



## The Future of Bitcoin as a Tool for Financial Development

### Rafaa Ibrahim Al-Hamdani

Assistant Professor, College of Business and Economics, University of Mosul, Iraq. ORCID: 0000-0001-7811-6474. E-mail: rafea\_ibrahem@uomosul.edu.iq

### Laila Abdul Karim Mohammed

Assistant Professor, College of Business and Economics, University of Mosul, Iraq. ORCID: 0000-0002-5219-8616. E-mail: layla\_abdulkarem@uomosul.edu.iq

### Jamal Hadash Mohammed

Assistant Professor, College of Business and Economics, Tikrit University, Iraq. ORCID: 0000-0003-3347-8353. E-mail: jamal55@tu.edu.iq

### Abstract

The purpose of research is focused on the insight into the future of Bitcoin on the financial situation, its implications and challenges. The problem of study is to investigate how to deal with a new type of digital currencies (such Bitcoin) that does not have a physical presence and there is no specific body to issue. Thus, this study aims to identify the nature of Bitcoin currency and what are the challenges associated with it as well as exchange rates with some currencies, as the research hypothesized the main hypothesis that Bitcoin will contribute to financial development in the future, the research also used the analytical rooted approach to present concepts and data, using financial technical analysis to display the results The research also came up with a number of conclusions and recommendations. The results of paper significantly contribute to the literature through providing evidence from financial data of Bitcoin.

**Keywords:** Bitcoin; Digital Currencies; Block Chain; Cryptocurrency.

## **Introduction**

As a result of the tremendous development witnessed by the economic and financial world, which was reflected in the emergence of new phenomena and variables previously unknown, including the phenomenon that swept the world and ravaged astray on the Arab countries, which is electronic commerce and what are the advantages and risks related to, which emerged the parts of electronic commerce, which prevailed on the market and the world Electronic money or digital currencies and that the most prominent of those coins and currencies is Bitcoin, which appeared in late 2008 and began to work in 2009 and in spite of the ambiguity, but it has become global in all its standards, which contributed to the Financial development accelerated Despite the positions of many countries, but it has acquired the exchange rate of the most important global currencies (the dollar and the euro).

The problem of the research lies mainly in how to deal with a new type of currency (Bitcoin) that does not have a physical presence and there is no specific entity to issue, which raises a number of questions:

1. What is the issuer of the money?
2. Can control the bitcoin and control it?
3. Can access financial development using Bitcoin?

So, based on the above, the importance of research is through keeping pace with developments in the environment, which is characterized by high speed. Secondly, global spread of Bitcoin and control of traditional and electronic currency exchange rates. Finally, virtual currencies, especially Bitcoins, are gaining importance in being a suitable alternative to future cash currencies. Therefore, the research aims to achieve a set of objectives, namely: Statement of the nature of virtual money (Bitcoin) and its importance and characteristics; Secondly, view challenges facing Bitcoin virtual coins and finally, View the technical analysis of the Bitcoin exchange rate with the prices of other currencies (dollar and euro).

## **Theories and Literature Review**

Before dealing with what digital currencies, it should be noted that there is a set of terms to be differentiated among them and widely used, including: traditional currencies, banknotes, electronic currencies, virtual currencies, digital currencies and digital currencies.

Conventional currencies refer to those funds in the form of physical material (metal or paper) on the ground, which can be centrally controlled and can be used concretely between dealers and can be withdrawn and deposited materially and concretely in various bank accounts, and has a market value depends on the mechanism of supply and demand Each country has its own currency under a special name and has a value among other currencies such as the dollar, euro, yen, dinar, etc. (Andresen & Antonopoulos, 2019). These traditional currencies may be traded between individuals, institutions, governments, shops selling, buying, transfers, etc. in electronic

form through computers or mobile phones and using the Internet without the need to review banks or receive and hand delivery between dealers, this process is called electronic trading of funds and is called on this money traded in electronic currencies E. Currency, so it can be said that each electronic currency is a traditional currency traded electronically and not vice versa. Virtual currencies are digital and intangible (non-physical) funds that are not like the dollar or the dinar, but are currencies in the form of numbers on the Internet with different names and are not centrally controlled, and does not exist on the ground but in a virtual world They are not available in the form of securities or real, but exist in virtual portfolios (Virtual Portfolios) and remain on the Internet and cannot be taken out to reality, but what distinguishes it is not transferable to traditional currencies such as dollars and euros, but the value of these currencies That are used on the ground, as they are.

Therefore, the digital currency is a financial balance recorded electronically on a card with a value stored, a form of electronic money used in the presence of Internet networks, as it is intangible and does not have a physical presence as in Coins( Sabal Majali, Chloe Gueguen, et al,2019,3-4) and are in two types: digital currencies and encrypted currencies Encrypted Currency, the central currencies and belonging to a company or a certain entity is the development and keep the transactions in it confidential and available only to its developers and operators as in (Rabel) Ripple, either digital currencies. It is a type of cryptocurrency that exists today, and what distinguishes it is not subject to regulation or control by a company or a certain entity, and is freely circulated as the transactions are public and non-secret and can be monitored by the community and the public, while the production is controlled only by mining . One of the most famous digital currencies of Bitcoin, and these digital currencies are virtual money and electronic money at the same time, and is not subject at any time to the central control, but it is distributed based on encryption to avoid the occurrence of fraud, do not bear any serial numbers They are not subsidized by the state, such as paper currency N either get them to participate in the production process by buying it from one specialized in selling sites or by sharing with other people (return, 2019, 199).

From the above it can be said that each digital currency is a virtual currency and not vice versa. The focus of our research will be on the term cryptocurrency in both types.

### **The Advantages of Digital Currencies**

The technique used in digital currencies is one of the distinctive methods that make dealing with it is good and some people consider it less dangerous than what happens in other traditional currencies, because of these currencies have multiple advantages, including:

1. Speed in the completion of transactions and transactions in a way that may exceed what is done in conventional banks.

2. Security and fraud prevention thanks to the technology (Block Chain) and technology (Mining), which is based on Bitcoin and other digital currencies and other digital currencies.
3. These currencies are allowed after identification, because transactions are not linked to consumer information.
4. Low or no cost of conversion or reception of these currencies because there are no commissions or fees as in today's banks.
5. To provide great protection for the transactions that take place on the circulation of digital currencies, where they are distributed to many computers and globally, making it impossible to manipulate them.
6. Cannot be counterfeited unlike conventional coins.
7. Dealing with them shall be decentralized and shall not be subject to the laws of governments and the Central Bank.
8. Cannot be frozen or confiscated (Luther & White, 2014, 13; Nature, 2019, 336).

### **The Risks of Dealing in Digital Currencies**

Despite the advantages of dealing with digital currencies, it is not without some risks that users of these currencies may pose to individuals, companies and financial institutions, most notably:

1. Absence of the supervisory role through which the rights of the users, companies and dealers are guaranteed.
2. The process of dealing in these currencies is via the Internet and in the event of interruption, it may hinder the process of trading and may stop dealing for a certain period.
3. Many smugglers may resort to them in carrying out their own operations. This is because they are not subject to any government restrictions and are not dependent on any party.
4. The accounts of its customers may be stolen and hacked by hacking, which is one of the most important technological risks
5. Dealers may experience a loss of money as a result of forgetting their account or even recovering it again.
6. Exposed to market and competitive risks affecting market prices.
7. The value of these currencies exposed to large price fluctuations within short periods of time, which causes significant losses for dealers (Jubouri, 2018, 331; Neil & Hanna, 2016, 22-52).

### **The Manufacture of Digital Currencies**

In traditional currencies, we know that currencies are made physically in private factories and under the supervision of central banks. But how is it in digital currencies?

Digital currencies are generated by the so-called Mining or encryption, which is done through

specialized computers by solving a very complex mathematical equation known as Hash and many compete to solve these complex puzzles. On a specific amount of these digital currencies and then performs the Mining operation of the coin. (Isam al-Din, 2014, 51), and some may consider that the process of mining is one of the most important challenges to the spread of Bitcoin due to the difficulty of solving mathematical transactions and deciphering the mystery (Swailhi, 2018, 226).

There are other ways to get digital currencies without mining, where you can buy online using local funds to deal and from markets dedicated to the Internet. It can also be sold by a person or company to users from customers or companies and other stores, as in the stock market or gold. The value of a digital currency is determined by the mechanism of supply and demand and is constantly fluctuating. In other words, it is the case of any traditional currency that has a value.

### **The Most Prominent Digital Currencies in Circulation**

After the widespread use of these currencies, many types and issuances to reach nearly (1500) digital currencies around the world, but the most famous and most traded and liquidity are (Badev & Chen, 2014, 7):

1. **Bitcoin:** It is an actual application of digital currencies accepted as a payment tool and used to purchase goods and services and pay debts, and the process of transferring this currency from one wallet to another is done in the same way as Internet banking services, but here there is no specific bank to process payments and can be compared. In other currencies, such as the dollar and the euro, but with fundamental differences, they believe that it will change the global monetary system in the same way that the Internet changed the lives of human beings. Among the differences that distinguish it from traditional currencies, it is fully electronic currencies and is traded via the Internet and is the first decentralized digital currency, i.e., no central regulatory body behind it and is created via Mining, and is replaced by traditional currencies and other products and services, and as of 2015. More than 100,000 dealers and vendors have adopted Bitcoin as their payment currency. Research estimates at Cambridge University show that as of 2017, there are between 2.9 and 5.8 million users using Virtual Portfolio, most of whom use Bitcoin, which stands for It has on the trading platforms symbol (BTC) and moves the price of bitcoin Between (16.000 - 17.000) US dollars. The market capitalization reached 271 billion US dollars.
2. **Ethereum:** The second most famous digital currency appeared in 2015 with a market value of (75) billion US dollars and the price of etherium above (1000) US dollars, symbolized on trading platforms symbol (Eth).
3. **Bitcoin Cash:** It is the third most popular digital currency, appeared in 2017 with a market value of (50) billion dollars in 2018, while the price per unit Faisal (\$ 3,000), symbolized on trading platforms symbol (BCH).

4. **Ripple:** occupies the fourth place, which appeared in 2013 and attracted the attention of investors being used as a check according to an automated currency trading system, which is worth (42.5) billion dollars in 2018 and is characterized by being very cheap compared to other major digital currencies as the price per unit of currency (1.1) They are increasingly growing in trading, symbolized on XRP trading platforms.
5. **Lite Coin:** The market value is (15.4) billion dollars, while the unit price is (283) dollars and is symbolized on trading platforms symbol (LTC). It is similar to Bitcoin but it differs in the method of recording the financial transaction, as it takes (2.5) minutes, while Bitcoin takes 10 minutes
6. **Cardano:** which has a market value of (10.7) billion dollars, while the price per unit reached (0.415) dollars and is symbolized on trading platforms code (ADA).
7. **IOTA:** occupies the seventh position among the digital currencies with a market value of (10) billion dollars at a price (0.821) dollar per unit of currency.
8. **Dash:** A cryptocurrency that was launched in 2014 and has a market value of \$ 9.2 billion at a price of \$ 11.9 per unit.
9. **NEM:** The nominal value of (8.3) billion dollars at a price (0.932) dollars per unit of currency and is symbolized on trading platforms symbol (XEM).
10. **Manero:** It is a leading currency and aims to focus on privacy and resistance transactions as its transactions are not traceable and the trading price per unit in 2017 about (378) dollars, the nominal value amounted to (5.9) billion dollars and is symbolized on trading platforms code (XMR).

There are several other currencies appeared all used for a certain purpose, including the derivative of Bitcoin to address security problems and instability in Bitcoin prices, including Master Coin: \ Bitcoin Cash \ Bitcoin Cold, and others.

### **The Reality and Future of Digital Currencies**

Digital currencies and Bitcoin have received the attention of researchers and writers, especially in terms of their importance and impact on financial markets and competition between companies. In a study conducted by Game et al. (2012) showed the impact of digital currencies in the competition market between companies and the study showed that Bitcoin is the most used currency And impactful. In another study by Polasik et al. (2015) reveals the importance of Bitcoin in e-commerce, because of its ability to achieve the returns from the high share of sales and the speed and ease of completion of transactions, the study also aimed to provide a comprehensive pilot study of the features of payment and investment in Bitcoin Its impact on the management of e-commerce. She also stressed that among the factors that increase the share of sales paid in digital currency is the company's reputation in the market and the extent of customers' knowledge of dealing with Bitcoin and other digital currencies (Polasik et al., 2015).

Although the future of digital currencies could theoretically serve as money for anyone with Internet-enabled devices, there are those who, at present, believe that it works as money only for a limited period and for a small number of people in a study by (Robleh Ali , et al. 2014,281-281). They stressed that digital currencies can take the place of traditional currencies and operate, but for a limited period only, they pose significant challenges, whether at the level of individuals or the economy of a country or companies and shops, and the study pointed out that digital currencies do not pose a significant risk on Monetary and Financial Stability in Britain (Research Sample) However, there are those who see the importance of digital currencies in the future, because of the great revolution and change in the global monetary and financial system because of the rapid development and expansion of digital currencies. Fame in dealing with individuals, companies and financial institutions in a study conducted by Max and David (2016) in which they stressed that banks, companies and individuals are now living the era of digital currencies, a fast-evolving topic as it seems that digital currencies such as Bitcoin is a real competitors of currencies paper and metal touch. Their presence in the market may put pressure on the central banks to follow up and prepare a stricter monetary policy. The study also pointed out that the most interesting thing is the block chain technology used in digital currencies has the ability to improve the payment and clearing operations of central banks, which may pay customers on use and non-retention of physical cash deposits in commercial banks or commercial transactions.

### **Countries' Attitudes towards Digital Currencies**

The way governments deal and accept digital currencies varies from country to country. Generally, these visions are divided into three categories:

1. Countries have issued official laws prohibiting dealing and trading in digital currencies.
2. Countries where digital currencies are traded, but no official law has been passed by their governments and regulators on digital currencies, including Australia, where no formal statutory laws have been enacted, but there are a number of headquarters for companies dealing with Bitcoin on their territory such as Cryptopia. In North Korea, there are trading platforms such as Okex and Binance, although there are no laws. At the Arab level, some companies and restaurants have accepted the use of Bitcoin (Hawsib.com).
3. Countries whose governments and legislative bodies have issued official laws that allow dealing with digital currencies and even regulated the mechanism of dealing and calculating taxes in them. It is also a suitable place for the spread of Block Chain companies and is considered by some countries friendly to digital currencies, particularly in Bitcoin, including Japan, which is the first country to start. By accepting dealings in Bitcoin, it issued a law through the Japanese Financial Services Agency (FSA) in 2016, which is part of a package of laws regulating the financial sector and the Japanese bank, where it officially recognized Bitcoin and other digital currencies as a means of payment that fall within virtual currencies, which disrupt As for the electronic money, and within the

provisions of the law we find that each market for digital trading should have a reserve liquidity equivalent to (10) million yen, which is equivalent to (90) thousand dollars, and each trader must provide documents proving his identity within the issuance of (KYC) This may affect the popularity of Bitcoin in its anonymity in cryptocurrency. However, the justification of the Japanese legislator came to protect investors from the risks of fraud, and has witnessed the Japanese markets in 2016 record highs promised this year (the year of digital currencies) excellence as a result of investors to buy and pay Bitcoin has doubled the value of Bitcoin to more than 100 percent at the end of 2016 To the value of (1000) dollars, which made other digital currencies move up.

Germany is also a crypto-friendly country that allows its government to deal with digital currencies and seeks to enact tax laws on digital transactions to regulate the mechanism of work. Bitwala is the first company with block chain technology to launch an icon for sale. Solar is Bank is developing a digital currency trading platform system for trading traditional investment assets such as stocks, bonds and modern financial derivatives. Singapore is one of the countries that have announced the legality of Bitcoin transfers and receiving cash from local banks, and the Swedish Financial Supervisory Authority announced that Bitcoin and other digital currencies are one of the means of electronic payment in its services

### **Attitudes of International Companies Dealing in Digital Currencies**

Individuals, businesses and stores are the most eager to use digital currencies in their dealings, as they face the routine and complexities of opening bank accounts and transfers to traditional currencies, but it is not without some challenges and risks that some investment companies and shops may face, but when comparing. The advantages of the above mentioned digital currencies with their risks, we find the superiority of the advantages, and thus many international companies began to expand their virtual digital transactions, which helped to spread widely and among those companies:

1. Microsoft Company: This company has allowed its customers to use Bitcoin to pay in the stores Windows and X Box since 2014 and the company is working to strengthen the technology of the Chain.
2. Pay Pal Company: This Company began to accept payment in digital currencies, including Bitcoin in 2014 and in 2016 began to allow users to sell Bitcoin on the company's accounts for cash.
3. Tesila Company: Although this company has not officially announced its acceptance of Bitcoin or any other digital currency, but there are many sellers who accept Bitcoin payment for Tesila Model S and Model X, and sometimes customers can pay in advance Bitcoin. However, most of these transactions were done indirectly through Coin Base and Bit Pay sites that convert digital currencies into cash.

4. Intuit Company: a company specialized in accounting, savings and personal business management programs started in 2014 acceptance payment in digital currencies, including Bitcoin through the adoption of block chain technology
5. Dish Network Company: It is a telecommunications and internet services company that adopted the adoption of digital currencies in 2014 after signing a partnership with Coin base and allowed its customers to pay monthly dues easily through digital currencies was the first company to provide paid channels and accept payment in digital currencies.
6. Xpedia Company: an online travel and tourism company started in 2014 accepting payment in digital currencies, specifically in the Bitcoin for reservations, which expanded this matter internationally.
7. Sub Way Company: a chain of restaurants offering franchises to various countries of the world, some of which accepted the payment in Bitcoin, which increased its international fame,
8. Lamborghini Company: After its partnership with Eggify, the company officially announced on its web pages that Bitcoin was accepted as a way to buy its cars.
9. Wikipedia: Although it offers its services free of charge, but officially announced its acceptance of donations made by various institutions in digital currencies, through the site Coin Base (Andresen & Antonopoulos, 2019)

## Research Hypothesis

Research assumes a basic premise that virtual money (Bitcoin) is an important tool in global financial development and the transition from traditional reality to the virtual world.

## Research Methodology

The research used the fundamentalist analytical method. Through the original methodology, the theoretical aspect of the research was presented, whereas through the analytical method the technical analysis was used in the practical or applied aspect of the research.

## Empirical Results

### 1. Technical analysis of Bitcoin prices with currencies

**1.1. Analysis of Bitcoin exchange rates with the US dollar** for the period from 2015 to 2019, which is shown in Table 1 in the global financial market, which shows how the technical analysis was adopted by researchers as the general rate of exchange rates between Bitcoin with the dollar was adopted quarterly.

**Table 1. Bitcoin prices with the US dollar**

The years	Low	High	Open price	The last price	Change %
Q1 ( 2015 )	209.6875	268.7125	259.7775	238.3875	-0.05405
Q2 (2015)	213.1586	273.1581	256.7819	251.8475	-0.02854
Q3 (2015)	231.3726	306.6893	266.3242	339.5975	0.028858
Q1 (2016)	379.5525	457.755	412.43	416.82	0.01855
Q2 (2016)	537.4875	672.7525	568.6825	601.3125	0.07695
Q3 (2016)	537.4875	672.7525	568.6825	601.3125	0.07695
Q1 (2017)	909.07	1,291.68	1,050.79	1,168.05	0.12
Q2 (2017)	1,983.40	3,339.70	2,225.43	3,046.68	0.37
Q3 (2017)	5,478.00	10,689.82	6,360.53	8,633.08	0.33
Q1 (2018)	7,049.13	12,621.38	10,328.35	9,191.08	-0.06
Q2 (2018)	6,192.90	8,505.80	7,768.88	7,158.45	-0.05
Q3 (2018)	4,804.49	6,526.40	6,016.79	5,213.82	-0.13
Q1 (2019)	3,687.17	4,588.58	3,849.21	4,290.56	0.11
Q2 (2019)	7,920.00	12,086.00	8,751.12	9,862.17	0.18

*Table of researchers (prepared by researchers based on <https://sa.investing.com/>)*

From the previous table, we note that the financial developments witnessed in the formation was very accelerated with the US dollar, where the lowest level reached in 2015 is 238.3875 to continue to rise until the first quarter of 2018 to the exchange rate of 9,191.08 and then to decline in the second and third quarter to reach Very strong rise in the second quarter of 2019 to reach an exchange rate of 9,862.17. This means that the exchange rate spikes from the first quarter of 2015 to the second quarter of 2019 as the difference between them represents 9,623.79 and this indicates that Bitcoin prices have not seen other currencies at all, whether traditional or electronic and this May) rate of change extracted from the analysis. The technical market for the global financial market, which we note after it was five percent in the first quarter of 2015 to reach the highest rate of Bitcoin trading on exchange rates in the second quarter of 2017 to reach 37 percent and then to decline in 2018 to reach the negative in the first, second and third quarter to begin Up to 18 percent in The second quarter of 2019, Figure 1 and 2 show the nature of the general trend of the latest price and the rate of change for the study period (2015-2019).

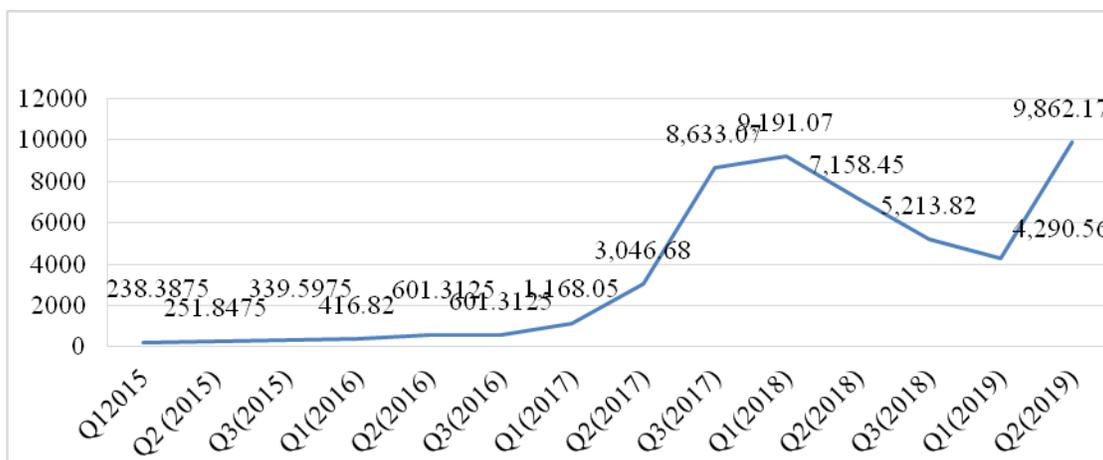


Figure 1. The trend of the latest price (prepared by researchers based on <https://sa.investing.com/>)

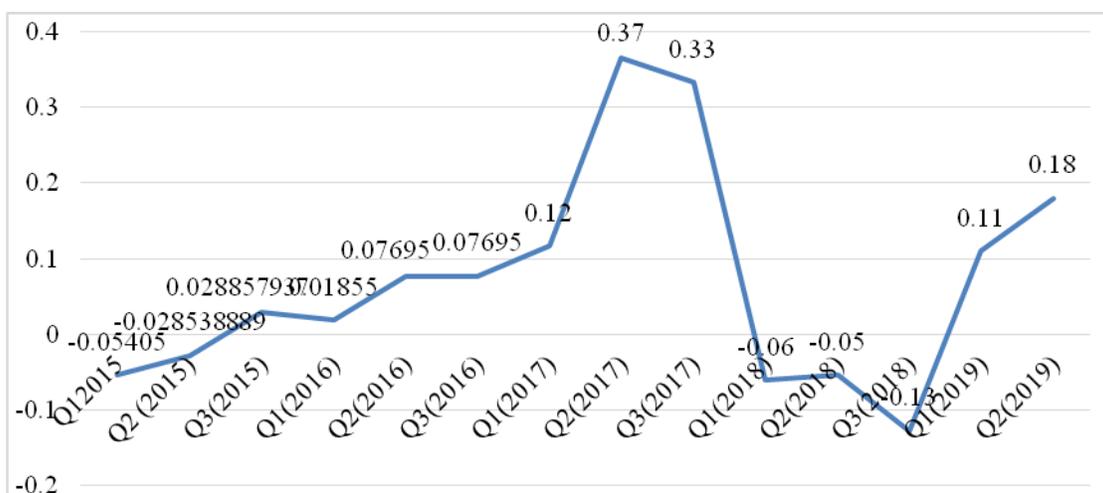


Figure 2. The trend of the rate of change % (by the researchers based on [https://sa.investing.com](https://sa.investing.com/))

**1.2. Analysis of Bitcoin exchange rates with the euro** for the period from 2015 to 2019, which is shown in Table 2 in the global financial market, which shows how the technical analysis was adopted by researchers as the general rate of exchange rates between Bitcoin and the dollar was adopted quarterly.

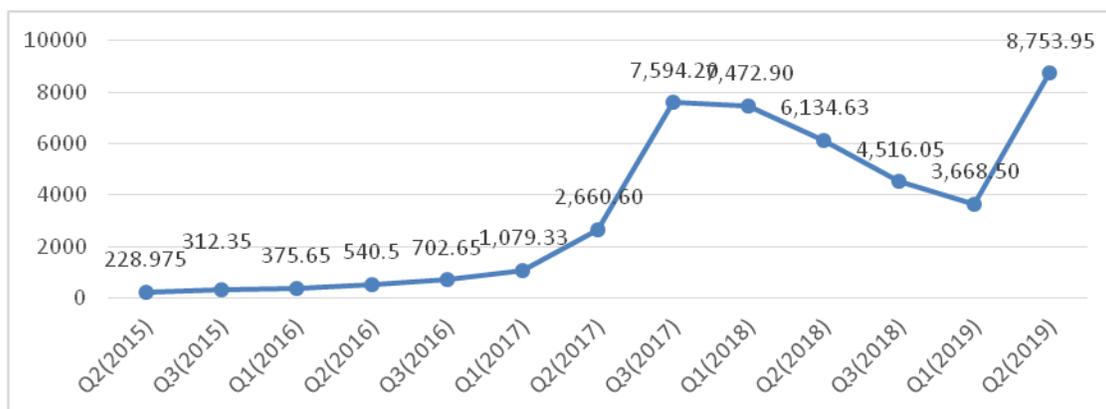
From the previous table we note that the financial developments witnessed in the formation was very accelerated with the euro as the data for the first quarter of 2015 is not available, as the lowest level reached in 2015 is 228.9755 to continue to rise until the third quarter of 2017 to reach an exchange rate of 7,594.20; then, to decline in the second and third quarter to reach a very strong rise in the second quarter of 2019 to reach an exchange rate of 8,753.95. This means that the exchange rate spikes from the second quarter of 2015 to the second quarter of 2019 as the difference between them represents 8,524.98 and this shows that Bitcoin prices have not seen other currencies at all, whether traditional or electronic. This shows the rate of change extracted from the technical analysis of the market. The global financial market, which we note after it was

03 percent in the second quarter of 2015 to reach the highest rate of trading Bitcoin on exchange rates in the second quarter of 2017 to reach 36 percent and then to decline in 2018 to reach the negative in the first, second and third quarter to start rising until Reached 20 percent The second quarter of 2019, and Figure 3 and 4 shows the nature of the general trend of the average last price and the rate of change for the period of study (2015-2019).

**Table 2. Bitcoin prices with the euro**

Date	Low	high	Open price	The last price	Change %
Q2 (2015)	200.85	253.65	230.2	228.975	0.003625
Q3 (2015)	254.55	354.6	264.85	312.35	0.183475
Q1 (2016)	336.975	412.9	376.45	375.65	0.005625
Q2 (2016)	461.675	602.825	510.375	540.5	0.081675
Q3 (2016)	589.35	720.35	600.4	702.65	0.161625
Q1 (2017)	850.03	1,221.25	994.13	1,079.33	0.09
Q2 (2017)	1,721.73	3,204.18	1,972.28	2,660.60	0.36
Q3 (2017)	4,783.33	9,119.43	5,563.80	7,594.20	0.35
Q1 (2018)	5,622.75	10,354.45	8,594.15	7,472.90	-0.07
Q2 (2018)	5,364.13	7,218.50	6,538.08	6,134.63	-0.05
Q3 (2018)	4,099.75	5,438.75	5,216.13	4,516.05	-0.13
Q1 (2019)	3,186.13	3,996.35	3,302.53	3,668.50	0.11
Q2 (2019)	6,963.00	10,765.00	7,735.90	8,753.95	0.20

Table of researchers (prepared by researchers based on <https://sa.investing.com>)



**Figure 3. Trend of the latest price (prepared by researchers based on <https://sa.investing.com/>)**



**Figure 4. The trend of the latest rate (prepared by researchers based on <https://sa.investing.com/>)**

## Conclusions and Recommendations

The main purpose of this study is studied the insight into the future of Bitcoin on the financial situation, its implications and challenges. The research came out with a several of conclusions. Firstly, the virtual currencies (Bitcoin) developed rapidly in the search periods and this shows the control of those currencies on the basket of other currencies. Moreover, there are no international standards for the disclosure of those currencies in terms of issuance and the country that exports them. However, Bitcoin prices did not witness a rise in other currencies at all, whether traditional or electronic this shows the rate of change extracted from the technical analysis of the global financial market. It can be said that each digital currency is a virtual currency.

Along the way when the study was conducted, there were a few shortcomings that cannot be controlled. Among the shortcomings were the sample sizes of data. The need to recognize the currency of Bitcoin and deal with it by the countries that have a position on them. The need for companies and institutions dealing with Bitcoin to disclose the nature of the dealings more. The need to prepare many studies in the subject of Bitcoin, because of its future effects on the economy in general. It must at any time be subject to central control.

## References

- Al-Hamdani, R. I. (2018). Predicting financial failure using the kida & z-3 modular comparative analytical study. *Tikrit Journal for Economic and Administrative Sciences*, 3 (43), 85-102.
- Badev, A., & Mathew, C. (2014). Bitcoin technical background and data analysis. *Finance and Economics Discussion Series*, 104, October. Retrieved August 15, 2019, from <https://www.federalreserve.gov/econresdata/feds/2014/files/2014104pap.pdf>
- Essam Al-Din, H. M. (2014). Bitcoin currency. *The Banker Magazine*, 73.
- Andresen, G., & Antonopoulos, A. (2019).
- Bitcoin, Retrieved August 15, 2019, from <https://en.wikipedia.org/wiki/Bitcoin>.

- Hamidzadeh, A., Tahmasebi, R., & Shirvanehdeh, A. Z. (2018). Identifying functions of online community of practice. *Journal of Information Technology Management*, 10(1), 1-22.
- Hawsib Information Technologies .(2019). Bitcoin is an innovative payment network and a new kind of money. LLC. Retrieved August 15, 2019, from <http://hawsib.com/>
- Jubouri, A. A. A. H. (2018). The management of banks applied entrance. *First edition , Iraq, Dar Memory for Publication and Distribution*.
- Kroll, J. A., Davey, L.C., & Felten, E. W. (2013). The economics of Bitcoin mining or Bitcoin in the presence of adversaries. *Proceedings of WEIS 2013*, <http://weis2013.econinfosec.org/papers/KrollDaveyFeltenWEIS2013.pdf>
- Luther, W. J., & While, L. H., (2014). *Can Bitcoin become a major currency?* George Mason University Department of Economics. Working Paper No. 14.
- Max, R., & David, Y. (2016). Digital currencies decentralized ledgers and the future of central banking. National Bureau of Economic, NBER Working Paper No. 22238. Retrieved August 15, 2019, from <http://www.nber.org/papers/w22238>
- Neil, G., & Hanna, H. (2016). Can we predict the winner in a market with net work effects competition in market. *Game*, 7(3). Retrieved August 15, 2019, from <https://www.mdpi.com/2073-4336/7/3/16>
- Odeh, M. R. R. (2019). Functions and conditions of money and the extent of their realization in virtual currencies - A doctrinal study. *The fifteenth international conference of the Faculty of Sharia and Islamic Studies of the University of Sharjah, virtual currencies in the balance*.
- Polasik, M., Piotrowska, A. I., Wisniewski, T. P., Kotkowski, R., & Lightfoot, G. (2015). Price fluctuations and the use of Bitcoin: An empirical inquiry. *International Journal of Electronic Commerce*, 20(1), 9-49.
- Roble, A., John, B., Roger, C., & James, S. (2014). The economics of digital currencies. *Bank of England Quarterly Bulletin*, Q 3, No. 187. Retrieved August 15, 2019, from <https://www.bankofengland.co.uk/-/media/boe/files/digital-currencies/the-economics-of-digital-currencies>
- Sabal Majali, Chloe Gueguen, and Ahmed Tamimi.(2019). Dinarak Jordan: How Mobile Money Can Empower Female Agents and Clients. Retrieved August 15, 2019, from <https://seepnetwork.org/>
- Sowelhi, N. (2018). Bitcoin mining and virtual currencies on the stability of the global monetary system. *Journal of Scientific Horizons*, 10 (2), 219-238. Retrieved August 15, 2019, from <http://afak.cu-tamanrasset.dz/wp-content/uploads/2018/12/12.pdf>
- Thivagar, M. L., & Abdullah Hamad, A. (2019). Topological geometry analysis for Complex dynamic systems based on adaptive control method. *Periodicals of Engineering and Natural Sciences* 7(3), 1345-1353. Retrieved August 15, 2019, from <http://pen.ius.edu.ba>
-

**Bibliographic information of this paper for citing:**

Al-Hamdani, Rafea Ibrahim; Abdul Karim Mohammed, Laila; & Hadash Mohammed, Jamal (2019).  
The future of bitcoin as a tool for financial development. *Journal of Information Technology  
Management*, 11(3), 1-15.

---

Copyright © 2019, Rafea Ibrahim Al-Hamdani, Laila Abdul Karim Mohammed and  
Jamal Hadash Mohammed.