International Journal of Business and Management Invention (IJBMI)
ISSN (Online): 2319 – 8028, ISSN (Print): 2319 – 801X
www.ijbmi.org || Volume 7 Issue 12 Ver. 1 ||December 2018 || PP—57-64

Review of Virtual Currency Potential as a Payment Instrument in Legal Aspect in Indonesia

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ABSTRACT*: Money serves as a means of trading activity transactions wherever located. The exchange between items can be done using money. In addition, we can use e-banking applications to facilitate transactions reaching trillions. The current trend of payment methods being warmly discussed by people is the bitcoin model. Bitcoin and Ripple is one type of digital currency transaction used in virtual currency / Cryptocurrency (VC). The use of Virtual Currency still has a high enough risk, because there is no clear rule in doing bitcoin transaction. Bitcoin has so far not been clearly regulated by Bank Indonesia, so Bank Indonesia advises against receiving bitcoin as the official payment instrument in Indonesia. The purpose of this study was to find out and examine how to assess bitcoin as a payment instrument in making transactions. In addition, this study also aims to find out the opportunities to develop using virtual currency in the payment system. Finally, this study aims to examine and analyze the legality that governs the payment system using Virtual Currency. This research uses descriptive qualitative method with literature study approach. The results of this study can be used as a recommendation or basis of policy makers of Bank Indonesia in making rules that do not harm all parties.*

KEYWORDS*: Virtual Currency , Management Strategic, knowledge management*

Date of Submission: 20-11-2018 Date of acceptance: 06-12-2018

I. INTRODUCTION

Virtual Currency is a type of currency that was originally created for online entertainment. The thing that distinguishes between digital currency and virtual currency is the value of these two currencies. Virtual currencies do not have any value because they are not created for use in real life. Examples of virtual currencies are points or coins that can be obtained when winning playing a game and exchanging points for certain features in the game. This is one of the initial forms of virtual currency. Meanwhile Cryptocurrency is a form of digital money designed to be a safe and mostly anonymous currency. This is also an internet-related currency that uses cryptography, which is a process of information change that is almost unresolved, to track purchases and transfers. VC is considered to provide a variety of conveniences, such as Bitcoin for example, which is considered to be able to reduce the time and costs needed to make transfers abroad, especially in the form of remittances. This is because transfers are made directly to the sender and recipient, without intermediaries, so that it is faster and does not need to issue fees to intermediaries. In 2014, the World Bank recorded an average cost of sending remittances around 8%, and Bitcoin was able to send remittances twice as fast and 75% cheaper.

Syamsiah (2017)[1] Cryptocurrency relies on digital information transmission, using cryptographic methods to ensure the legitimacy of every transaction that occurs. Bitcoin has a gold coin market share that has a fairly broad market, with decentralized currencies and is free from organizational bureaucracy. Bitcoin electronic coin transactions occur through the use of peer-to-peer networks. Cryptocurrency began to attract attention since 2011 with various coins. Meanwhile, Prabhu (2017)[2] meaning that cryptocurrency is a digital asset designed to work as a medium of exchange using cryptography to secure the transaction, and to control the creation of additional units of the currency. Cryptocurrencies are classified as a subset of digital currencies and are also classified as a subset of alternative currencies and virtual currencies.

The use of this Virtual Currency has a high risk. According to the Head of the Bank of Indonesia Transformation Program Center, Onny Widjanarko said that there is currently no clear regulation if the public conducts bitcoin transactions. Bitcoin has not been specifically regulated by Bank Indonesia. And urges merchants not to accept bitcoin as an official payment instrument in Indonesia. Bank of Indonesia warns all parties not to sell, not accept, buy or trade virtual currencies or virtual money like Bitcoin.

The shift in the use of money as a means of payment transactions from currency to non-cash has more or less changed the trend of models and payment methods. Payment of non-cash transactions is believed to be a very efficient and relatively safer method. The payment system uses Automated Teller Machines (ATM), as well as e-banking has become the habit of some people in Indonesia whose value reaches trillions of rupiah as mentioned above. One trend or payment model that is currently being talked about by many people is the bitcoin model. Bitcoin and Ripple is one type of digital currency used in virtual currency / Cryptocurrency (VC).

Potential violations of law that occur in VC transactions can be seen from the flow system. Based on the flow, VC can be divided into three types, namely closed (nonconvertible), open with one flow direction and convertible. Closed VCs are commonly used in the world of online games where the money cannot be directly used to buy goods and services in the real world, even though the practice exists but is not legalized by the provider and usually results in sanctions in the form of account closure by the administrator. Open VCs with one flow direction are like Facebook Credit, Nintendo Points whose use is limited to goods / services provided by the provider and circulation and regulation are regulated by the provider. Whereas for convertible VC, is a VC that can be used to buy goods and services in the real world and can also be exchanged with fiat currency. The Convertible VC can be divided into two, which are centralized and decentralized.

This study aims to analyze the development of digital payments when using virtual currency in the future and the potential risks so that it can be known the feasibility and application of the use of virtual currency in the payment system in the community.

II. LITERATURE REVIEW

Payment Tools: Money is a stock of assets that can be immediately used to make transactions. In addition, it can be used for anything that can be used or received to make payments for goods, services or debt. And having a fundamental purpose in the economic system, facilitating the exchange of transactions of goods and services, can shorten the time and effort needed to trade (Mankiv, 2012)[3]. The electronic payment system provides a method of payment for the purchase of goods or services via the internet. Unlike the usual payment system, customers send all data related to payments to sellers via the internet, there is no remote external interaction between customers and sellers. Currently there are more than 100 kinds of electronic payment systems (Trihasta & Fajaryanti, 2008)[4].

Electronic Money: In its development, moving towards the payment instrument and electronic cards, for example credit cards, ATM/debit, and e-money. E-money is seeded into a means of payment intended for transactions of small value. Various studies have shown the benefits of using e-money as maximum flexibility in payment transactions in small nominal amount. For example, in transport, in cinemas, clubs, and the payment of fines, taxes and court orders. It is very easy to make calculations on the internet when buying traditional and electronic products such as the purchase of computer software, etc. (Miller et.al., 2002)[5].

E-money payment process can be done quickly and there is no common problem such as queues. E-money is transferred from the payer to the recipient within seconds. E-money have significant advantages compared with cash, but it has also drawbacks. Central banks in many countries are concerned about the development of e-money, especially on the issuance (emission) e-money that are not controlled and the risk of infringement appearing (Wulandari, 2016)[6]. E-money has the potential to provide a wide range of positive effects, such as comfort and privacy, the reduction in costs associated, potential new business, as well as the transfer of financial activities among communities on the Internet. However, there are controversial issues that arise concerning the introduction of e-money. Establishment of electronic currency raises a number of issues relating to taxation and allegations of money laundering. Also, the concern about confidentiality and the possibility of leakage of personal data of citizen (Seitz, 2006)[7].

Virtual Payment: Digital payments according to (Sianipar, 2017)[8] are digital money published in addition to monetary authorities obtained by mining, among others Bitcoin, Blackcoin, Dash Degecoin, Litecoin, NXT, Peercoin, Primecoin, Ripple and Ven. According to (Richer, Kraus, & Bouncken, 2015)[9] A new era of transactions and banking has begun. Transparency of virtual currencies will dramatically change the business world. The advantage of Virtual Currency is that it can move fast, encrypted and cheaper. But there are losses including lack of trust, lack of acceptance or concerns about the cessation of the existing system. The digital currency system was launched in 2009 by Satoshi Nakamoto. Using cryptocurrency (virtual currency) can be used as a standard currency that allows users to make virtual payments on business transactions that occur without service fees but still have centralized trust authority (Syamsiah, 2017)[10].

Cryptocurrency: Cryptocurrency relies on digital information transmission, using cryptographic methods to ensure the legitimacy of every transaction that occurs. Bitcoin has a gold coin market share that has a fairly broad market, with decentralized currencies and is free from organizational bureaucracy. Bitcoin electronic coin transactions occur through the use of peer-to-peer networks. Cryptocurrency began to attract attention since 2011 with various alcoins appearing (Syamsiah, 2017)[11].

III. RESEARCH METHODS

The study used a qualitative descriptive approach. Emphasis in this study is to analyze the process of conclusion of the comparison and analysis of the dynamics of the relationship of phenomena observed using scientific logic (Azmar, 2001)[12]. In qualitative research, the boundary line between each step / stage of the research is more flexible. This means that the steps do not move linearly where one stage is completed completely and then proceed to the next stage. But in this model researchers can return to the previous stages during the research process in accordance with the needs and creativity of researchers (Efferin, Darmadji, & Yang, 2008)[13].

This research is a literature study. This study will examine how the development of the virtual currency payment system is used as a means of payment in making transactions. This study will also examine how the legality aspects govern the payment system using Virtual Currency. Literature research or literature review, reading and recording and processing material for library collections and other materials without the need for field research (Mestika, 2004)[14].

Ideally, research will use a combination of library research and field research with an emphasis on one of them. In this study, researchers will put more emphasis on the literature study approach. While the field study is carried out on the research object or selected resource persons who have the appropriate criteria. Some reasons for using the literature study method in this study are as follows: 1) The research problem in this study can only be answered in more detail through literature study; 2) Sources of research from objects that are VC users who are still very limited; 3) Literature study is needed as one of the lessons themselves, namely preliminary research to understand more in the new symptoms that are developing in the field or community.

This study will explain the argumentation of scientific reasoning results from literature review. In addition, the analysis of the researcher and the thought process of a problem or topic of study will be expressed in a descriptive form. In qualitative research, the boundary line between each step / stage of the research is more flexible. This means that these steps do not move linearly where one stage is complete completely later and then proceed to the next stage. But in this model researchers can return to the previous stages during the research process in accordance with the needs and creativity of researchers (Efferin, Darmadji, & Yang, 2008)[15].

The design of qualitative research studies can be described as follows:

Fig. 1 Research Design Method
Source: (Efferin, Darmadji, & Yang, 2008)[16]

Formulation of Research: Each research formula needs to be explained separately from its data sources, methods of data collection and analysis, how the method is done in more detail, and what is the reason. The researcher should make a list of questions to help answer this Research Formulation. In this study, the researcher will classify the questions in this research into 3 (three) classifications, namely 1) opening questions, 2) core questions, and 3) closing questions. The researcher will prepare a series of questions and sequences, but in the process of discussion/interview later, researchers do not have to refer entirely to the list that has been prepared. However, the most important is, researchers will direct the question to the respondent to answer the formulation of research in this study.

Data Source: Sources of data used in this study there are 2 types of primary data sources and secondary data sources. Primary sources are data sources that directly provide data to data collectors. Secondary data sources are data sources that do not directly provide data to data collectors, for example through others or through documents. Primary data sources are business actors or miners; bitcoin holder; public; Bank of Indonesia official; and Officer of the Financial Services Authority. Meanwhile, the secondary data sources are journals that discuss bitcoin and virtual payment tools.

Analyzing Research Data; Data analysis in this study used qualitative descriptive method. According to (Moleong, 2007)[17] this method will observe carefully certain aspects relating to what will be studied using a natural setting, with the intention of interpreting the phenomena that will occur and be carried out by involving various existing methods. This study analyzes data using the following methods: a) Content Analysis; this method is used to analyze the potential of Virtual Currency in this case is Bitcoin as a payment tool in the aspect of legality. The data obtained is then grouped, in identification, categorization, and then interpreted. b) Descriptive; this is a method that aims to illustrate or describe the data that has been collected, so that researchers will not see that something is indeed the case (Arikunto, 2013)[18]. Researchers will not change anything in the main or secondary sources. The researcher only reads, explains in a descriptive way, and then concludes as the original.

Research object; the objects of this research are Businessman or miner; Bitcoin holder; General public; Bank Indonesia Officer; Financial Services Authority (OJK) Officials. Those are called primary source of data. **Time and Place of Research**; This research began in April until November 2018. In that time period, researchers will conduct field research, data processing, and preparation of research reports.

IV. RESULTS

Cryptocurrency and Regulation; The Indonesian government issued Law No.7 of 2011 concerning the currency affirming the definition of money and its functions. In the Law explicitly states that the currency is money issued by the Unitary State of the Republic of Indonesia and every transaction that has the purpose of payment, or other obligations that must be fulfilled with money, or other financial transactions conducted in the territory of the Republic of Indonesia must use rupiah. From this understanding legally, VC does not have a strong legal basis that regulates it. But in practice, VC has been used as a medium of exchange in several international trade. This condition is a contradiction between the practice in the field and the regulations governing it. Practically and the theory of this type of exchange can be used but collides with government regulations.

"Cryptocurrency emerged as an answer to the constraints faced by the current payment system that relies heavily on third parties as companies that are trusted payment products to manage digital transactions such as visa, mastercard, paypal, and others."

Source: (Syamsiah, 2017)[19] *Indonesia Journal on Networking and Security - Vol. No. 6 2017*

The potential problem of cryptocurrency, especially bitcoin, that will arise is related to law, because the status of bitcoin is unclear. Digital assets cannot be included in the currency category. The polemic related to the BTC phenomenon also refers to Indonesian Central Bank Regulation No. 11/12/12 PBI / 2009 which states that Electronic Money is a payment instrument that fulfills the following elements: 1. Published on the basis of the value of money deposited in advance by the holder to the issuer; 2. The value of money is stored electronically in a media such as a server or chip; 3. Used as a means of payment to traders who are not publishers of electronic money; 4. The value of electronic money deposited by the holder and managed by the issuer is not a deposit as referred to in the Law governing banking. This concept can be contrary to the BTC system which decentralized authority transactions without using third parties for verification. BTC holders are authorized to verify by using the digital signature concept in each transaction. This is in line with what was stated by Dr. Mongid, STIE Perbanas Indonesia lecture:

"The decentralized authority transaction concept violates the rules in transactions in this country that embrace a centralized system. If the use of BTC is not prohibited or limited by strict rules or regulations, it will arise potential for financial crime. One potential financial crime through BTC is money laundry. The Virtual Currency in this case is BTC, often used for crime because there is no third party that becomes a verifier and supervisor like OJK. Meanwhile, to enter BTC into one of the legal payment instruments, it cannot yet. This is because BTC does not meet the currency element as stated in Bank Indonesia regulations. "

Furthermore, the use of BTC is very likely to be applied as a medium of exchange or a legitimate transaction. Of course there must be legislation that specifically regulates regarding BTC. The current rules and regulations implicitly or expressly prohibit the use of BTC as a medium of exchange in transactions. However, technological developments in terms of transactions cannot be avoided someday. Especially if the volume of use of VC in this case BTC is getting higher. The same thing was expressed by Dr. Mongid:

"The arrangement of transactions using BTC or digital currencies needs to be set out and regulated in separate laws and regulations that specifically regulate matters relating to currencies. In this arrangement, the material must be separate or not poured into one with the material governing the Central Bank. “

Cryptocurrency and Risk; In addition to providing convenience, Virtual Currency, especially Bitcoin (BTC) is also not free from risk. Because of its digital nature, bitcoin is vulnerable to payment system models, financial system stability, money laundering prevention of terrorism funding and consumer protection (APU PPT). The attention of Bank Indonesia (BI) has become more intense when funding terrorism through the practice of BTC. This is related to the BTC transfer mechanism that does not pass through formal institutions that have an APU PPT system. This causes The Central Bank not be able to identify and monitor the movement of transactions. The most probable risk if using BTC is convertibility risk. Convertibility risk is when an asset has no guarantee of flat money. In addition, BTC is also at risk of high price volatility (up/down). The absence of BTC collateral is exchanged with flat money related to the absence of underlying assets.

Source: id.investing.com

Fig. 2 Graph of BTC / IDR Fluctuations in Increase / Decrease During the September-August Period 2018

Based on the data of id.investing.com above, it can be seen that in the past year from September to August the fluctuations (up / down) of BTC were quite sharp. These sharp fluctuations apply to both up and down conditions. The highest price ever achieved in that period was 1Btc worth Rp266,884,879 on December 11, 2017. The lowest value recorded in the same period was 1BTC equal to Rp140,704 on August 28, 2017. A fantastic and unreasonable increase in the history of the investment make people become speculators.

The risk can be an advantage or even a loss depends on the point of view where we see it. If a decrease in the value of BTC when we invest in a high price, of course it will be exposed to losses. But the decline can also be an advantage if at that time the businessman will make a payment or transaction. Fahri, Director of Indodax, resource persons from the BTC mining company gave a statement:

"The problem that often occurs is when investors become greedy in spending their money to exchange it for BTC. Investor behavior becomes irrational because they see a graph of the BTC exchange rate which continues to rise sharply against US $. Investors like this sometimes also do not consider the fundamental aspects of the law of demand and supply in the BTC trade. The problem is that the fundamental aspects of BTC are not influenced by micro / macroeconomics in general. The BTC exchange rate against pure currencies is influenced by BTC demand and supply."

The tendency of investors to invest in the form of digital assets is influenced by investor psychological factors. Investors are only guided by the movement of graphs of BTC price fluctuations. Meanwhile, the fundamental factors used as a basis for price movement analysis are not owned by BTC. This causes investors or BTC holders to be weak parties. BTC holders cannot estimate the price movements of bitcoin itself.

Cost Benefit VC; Virtual Currency especially BTC influences changes in transactions. The change is related to the transaction speed and the costs incurred are cheaper up to 70%. Its peer to peer nature makes it unnecessary for a Central Bank to be a third party to validate transactions. The following are some of the advantages BTC has if it is used as a payment tool.

A. Not Owned by Any State; BTC was created with an open source model so that BTC is not owned by any country. Because it is not owned by any country, BTC is not influenced by any country. The BTC exchange rate is purely influenced by the mechanism of demand and supply.

The value of BTC is not dependent on a government or regime that manages finances. The BTC exchange rate is purely influenced by the law of demand and supply. This makes BTC has a sharp up and down tendency because it depends on the volume of transactions. The higher the demand, the higher the value of the BTC rate against conventional currencies. For smart investors, it will be used for profit taking. But this does not apply to investors who are just about to buy. Price increases can be the capital of the end. Because if you don't take into account carefully, immersed capital can evaporate in a matter of hours. In addition, investors must really understand the fluctuations or movements of price fluctuations, because BTC is not influenced by the macro / micro economic fundamentals of a country or region. BTC is different from conventional currencies where the exchange rate or exchange rate can be determined by the state of the holder or owner. A government or regime in power can devalue (reduce the exchange rate) of its currency against foreign currencies if needed. Conversely, conventional currency exchange rates are also influenced by a country's trade balance.

B. High Demand; When it was first launched BTC was set at a fairly "cheap" price. Bitcoin was first created on January 3, 2009 where at the time of the first creation, BTC did not have a price or sale value. In this phase BTC is recorded first transacted or called block genesis. That's when the BTC block chain began. Subsequent developments on January 5, 2009 were the First Liberty Standard Bitcoin Exchange, which at that time opened a service to sell and buy BTC. The exchange rate at that time was 1,309.03BTC / 1 $ US or about eight hundredths of a cent per BTC. This price is equivalent to the cost of electricity used by computers to produce BTC, or "mine" the currency. Bitcoin prices have a tendency to always rise. This is because the number of BTC is limited while demand continues to rise. Market law then applies where there is no equilibrium in a perfectly competitive market. Limited traded goods but high demand. Bitcoin value is almost the same as minerals where commodity stocks are limited while demand always rises. But it's not like water. Because water has a life cycle. BTC does not have a life cycle to be reborn. Once Bitcoin is born, every piece will be a fight.

Data as of June 2018 the value of BTC has reached US $ 6,727.55 / coin. This value has dropped 51.7% from the position last year at US $ 13,939.48 / coin. The development of the rise and fall of the BTC exchange rate shows the demand or demand for BTC is very high. Meanwhile, the amount of BTC which is "only" 21 million causes prices to soar when demand is very high. Meanwhile the value of BTC capitalization has touched $ US166.7 billion in June 2018, equivalent to Rp2,250 trillion at an exchange rate of Rp13,500 / $ US. This value has been able to finance the Government of Indonesia's budget of Rp2,221 trillion. This high demand is also the effect of the simple nature of BTC which can cut transaction costs up to 70%. This efficiency is of course tempting for businesses who will transact using BTC.

C. Safe from Counterfeiting; Bitcoin cannot be faked at any time because BTC has no form. Bitcoin is only an asset in digital form stored in a wallet file. It is different from currency that has the risk of being falsified until it approaches its original form. Bitcoin already has a cryptography where only account holders can use it. The only risk is when the wallet file storage media in the form of a hard disk is damaged or affected by a virus. The file inside can be used or damaged. Even worse if the account owner does not have backups in other places, then it's finished. Even more dangerous if there is malware where there is a mal-function in the wallet operation. The risk is that it can be hacked by someone else. In addition, if an account user accidentally deletes the file, it will just disappear. Currency that we know so far is very vulnerable to counterfeiting. Moreover, before the political year the amount of counterfeiting money was very high. This is related to political spending carried out by both contestants and parties. Even if it is falsified in large quantities, it will have an impact on increasing inflation in the current year. However, this does not apply to digital-based exchange devices.

D. Free of Inflation; Once again BTC is not bound by any currency and is not influenced by micro / macro economy, so BTC is resistant to inflation. The only thing that can affect the volatility of BTC values is purely demand and supply factors. One more thing, BTC is also not bound by political conditions, escalation, or security of a country or region. In contrast to conventional currencies, BTC is not born of an economic, political, defense and state security bargain. Bitcoin is born from the idealism of independent people. Idealism of people who are able to analyze themselves the flow of BTC demand and supply without the influence of regional economic fundamentals.

Bitcoin is almost the same as gold in conventional currency traffic. He safeguards the value of inflation. Gold is used as a protector of crazy inflation, because gold's purchasing power is more stable. Likewise, with BTC, the buying or selling power of BTC remains. This means intrinsically, BTC has the same value but nominally it can go up or down. But in reality BTC has a tendency to always rise.

E. As an Investment Alternative; If it can be called an investment, bitcoin provides an advantage in terms of increasing exchange rates. In 2017, exactly May 19, the price of bitcoin has doubled to the level of US $ 1,938.04, up 103%. The highest percentage increase in exchange rates occurred in 2013 which reached more than 5 thousand percent. But in 2014 the value of bitcoin returned down 54%. High fluctuations and the level of independence of bitcoin holders, so for risk takers, bitcoin is a promising financial instrument. The following is an illustration that shows the increase in bitcoin from 2003 to 2017.

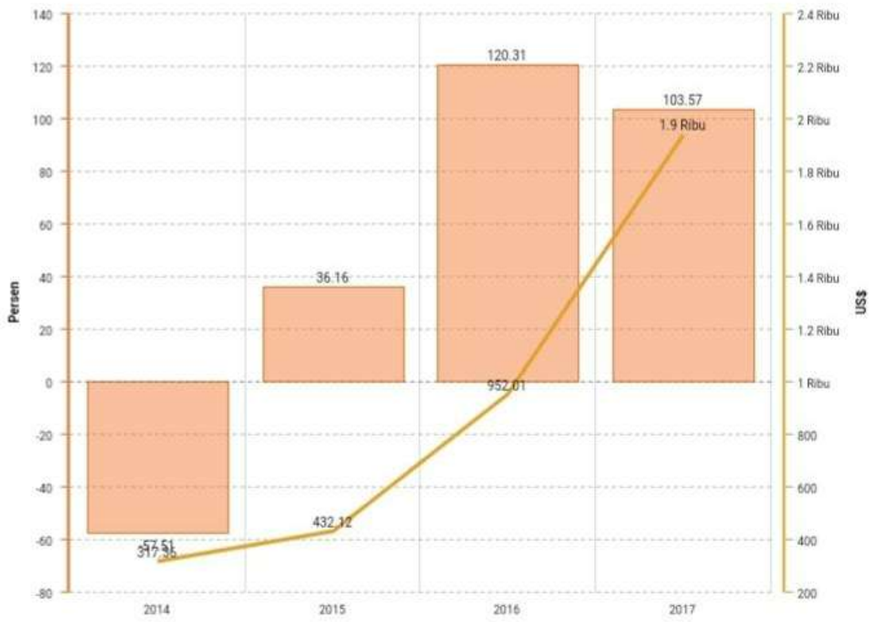

Fig 3. Volatility of Bitcoin Prices from 2003-2017

Based on the graph above it can be seen that the increase in the bitcoin exchange rate is very high. This cannot be found in any conventional type of investment. The enthusiasm of bitcoin enthusiasts is like an euphoria that has a positive impact on exchange rates. This payment instrument is indeed widely known by the public. Since it was first introduced by Satoshi Nakamoto in 2009, the existence of this medium of exchange is still reaping a lot of pros and cons. These pros and cons are related to the acceptance of bitcoin as a legitimate payment instrument in various countries. Therefore, the holder of “the currency" is also not immune from potential risks and losses. The losses incurred are inseparable from the nature of bitcoin itself.

Some of the potential losses of bitcoin holders are as follows:

A. No Rate; Bitcoin is stored by the holder in a wallet file. Banking especially the Central Bank does not participate in or has a bitcoin storage mechanism. The result is that there is no bitcoin interest like when we save money at the Bank. This problem may not be too annoying for individuals who use bitcoin just to transact digitally or transfer. But it will be a problem when bitcoin holders are traders. Traders with large capital will have significant implications when saving capital in the form of bitcoin because there is no interest mechanism in the bitcoin system. The digital assets are held by the user themselves and are not stored in the bank, so there will be no interest from the money saved in the form of the Bitcoin. Although for the majority of people this is not a problem (because it might only use Bitcoin to send money to other people), but if a Bitcoin user is a trader it is possible to accept significant implications due to the absence of interest when saving or using Bitcoin.

B. Piracy; Bitcoin is indeed created very secure, but it does not rule out the possibility that there are still opportunities to be exposed to the risk of piracy. This piracy is related to the action of infiltration or hackers that send a virus that can result in a malware wallet file system. This wallet file damage can cause bitcoin to be lost, deleted, stolen by other people (hackers) and so on. Another major disadvantage to using Bitcoin, which is also a loss of ordinary money, is the possibility of being lost or stolen. Because Bitcoin is stored in a simple file called 'file wallet', they are vulnerable to hackers and viruses that can send money from a user's wallet to someone else's (which is also almost impossible to recover because of the nature of the transaction). However, the process of securing a user's wallet file can actually be done quite simply and is not complicated.

V. CONCLUSIONS

Future Research Direction. Virtual currency, especially bitcoin has become part of the international community to transact. Ease, high level of volatility, security and so forth are some considerations for people to use it. But the use of bitcoin in Indonesia does not yet have a clear legal framework so that the use of bitcoin as an alternative payment is still very limited. bitcoin by some people is still used and treated as a digital asset. Even though technically, this digital asset can already be used for transactions. However, all of that is constrained by regulation or there is no legal framework that regulates transactions using bitcoin in Indonesia.

One risk that is exposed is that some people use bitcoin and other virtual currencies to commit crimes. Money laundering and helping fund terrorism are one of the risks or threats with the existence of bitcoin. Besides that, the high volatility of bitcoin can threaten anyone who leads to bankruptcy when the value of bitcoin falls as a result of a country's regulation.

Some of the advantages of using bitcoin and other virtual currencies are independent. The independent nature of bitcoin is that it is not influenced by macro and micro economic factors. The volatility that occurs in bitcoin is only affected by demand and supply. Besides that, the high demand for bitcoin causes the price of bitcoin to have a tendency to always rise. The positive result is; bitcoin can be an alternative investment. This alternative investment is considered safe because it is free from inflation and almost impossible to hijack.

While it is used in Indonesia, it is necessary to have regulations and laws that regulate bitcoin traffic. This bitcoin transaction traffic arrangement must involve the Central bank as a bitcoin filtering or miner itself. In the end, the use of bitcoin became legal in Indonesia when the legal framework governing it was issued by the Indonesian government.

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Rudi Santoso. “Review of Virtual Currency Potential as a Payment Instrument in Legal Aspect in Indonesia" International Journal of Business and Management Invention (IJBMI) , vol. 07, no. 12, 2018, pp 57-64