



The Future of Cryptocurrency After the Pandemic

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Abstract

The definition of money is one of the most fundamental discussions of economics. Regardless of banknote or coin, many studies have been done on what money means. In the second half of the 20th century, with the spread of the banking system, a global monetary system based on the dematerialized money system was established. Especially in times of financial crisis, the reliability of this system is questioned. However, the global financial system, in which the whole world is integrated, makes a total change very difficult. The widespread use of cryptocurrencies has brought new discussions with recent technological developments.

It is thought that the COVID-19 pandemic will increase because of the transmission of the virus due to the exchange of money. It is seen that these developments are defined as a period in which shopping has shifted to the internet environment and cryptocurrencies are valued. On the other hand, the crisis environment in the world has produced a completely different result. People moved away from uncertainty and turned to investments such as gold and silver. The post-pandemic period is pregnant with new developments in this respect. In this paper, the integration process of cryptocurrencies for the post-pandemic period will be questioned.

Keywords

Cryptocurrencies, Bitcoin, COVID-19 pandemic, future of monetary system

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Introduction

Cryptocurrencies are a topical issue with the global pandemic and the recent developments and the transformation in digital technologies in recent years. With the United States indisputably establishing its authority in the aftermath of the Second World War, a financial and commercial system was also established in the world based on the US dollar. However, with the spread of technology to all areas and the impact of the Fourth Industrial Revolution 4.0 expanding into all sectors, the new cryptocurrency is the subject of a new debate whether it will replace the established system. This study examines the potential compatibility of the cryptocurrency system with the existing system or the conflicts therewith. Fluctuations and unstable changes in the value of cryptocurrencies brought with it the discussion on their integration to the system. From this perspective, the ability of cryptocurrencies to integrate into the international financial system is worthy of examination with a particular focus on the structure of Bitcoin, the most commonly used among cryptocurrencies. It is clear that Bitcoin, which offers the global economic ecosystem brand-new forms of payment, will not be able to integrate into the established system without compromising on its mechanism and structure. These structural changes and compromises should not mean that cryptocurrencies do not have a future. The static structure of the existing monetary system and the dynamism of cryptocurrency indicate that a hybrid payment system awaits the world. In this process, developing countries like Turkey should follow more proactive monetary policies. It is also evident that projects to combine the cryptocurrency, financial technologies and the informatics infrastructure are also needed in alternative areas with the potential to develop such as Islamic finance.

Bitcoin is a new cryptocurrency designed by Satoshi Nakamoto (Craig Wright) in 2009 as it said in many works (Nakamoto/Wright, 2008; Velde, 2013; Hern, 2017). Cryptocurrency is defined as a digital currency in which encryption techniques are used to regulate the generation of units of currency and verify

the transfer of funds, operating independently of a central bank (Lexico, 2020). Bitcoin is still a hot topic within the context of the transformative effect of the cryptocurrency and the opportunities it provides.

In this system of virtual currencies such as Bitcoin (the *blockchain* system), money transfers are made without third-party intermediaries or banks (Swan, 2015). Therefore, there is no transaction fee or a real sender's name in the system. Also, it is an object of curiosity whether the new virtual currency will be integrated into the international financial system. Actively used since 2009, Bitcoin has made a distinguished name for itself with the increase in its value that has happened recently (Golumbia, 2016). Indeed, Bitcoin's price rose to 19000 US dollars and it became the most valuable cryptocurrency of the world. While it experienced a sharp decline in value in 2018, Bitcoin opened the way for discussions that do not appear to go away soon. A decentralised system allowing transactions without a third-party intermediary, Bitcoin is open-source and cryptographic (Candan & Yaşlak, 2020). This is one reason why it is claimed to be safe. However, there has been some dispute on the trust in this safety along with the issue of its ability to integrate into the financial system due to it being not strong enough. Bitcoin, which stayed a hot topic after the considerable increase in its value, has been discussed within the context of the financial sector. Also, the academic circles (Hileman & Rauchs, 2017) have conducted studies in the context of Bitcoin's usability (Naughton, 2015), reliability (Vyas & Lunagaria, 2014) and its future (D'Alfonso, 2016). A review of a significant part of the studies on Bitcoin revealed that studies that emphasise concerns on Bitcoin's integration into the international financial system (Bonneau, 2015) come to the forefront. However, these studies have been found to be rather disconnected from each other, which pointed to the need for a comparative study in order to finally answer the question of whether such integration is possible. This study makes use of the findings made up of the present data we have and aims at making estimations through a comparative analysis of the view that this new medium of exchange and investment tool, Bitcoin, (Baur et al. 2016) will probably integrate into the international financial market as well as the view that such integration is not possible. Thus, it aims at checking the validity of assumptions and concerns regarding Bitcoin's integration in light of the advancement in the information technologies.

The Cryptocurrency and the Future of the Financial System

Although there are many dimensions to Bitcoin's integration from legal, political and financial perspectives (Shcherbak, 2014), this study mainly deals with the financial system with reference to the functionality made possible by the rapid advances in technology. Bitcoin is a cryptocurrency and these currencies can be used with specific passwords via the virtual wallets in which they are stored also using passwords (Frisby, 2014). People can use this currency for their payments or receive money in this currency as in real life. The difference is that this system involves virtual wallets and the absence of

an institution that keeps track and record of transactions is an innovation for individuals and the financial system (Yellin et al., 2017). Certain suggestions are being made regarding the compatibility of this new system with the old (conventional) system that runs on bank records (Scherbak, 2014). The fact that the cryptocurrency can be used as a medium of exchange is one of the fundamental factors of compatibility with the global financial system. On the other hand, the most significant issue of integration must be dealt with in light of the advances in information technologies.

From the perspective of data storage, the new system saves the data throughout the entire network under specific codes rather than at a single point. This transaction increases the security of the saved data (Ivan, 2016). Indeed today, the conventional banks utilising advanced financial technologies follow a similar method and keep backups of user information on different servers. In terms of ways to record information, this signifies existing technological compatibility (Arnold, 2017). The reason is that the blockchain technology is not only used in cryptocurrency but also many other areas, notably banking, as a high-security system (Forbes, 2017). It is clear that the blockchain system will help reduce transaction costs in banking transactions around the world (Masters, 2017). It is also understandable why existing banks and financial institutions are not willing to adopt this blockchain system as they profit from these fees calculated over the costs of the money transfer processes. Also, this system in which all user information is collected and access is achieved via multi-factor authentication not only allows the account holders to share as much data as they prefer but also maintains privacy more effectively than contemporary systems. With this in mind, globally known corporations including VMware, Intel, Oracle, IBM, Amazon and Microsoft have initiated projects to achieve compatibility with this technology (Evans, 2017). Multinational and corporate firms around the world have also started receiving payments in Bitcoin (Masters, 2017). All of these developments give important clues to Bitcoin's integration into the existing system.

Cryptocurrencies have no affiliation with the central bank of any particular country. Therefore they are less severely affected by the financial and political instability in a country than other currencies. Although the fact that there is limited control over the trading of cryptocurrencies causes undesired volatility in the financial system most of the time, there are areas where it is preferred since it does not belong to a single entity, nor is it monitored or controlled by a central authority. Also, it is not possible to freeze or seize a cryptocurrency account. Its flexible and independent structure takes the cryptocurrency one step ahead of the traditional system (Hernandez, 2014). The flexibility of the cryptocurrency has allowed it to be adopted as a payment method in many areas including the labour market (Agence France-Presse, 2017). Its use as a payment method and the limited control over it has not only created advantages but also certain risks.

The fact that Bitcoin is used in illegal transactions and unlawfully allows money laundering and the use of laundered money as in the Silk Road case in the US (BBC, 2013) brought with it some serious concerns. At this point, the views that advocate that governments should take their position in the cryptocurrency system in order to benefit from the system and not to lose control by missing the opportunities offered by the rapidly advancing/transforming financial technologies are now being voiced more frequently. However, there is the risk of the cost of the work to be carried out for the regulations on the cryptocurrency, which owes its advantages mostly to its flexibility, being higher than the revenue that will generate out of these regulations. Therefore, it will be a proactive move for the institutions and policymakers to develop strategies specific to this sort of virtual currencies and make their current financial systems compatible with them. These will allow the cryptocurrencies to involve in and adapt themselves to the legal process. This way, it will be ensured that the strengths of both systems are preserved rather than one system fully conforming to the other.

Another feature that makes the integration of the cryptocurrency possible is that the transactions on the blockchain system are traceable. What is to be done here is to get acquainted with this technology and train qualified specialists. This feature of the cryptocurrency which is often overlooked amidst the concerns on money laundering and abuse, in fact, makes it possible to keep track of even the smallest account activity. Through this diligent surveillance, the governments will be able to track down and arrest the offenders based on these transaction documents that serve as proof of even the smallest offence (Doguet, 2013). It would be wiser for the governments to integrate it into their systems instead of banning or avoiding its use. In addition to this, the cryptocurrency allows countries with very limited financial activity or weaker banking systems to easily benefit from the facilities used by developed countries (Barbirato, 2016). The cryptocurrency, which will enable the active use of financial technologies around the world thanks to these advantages, will not be the medium of uncontrolled money flow, as commonly believed, rather it will help create a payment system that will detect even the simplest irregularities under a properly established control mechanism. The governments will, therefore, work closely with the cryptocurrency in order to establish a control mechanism which will make money laundering impossible (Para Analiz, 2017a). In other words, the cryptocurrency can be integrated into the current system only by losing its essence. In this case, the cryptocurrency will become the international currency used for money transfers and payments under control. It will also become a currency to which each government can adjust its currency in the international markets.

Economic Confidence After the Pandemic

Confidence is one of the fundamental factors in the traditional economic theory (Aysan, 2020). In this context, the discussion on how confidence could be built in the cryptocurrency gives important clues to its integration. In

the cryptocurrency system, there is no physical contact with money and the payments are made online. This is rather different from the forms of payment that people are accustomed to. However, the types of money and payment methods are shaped by the needs of societies. Certain precious metals and paper have been used by people as money through history (Korkut, 2020). Changes can take place in the reliability and the form of money as happened in history. One reason is that pieces of paper, plastic cards or electronic data are not essentially money. What has allowed them to be regarded as money is that they have been released into the market by a reliable authority. In other words, both paper and plastic can be used commercially and have been considered money from the moment they become reliable tools (Singh, 2005). Therefore an environment of confidence must be established primarily in a payment system. The financial system established in this way will have a profound influence on the future of the new currency. Adequately and properly calculated regulations are significant in that they facilitate the adoption of the new currency system by the consumers. These are pioneer systems such as online banking applications and bank payment systems (Bollen, 2013). The integration of the cryptocurrency into the conventional system also depends on the enhancement of these pioneer ventures and the introduction of new applications to consumers. Once the consumer payment system has become reliable, practices will also be replaced by the new ones because it is money itself (its use, circulation, form, etc.) that largely shapes the markets and when money changes, the markets will follow (Nishibe, 2014). Therefore it would be wrong to assume that changes will happen only in the money system. We can now speak of a transformation to such an extent that will influence consumer behaviour.

On the other hand, the current value of Bitcoin stems from the fact that the users still accept it as a medium of exchange or see it as a commodity. As in other currencies or commodities, Bitcoin's value is determined by instantaneous supply and demand conditions in the market (Lo & Wang, 2014). Therefore, its acceptance as a commodity or a medium of exchange turns it into a standard currency. This is already gaining worldwide acceptance (Rizzo, 2015; Kawa, 2015). Therefore this kind of support paves the way for the integration of the cryptocurrency into the system. One of the most important issues at this point is the fact that the cryptocurrency systems are centered around Bitcoin. Among over two thousand cryptocurrencies, there are those released by certain authorities. This means that arguments for illegitimacy and lack of control are not valid for all cryptocurrencies (Doğan, 2020). And this shows that the integration process could be established on the basis of confidence. In addition to all of the above, there are some that interpret the future of the cryptocurrency after the pandemic from the health perspective. These studies underline the fact that paper money will help the spread of the virus, therefore people will turn to the options including contactless payment systems, online shopping and cryptocurrency transactions.

The Cryptocurrency and Its Risks

The first criticism of the integration of the cryptocurrency into the current system (Hileman & Rauchs, 2017) argues that cryptocurrencies do not have any real metal value like precious metals nor any government-backed value like paper money. Therefore, it is not estimated that, without a guarantee from an authority, the cryptocurrency will replace physical money any time soon (Reuters Business, 2017). Also the nonhomogeneous use of information technologies around the world is one of the biggest obstacles standing in the way of the cryptocurrency replacing the physical money. With the face value of even the physical money called into question especially after the recent crises and the COVID-19 global pandemic in particular, the cryptocurrency will face even a bigger challenge. The studies show that the cryptocurrencies are not considered as safe havens, but amplifiers of contagions (Conlon & McGee, 2020; Corbet, Larkin, & Lucey, 2020: 7).

The sudden fluctuations in the value of cryptocurrencies bring to mind the Dutch Tulip mania of the 16th century and other speculative frenzies in general (Taskinsoy, 2019; Moosa, 2020) For instance, Bitcoin had five corrections amounting to 30% throughout 2017 but the first four corrections were followed by an upward trend within 38 days on average. The fluctuations in Bitcoin's value continued in the following years. The loss of value was over 50% in 2018. As can be seen in Chart 1, Bitcoin follows a fluctuating course in general and recovers its losses afterwards.

Chart 1. Bitcoin's price against USD



Source: (TradingView, 2020)

Sharp falls and rises as shown in Chart 1 shakes the confidence in Bitcoin, which causes it to be regarded as merely an investment tool within the context of certain doubts. Bitcoin's main advantage that needs to be emphasized for integration is that it is medium of exchange although it has mostly been used as an investment tool. As the options for payment in the cryptocurrency

are not well-developed trading via cryptocurrencies is limited and they are used for speculative purposes in the form of savings/investment due to the challenges in spending them. However, since they are very open to speculative operations and more volatile than other stores of value, cryptocurrencies are not suitable for long-term investment. Although it offers a good degree of functionality based on its concept, cryptocurrencies have not yet reached the required trading volume as they are not real currencies and due to the negative effects of speculations (Para Analiz, 2017b). In this context, the risks associated with the cryptocurrency can be classified into three main groups: (i) economic, (ii) legal and (iii) infrastructural and technological risks (Candan & Yaşlak, 2020). Alongside these risks, the sociological impact of the spread of the cryptocurrencies must also be analysed well.

According to the US Federal Reserve as well as to the US Securities and Exchange Commission, the cryptocurrency and Bitcoin, in particular, are the biggest danger facing the American financial system. One reason is that international money transfers are possible via Bitcoin uncontrolled by government authorities. Also, there is the risk of the Federal Reserve's centralised structure falling apart (Financial Times, 2017). These risks associated with the cryptocurrency have primarily led to the restrictions imposed on its operation in many countries (Hill, 2014). Therefore, it would not be realistic to assume that the cryptocurrency will soon replace the dollar which is the main currency used in the payment systems nor that it will revolutionize the dollar system (Wessel, 2016). There are, however, other views that Bitcoin, which the most commonly used among cryptocurrencies, will be used as the common currency thanks to the rapid advancements in information technologies (Freen, 2018). Therefore, it would not be wise for countries to direct all investment and orientation in financial technology towards the cryptocurrency. Also, it should not be ignored that developments in financial technologies have features that can potentially recover the failures of the global financial system.

Conclusion

The integration of the cryptocurrency into the financial system is a process signifying a harmonisation that extends over time. This harmonisation process will be possible with the financial system becoming more dynamic while at the same time maintaining its stability and with the cryptocurrencies integrating into the financial system under heightened security and control. In other words, a stable but flexible financial system must be built on the basis of strengths rather than weaknesses. In order to achieve this, the cryptocurrency must be isolated from the speculative investment operations that surround it and regarded merely as a medium of exchange that makes shopping easier. Otherwise, all of the financial problems created by the fiduciary monetary system will eventually result in the widespread use of the cryptocurrency. Similarly, security is another important issue to be emphasized in this process of transformation and integration. The reason is that the cryptocurrency can be integrated into the international financial system only by making it

controllable. Controllability will allow the governments to play an important role in the widespread adoption of the cryptocurrency. As a payment system where the governments are not involved will not last long, the government involvement is especially important to create a sound and long-lasting currency. This will provoke new discussions when the governments start issuing their own cryptocurrencies.

While the rapid advancements in technology force all sectors to adapt, economy and finance are in no different condition. Furthermore, the developments in security systems as well as the fact that new information technologies are needed to track international monetary activity as a result of globalisation and increased trade volume led to the formation of new concepts for new circumstances. One of these concepts, the widespread adoption of the cryptocurrency is not only foreseeable but also points to the fact that the governments should be prepared for the potential problems that may arise. For this purpose, the institutional infrastructure should be prepared proactively for a planned transition instead of taking action in the process. All legislative/regulatory arrangements should be done in collaboration and mutual understanding with all the stakeholders in order to deal with all potential inconveniences in the future. Furthermore, the common trend of investing in commodities such as gold and silver, considered by people to be more reliable in times of crisis such as the global pandemic is another challenge facing the cryptocurrency in the future.

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