CHAPTER I

INTRODUCTION

1.1. Background of the Problems

Money is an important part of everyday life. Some people argue that money is the blood of the economy, because in modern society today, the economic mechanism is based on economic activities such as buying and selling, import-export and other activities which all require money to achieve a particular purpose (Narayanan, et al., 2016). Economic activities from time to time also experience many changes, many new and innovative things have been discovered. In the beginning, before money was created as a transaction tool, humans used the barter system in trading (Van de Streek, 1997).

In a modern economy like today, the role of money increases in harmony with its increasing function. Money is no longer just a means of exchange, but also a unit of account, a store of value, and a deferred payment standard, and even a commodity (Seitim, 2016). Payment systems have changed over time in the history of payment system evolution in the economy. The form of money keeps changing as it develops. At one time, precious metals such as gold were used as primary payment instruments. Furthermore, paper assets such as checks and banknotes begin to be used as payment instruments and are considered as money (Bailey, 1995).

In the growing development era, many new technologies are emerging and attracting the attention of many people, one of them is the development of internet technology. The internet is a global system which interconnected all computer networks using a standard Internet Protocol Suite that is globally connected, with the internet, people can do many things, from just playing around, looking for literature, until making an online business (Madakam, et al., 2015). Sophisticated technology can also affect the form of economic payment systems that have an impact on people's lives today. In this modern era, many people start using electronic payment systems rather than using conventional payments such as cash or checks, all because of the ease of electronic payment offered (Fanti, et al., 2019).

Seeing the phenomenon of today's society who are starting to choose to use electronic payment systems in transactions, cannot be separated from the development of the practice of buying and selling online which is the trend of the lifestyle of the people today. The practice of buying and selling by offering goods through television media, websites, and online stores is a form of convenience offered by the seller to consumers, to find and choose their needs. Then, online businesses also lead the changed of payment procedures. Online transaction payments no longer only use a nominal amount of money but use an alternative payment that is virtual money. Besides current commonly used payment methods such as bank transfers, credit cards and PayPal, new payment methods appear that get public attention, namely virtual payment devices are a series of computer programming codes used in transaction activities in the virtual world, based on their form there are three virtual currency schemes: closed virtual currency scheme, one-way virtual currency scheme, two-way virtual currency scheme (European Central Bank, 2012).

One of the examples of virtual money is bitcoin, which is the pioneer of the cryptocurrencies and the most popular among the others. Bitcoin is a digital currency created in 2009, after being published on a computer forum by a cryptographic expert known as Satoshi Nakamoto (Nakamoto, 2018). According to the bitcoin.org, the first implementation of the concept of "cryptocurrency" is Bitcoin. Wei Dai first described in 1998 on the Cypherpunks mailing list, he suggested the idea of a new type of money that uses cryptography to control its creation and transactions, rather than a central authority. Bitcoin offers a lower transaction costs than the traditional online payment mechanisms and is operated by a decentralized authority, unlike a government-issued currency.

According to Nakamoto (2009), buying and selling over the internet is currently based on trust between buyers and sellers, so transactions are generally carried out through third party intermediaries such as central banks. Bitcoin has a different concept, not based on trust but based on published cryptographic evidence and can be seen by all users, so making payment transactions using bitcoin is difficult to fake.

Each transaction is broadcast and verified by all nodes in the network through a certain consensus mechanism (Bonneau, et al., 2015). Each node collects transactions in a block and the block is associated with a difficult mathematical problem. Solving that problem is called mining, and the knot that mines coins is called a miner. The miners who solve the problem first secure the right to add the block to the current longest blockchain. After being confirmed, the new blockchain is then copied to each node on the network (Narayanan, et al., 2016). The longest blockchain is the consensus of all nodes, which records all transactions in history.

Table 1.1
Cryptocurrency Market Capitalization on 20 May 2019

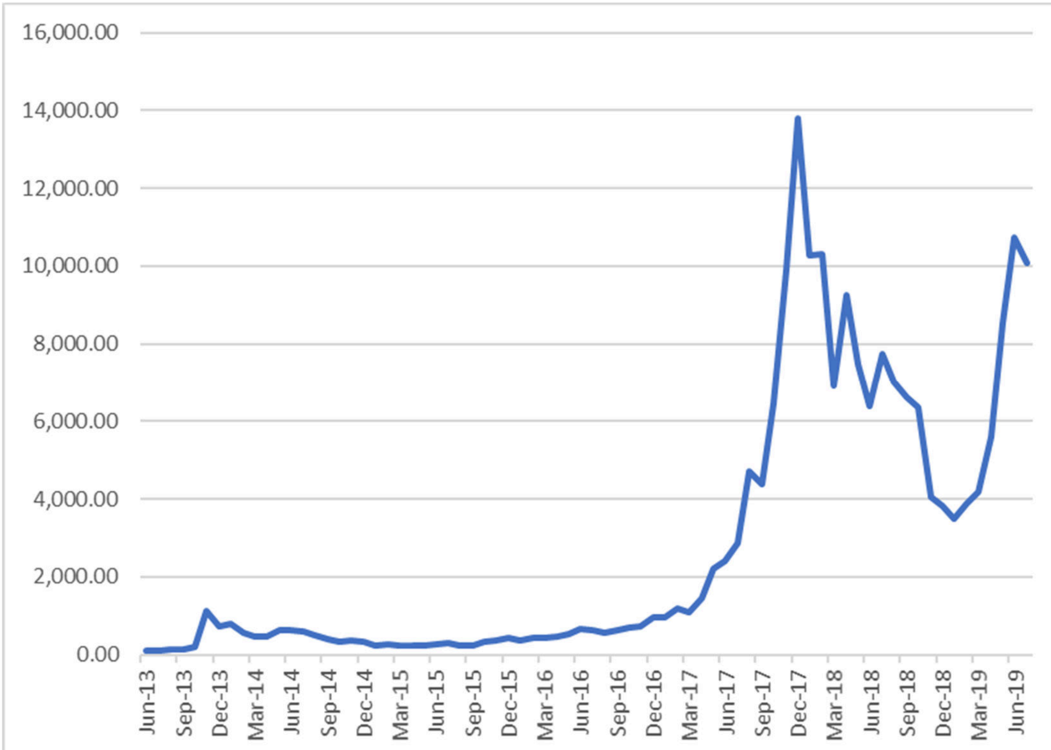
Cryptocurrency	Symbol	Market Cap	Market Cap %
Bitcoin	BTC	$138,259,820,508	56.94%
Ethereum	ETH	$26,205,400,087	10.79%
XRP	XRP	$16,453,314,284	6.78%
Bitcoin Cash	BCH	$7,121,601,984	2.93%
EOS	EOS	$5,638,959,690	2.32%
Litecoin	LTC	$5,571,380,633	2.29%
Others		$43,562,998,060	17.94%
Total		**$242,813,475,246**	**100%**

Source: https://coinmarketcap.com/all/views/all/

According to coinmarketcap.com, until 20 May 2019, there were 2185 types of coins and certainly will continue to grow. Based on Table 1. Cryptocurrency Market Capitalization in 20 May 2019 above, 56.94% of the cryptocurrency market capitalization was held by bitcoin. The other examples of cryptocurrencies which also have big market capitalization are Ethereum, XRP, Bitcoin Cash, EOS, Litecoin, Tether, Stellar, and Dogecoin.

Figure 1.1

Bitcoin Price in USD from June 2013 to July 2019



Source: Output of Microsoft Excel 2019-2019

Many people see bitcoin as a commodity to invest in. They realized that the price fluctuation of bitcoin is an opportunity to gain more profit, that is why the price of bitcoin began to rise in 2013. People start to buy and sell bitcoin in the bitcoin exchange markets (Sukamulja & Sikora, 2018). Figure 1.1 shows us that bitcoin price was rising significantly in early 2017 and reached its peak on 17 December 2017 at USD19,204.87. After 2017, the price of bitcoin has been fluctuating and had its lowest price at USD3178.23 on 16 December 2018 (daily data from Bitfinex of Bitcoin Price on www.investing.com).

Cryptocurrency is not regulated by any country and this is the main characteristic and attraction of bitcoin. Compared to other currencies, cryptocurrency has the advantage of being able to be sent anywhere via the internet without going through the bank so that transaction costs are cheaper. Cryptocurrency transactions are unconditional and there are no transfer restrictions, cryptocurrency is stored in a digital wallet that resembles electronic banking (Syamsiah, 2017).

But in the development, bitcoin also has cons and pros in every country where it is going to. Like Russia and Iceland which stated bitcoins are illegal and unlawful because it is difficult to track and potentially money laundering (Kadyrov & Prokhorov, 2018). But in China bitcoin circulates freely with warnings, they forbid companies to use it, but the public is allowed to trade with bitcoin as a commodity trading activity on the internet (Zhang, 2018).

Responding to the bitcoin phenomenon, Indonesia recently issued a regulation stating that bitcoin is not recognized as a legal payment instrument in Indonesia. In Indonesia today, bitcoin transactions are prohibited by the increasingly strict prohibition on the use of bitcoin transactions between individuals. Prohibition for financial service providers has been regulated in *Peraturan Bank Indonesia* or The Bank Regulation of Indonesia Number 18 of 2016 concerning the Implementation of Payment Transaction Processing. So, if the company is found using bitcoin as a transaction tool, the business license will be revoked and subject to sanctions. As for banks, there will also be strict sanctions. But for individuals, the ban still applies even without sanctions.

Bitcoin has some drawbacks when it is used as a currency, i.e. there is no legal regulations governing the circulation of bitcoin currencies. If there is misuse of bitcoin such as theft, money laundry, fraud, and other crimes there is no single institution that is responsible (Demchenko, 2017). There are a lot of cases that have happened until now, where the cryptocurrency being hacked. As reported by detik.com on 28 January 2018, Coincheck, a virtual currency exchange in the style of bitcoin in Japan, lost 523 million coins of NEM (Japanese cryptocurrency) worth 58 billion yen or around Rp7.1 trillion. A total of 523 million NEM coins are known to have been sent to another account on January 27, 2018.

It is getting more interesting when researched deeper about bitcoin. Even there were a lot of pros and cons about it, based on an article from www.coindesk.com on 15 March 2019, bitcoin is still one of the investors' favorite commodities. It said that the daily trading volume for the world's largest cryptocurrency bitcoin exceeded $11 billion Friday, 15 March 2019, the most observed in a 24-hour period since April 25 of 2018.

Bitcoin is often compared with other common commodities, like crude oil and gold. Bitcoin is considered as a commodity because it is sought after as an alternative investment. Meanwhile, to get it needs to be mined by breaking complicated mathematical codes. Bouoiyour et al. (2016) test the interconnection of precious metals and bitcoin with volatility in financial markets. They found that the feasibility of gold, silver, and Bitcoin as hedges and safe havens is not constant at all times, bitcoin acts as a safe haven that is weak in the short and long term. Based on the research, the result supports that the price of bitcoin can potentially be determined by long-term fundamentals, including supply-demand fundamentals, trade-exchange ratios, monetary velocity, equity market indices, exchange rates, oil prices and estimated volume of output (Bouoiyour, et al., 2016).

Based on the description above, the researcher observes the need to conduct research on the factors that influence the price of bitcoin. For this reason, researchers will conduct research with the title "The Effect of the Volume of Bitcoin, Stock Market Index, Number of Bitcoin Wallet Users, Gold Price, and Oil Price to the Price of Bitcoin".

1.2. Identification of the Problems

Based on the description of the background of the problem, it can be identified that in this study there are several problems which will be studied scientifically. The following are some of the issues raised in this study:

a. Does volume of bitcoin influence the price of bitcoin?

b. Does stock market index influence the price of bitcoin?

c. Do bitcoin wallet users influence the price of bitcoin?

d. Does price of gold influence the price of bitcoin?

e. Does price of oil influence the price of bitcoin?

1.3. Scope of the Research

Restrictions on the problem needed to focus on the issues examined. Based on the background of the problem and identification of the problems described above, this study focuses on the price of bitcoin and identify variables that may affect the bitcoin price. The study focuses on some variables to explain the fluctuation of bitcoin price, such as: bitcoin price, bitcoin volume, stock market index, number of bitcoin wallet users, gold price, and oil price.

1.4. Purposes of the Research

Based on the background and problems described, the purposes of this research are to find out:

a. the influence of the volume of bitcoin to the price of bitcoin

b. the influence of stock market index to the price of bitcoin

c. the influence of bitcoin wallet users to the price of bitcoin

d. the influence of price of gold to the price of bitcoin

e. the influence of price of oil to the price of bitcoin

1.5. Benefits of the Research

Researcher hopes that the research about the analysis of the fluctuations of bitcoin's price could bring benefits to many sectors, like to academic and practical benefits.

a. Academic Benefits

The results of this study are expected to provide benefits to the academic as well as the necessity of a scholarly repertoire of knowledge to continue to grow and prosper. Can be used as a reference for further research that discusses the fluctuations in bitcoin prices in more detail by using a different perspective.

b. Practical Benefits

This research is expected to be able to provide meaningful contributions to interested ones and observers who are concerned with virtual currency in the form of bitcoin. This research is expected to be able to help new investors who would like to invest their money in virtual currency market, especially in bitcoin.

1.6. Systematics of the Writing

CHAPTER 1 INTRODUCTION

This chapter consists of the background of the problem, identification of the problem, purposes of the research, scope of the research, benefits of the research, and the systematics of writing.

CHAPTER II THEORETICAL BACKGROUND

This chapter contains the results of previous studies relating to this research. Literature review is used as the theoretical basis in writing and also calculations in assessment.

CHAPTER III RESEARCH METHODOLOGY

This chapter explains the explanation of the data used in the study and also the methods used in the research.

CHAPTER IV DATA ANALYSIS

This chapter explains in detail the research conducted and the results of the research.

CHAPTER V CONCLUSION

This chapter summarizes the overall results of the study. Also, there is an explanation of weaknesses in the research and suggestions for future research.