. It clearly has unit of account characteristics. First, it is divisible. A Bitcoin can be divided into an infinite number of pieces, and these can be put back together to form a full Bitcoin. Rogojanu and Badea (2014) noted that one of the challenges with Bitcoin is that the number of Bitcoins is limited to 21 million, but Van Alstyne (2014) pointed out that fractional ownership of a Bitcoin is possible; therefore, the 21 million is not a limiting number. Second, Bitcoin is fungible. All Bitcoins are created equally, and they can all be interchanged. Third, it is countable and subject to mathematical operations. Although Bitcoin seems to clearly meet the unit of account requirements, there is still debate on this. The debate primarily revolves around

Bitcoin's ability to value goods and services; because of its volatility, it has trouble consistently valuing goods and services. As Figure 1 shows, Bitcoin displayed substantial volatility from 2011 to 2015. However, many currencies incur extreme volatility and are still considered currencies (Dornbusch et al. 1995).

The third requirement of a currency is that it be able to be used as a store value of account. Glasser et al., (2014) empirical analysis of Bitcoin users suggest that Bitcoin is more demanded as an asset than as a currency; they found that users are keeping the coins to store up value for future use. This was further substantiated by Wu and Pandey (2014); they found that Bitcoin is a good investment asset to use for portfolio diversification. This has also been substantiated by several other studies and is in line with the reason that Bitcoin was originally created—which was to offer an alternative currency that would not lose value because of actions taken by government (Nakamoto 2008). Some have argued that Bitcoin's volatility marginalizes its store

value. To that point, many investors gauge the credibility of a currency by its stability and ability to be a safe haven when other financial assets are experiencing volatility (Ranaldo and Söderlind 2010).

The state of Bitcoin as a legitimate currency is unclear. It demonstrates the hallmarks of a currency, but its volatility brings into question whether it clearly meets the requirements of a currency. The volatility has been its largest source of criticism, but this is to be expected of a young currency. Many currencies have suffered from high levels of volatility, but the main difference between these currencies and Bitcoin is that Bitcoin is not backed by a government. It is clear that the legitimacy of Bitcoin as a currency will remain ambiguous for the foreseeable future. In order to gain wide acceptance as a currency, it is going to have to continue to grow in

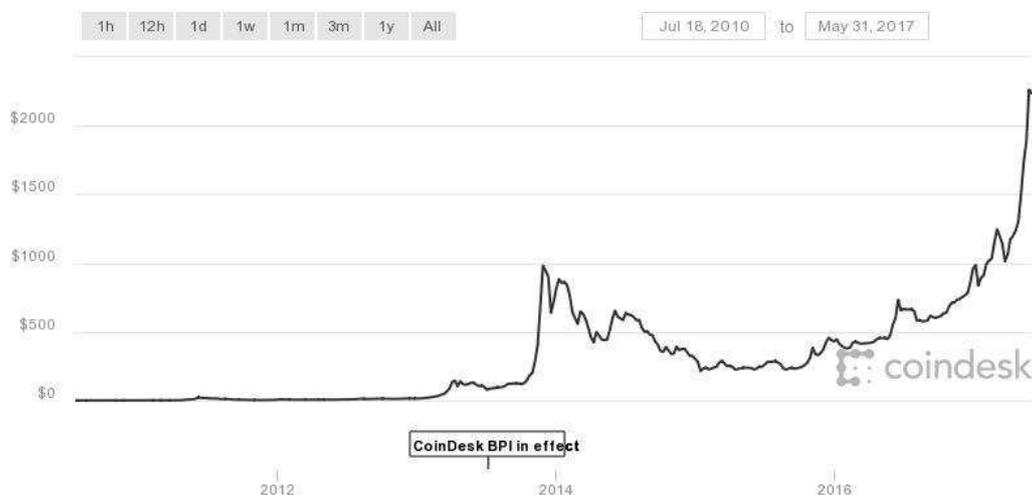
use for several more years and not have any more security issues. In the meantime, there is evidence that Bitcoin is a useful economic instrument.

### III Value of Bitcoin

#### 1. Movement of prices of Bitcoin

Given that one of the main disadvantages of Bitcoin is the huge volatility of its price in the market, one the following graph its price movement from the very beginning until today will be shown.

**Figure 1: Trends in prices Bitcoin-a**

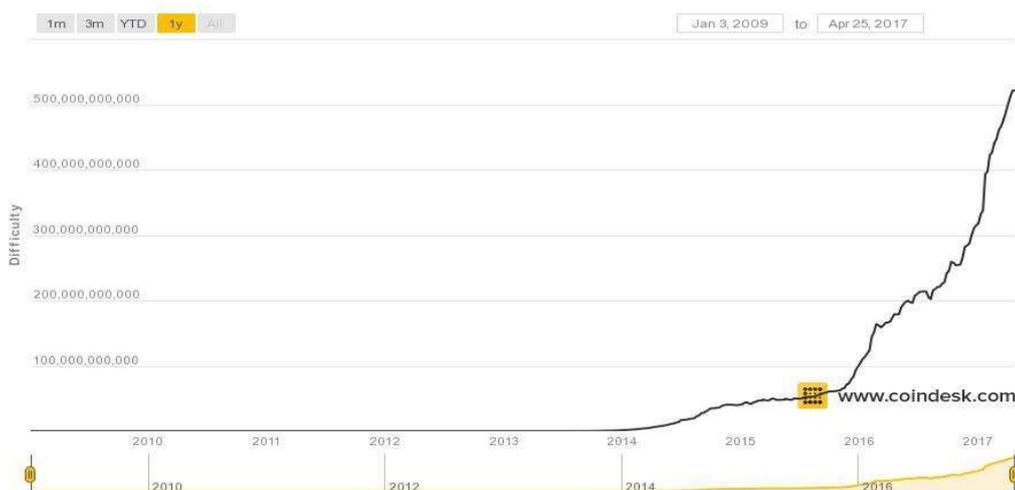


Source: <http://www.coindesk.com/price/>

Since its appearance almost up to 2013, the value of a Bitcoin was insignificant and mainly used by technology enthusiasts and those that were interested in cryptography. But after seeing the current dizzying rise in the price especially from the end of 2013, when the price in some markets reached then a maximum of \$ 1,000. Then, after reaching the peak comes a drop of price and many fluctuations, but the value has not fallen below 250 dollars, and after 2015 there was a renewed growth of price to reach its highest value and even surpassed the value of gold in the closure of

3 March 2017 on certain stock exchanges Bitcoin has cost up to 1,290 dollars, while an ounce of gold cost 1233 dollars. Currently it is worth almost double the value of gold, it is worth over 2220 \$, and it has a new peak of 2766 \$ reached on the 25 of May. Some of the events that changed and affected the price of Bitcoin will be mentioned of the value. First transaction made via Bitcoin in order to purchase a real good happened on 22 May 2010 when a resident of Jacksonville in Florida ordered two family pizzas and offered the seller 10,000 Bitcoin units. The seller agreed to, and if the seller would exchange those Bitcoin on current prices he would receive over 2 million of dollars for them ! But back then they were worth around 100\$ and were not so easily convertible for dollars. In February 2011, the value of Bitcoin grew to \$ 1 for 1 Bitcoin. Then there happened exponential growth levels until 2013 and 2014. Between these years there were fluctuations when the Chinese government prohibited financial institutions to use Bitcoin. Later in 2014, a drop of the largest stock exchange for Bitcoin, Mt Gox due to hacking lead to splitting of Bitcoin price and a loss of confidence in the whole system. But after that we see a steady upward trend that began in 2015 caused mostly by the most media attention, especially frequent use of social networks and the Internet, then a number of companies that accepted Bitcoin as a tender, the occurrence of articles in reputable journals, for example the front page on 31 October 2015 in the journal the Economist, then television reporting etc. Also, many countries are moving to legally regulate this virtual currency and that gives it stability and confidence. All this leads to overcoming the gold price on March 3, 2017. Of course the fact that by the current data already about 16 million Bitcoins have been excavated and the procedure is largely made it more complex in order to limit the offer. Next shown is a graph with increased complexity of the process of mining.

**Figure 2: The complexity of the process of mining**



Source: <http://www.coindesk.com/data/bitcoin-mining-difficulty-time/>

We see almost exponential increase in the complexity of the mining process that accompanies an increase in the number of Bitcoin users as well as the number of miners.

## 2. Gold and Bitcoin

Even the creators of the idea of Bitcoin are all the time alluding to his resemblance to gold, ranging from gold-coloured coins to be used as a logo of the virtual currency, then to the limited supply, and up to some details such as terms used which include the process of Bitcoin mining, the excavation of currencies, some of the users are called miners and so on...

**Figure 3: Trends in the price of gold last 30 years**



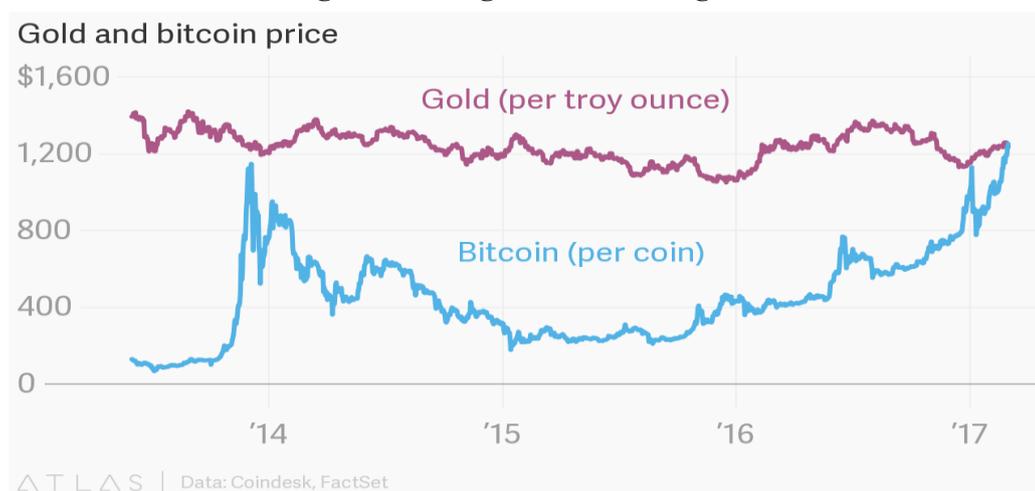
Source: <http://goldprice.org/gold-price-history.html>

It can be seen that since 2008 there has been a rise in the gold price. This points to a general loss of confidence in the cross national currency after the financial crisis that occurred this year and the transfer of funds into gold. In many ways, gold is the precious metal counterpart to the Bitcoin. Like the Bitcoin, gold must be obtained through mining. But, while gold is obtained through physical mining, Bitcoins must be “mined” virtually through the deciphering of special computer encryptions. Another similarity is that both gold and Bitcoins are only available in limited quantities. It is estimated that there is approximately 171,000 metric tons of gold in the world, while the Bitcoin system will only be able to generate and support a maximum of 21,000,000 bitcoins until further technological advances are made. Given such similarities and their individual market activity over the past few years, it is understandable why many believe that Bitcoin could ultimately replace gold in terms of value. However, in spite of this evidence, there are a number of reasons why this shift is unlikely to occur. The first reason that the bitcoin will never replace gold is because it still poses a great deal of financial risk. Despite its recent peaks in market value, the bitcoin continues to experience significant price fluctuation that often results in substantial losses. Furthermore, both the future and the viability of the bitcoin have yet to be determined, leaving many customers wary over the the security of their virtual savings in the event that the system becomes terminated or obsolete.

With such instability and uncertainty surrounding the bitcoin, it is unlikely that it will generate the customer base to match, much less surpass, gold as an investment asset. Another reason that the bitcoin is unlikely to replace gold as an investment asset is that the system has yet to achieve full status as a truly "universal" and legitimate form of currency. Many countries, including Germany, Norway, Russia, France, Thailand and Korea, refuse to use the bitcoin for fear of potential loss. In fact, several have gone as far as making it illegal in their country. In contrast, there isn't a country in the world that would ignore the value of gold, much less prohibit its use. Therefore, until the bitcoin can reach the same worldwide level of legitimacy and approval that gold has, it will never be able to replace gold as a valuable commodity. The final reason that the bitcoin is unlikely to surpass gold as an investment commodity is that gold has consistently demonstrated signs of recovery since it plummeted by 28% in 2013. Many people presumed that the sudden drop in gold's market value was an indication that it had lost its status as a safe investment choice. However, a number of signs, such as the increase in debt-to-GDP ratio and the increase in the price of mining, suggest that gold will not only recover from its drop, but it will continue to thrive as a popular investment commodity. Consequently, as long as investors believe that gold can generate profits, they will continue to forgo any other potential replacements.

If we look at comparative price movements of Bitcoin and gold (Figure 4) it shows that the price of Bitcoin at the end of 2013 almost reached the price of one ounce of gold in the market and then launches headlong to mid 2015. After a significant decline and periods of depression Bitcoin price has recorded constant growth and in April 2017, is equated with the price of gold at the end of the month to outpace the price of gold on the market, marking further growth.

**Figure 4: Budget Bitcoin and gold**



Source: <https://www.theatlans.com/charts/B1At3pS9l>

The figure clearly shows how the price of Bitcoin is less stable compared to the price of gold, but also clearly we see the moment when first the price of Bitcoin almost caught up with the price of gold, and then after the fall and re-growth caught up with and surpassed the price of gold at the end of this graph.

## Conclusion

Bitcoin is the most famous and the first virtual currency in the world. This scheme is decentralized virtual currency with two-way flow and can be called crypto-currency. It is designed to be independent of the governments, banks and other institutions. Essentially Bitcoin functions as a sort of electronic cash. Emissions of Bitcoin are fully planned and programmed, and its management is assigned to the network and to the end-users.

There are certain characteristics out of which some stand out: the anonymity of users, non-payment of fees for the transfer of funds, lack of national legislation on this issue, the risk of loss of value due to volatility. Among these characteristics there is no strict division of the advantages and disadvantages as an item can belong to both categories. Certainly it is necessary to mention the abuse of this virtual currency, which was associated with trafficking in illegal goods, financing of terrorist movements, money laundering, tax evasion, but we hope that it will find ways in the future to minimize and eradicate this type of usage.

In the context of the international monetary and financial system Bitcoin can be classified within the scope of international payments as well as the performance of certain functions of money. However specific positioning is not yet possible to perform due to the many uncertainties that are related to this phenomenon. With regard to its status in the national regulations differing from one country to another and moving in the range from full legal invisibility through acceptance as some forms of property, to complete acceptance as proper currency. National Bank of Serbia for example does not recognize Bitcoin as legal tender and warns citizens that they are using this currency on their own responsibility in case of fraud or loss on investment.

The price of this currency shows considerable volatility and steep ups and downs, until the last quarter of consistent growth, catching up and even overtaking the price of gold on the market. It remains unclear, however, what is the future of Bitcoin? The answer here can go in two main directions, full optimism on one and pessimism on the other side.

If we start optimistically and assume further operation of the virtual currencies and the Bitcoin at the very top of them, there will be official recognition of this currency in most countries of the world that will be accepted as legal tender. Banks, financial institutions and state reserves will include Bitcoin within their funds. In calculating the balance of payments, the new method will add a special section which will refer to the exchange of virtual value, in which the main item will be occupied by the virtual currency Bitcoin. If we start with creative optimistic attitude it can even be predicted that Bitcoin could be included in the basket of currencies used in the calculation of special drawing rights (SDR) at the International Monetary Fund (IMF). What this would certainly require is some way of global defining and adopting the rules of operation and use of this currency, for example to adopt a specific resolution at the United Nations. If all this comes true it would inevitably pressure the increase of the supply of Bitcoins as the current 21 million units would simply become to scarce for such ambitious plans. There will occur many dangers related to the loss of state

control over the levers of monetary and fiscal policy and Bitcoin should therefore be adequately and timely regulated in the field of virtual currency.

The second scenario is not nearly as imaginative as the one described above. Namely, if it turns out that all this was a pyramid scheme designed to enrich those who are at the top of the pyramid at the expense of those who are at the bottom, after some time there will be a bubble burst that will occur around Bitcoin similar to what happened with the real-estate sector in America, where we experienced a bubble bursting in 2007. Many also compare this to the frenzy of "tulip mania" that has been on-going in the Netherlands during the 17th century. The greatest fear exists from the sharp drop in prices of these virtual crypto currency because then there would be its general desertion and huge sums of money would be lost, leaving Bitcoin to become just another of the interesting stories in the financial history.

Chance of a certain third scenario where there will be a slight increase in the popularity of these currencies, will record certain ups and downs in the price, but will still be able to maintain its place at the international financial scene. The recognition of many countries and the introduction of Bitcoin into legal channels would certainly contribute to this.

At the end, many questions remain shrouded in mystery: who is behind the Bitcoin phenomenon, who profits from this scheme, and whether it will come to collapse or success ... Is this one of the levers of creating "virtual" colonialism mentioned at the beginning? No one can definitely say the last word here, although many things depend on state authorities and financial institutions, as well as on end-users who will decide on the fate of Bitcoin.

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