ISLAMIC ECONOMIC PERSPECTIVE AND POTENTIAL OF ZAKAH ON CRYPTOCURRENCY

Rozi Irfan Rosyadhi¹, Abu Salim²

¹JNTUH School of Management Studies:, Jawaharlal Nehru Technological University, Hyderabad ²Economy Syariah, ITB Ahmad Dahlan (Institut Teknologi Dan Bisnis Ahmad Dahlan Jakarta) email: rozirosyadhi@gmail.com, salimabu790@gmail.com

ABSTRACT

Indonesia is a Muslim-majority country, the survival of extensive zakat is very important for society. In the era of digital technology, the government encourages the government to improve classical zakat administration to ensure transpiration and the principle of facilitating zakat payments. This paper provides a study of the Islamic economic perspective and the potential application of zakat on cryptocurrencies. This paper provides a study of the Islamic economic perspective and the potential application of zakat on cryptocurrencies. In this study the author uses a qualitative approach where the main source is from the Indonesian zakat administration law and the secondary sources are published journals, articles, and reports. The findings of this paper suggest that governments and NGOs should facilitate and accept zakat payments in cryptocurrencies, because one of the advantages is the ability to make transactions more transparent and cross-border using blockchain technology. Provide a sense of security and more trust to the community towards zakat organizations in Indonesia. This study also found a way to calculate cryptocurrency zakat by determining the nisab, consistently above 85 grams for 12 months, so you can pay 2.5% zakat using the value of currency or value of precious metal. This research will help zakat managers in Indonesia to adopt technology in this regard.

Keywords: Zakah, Blockchains, Cryptocurrency.

INTRODUCTION

In Islam, Zakah is third pillar of the religion Islam. Every Muslim who is capable of paying zakah shall do so without an excuse. In Islam, there are two types of zakah; which is zakah al-fitr and zakah al-maal. Irrespective of the country in which a person resides and the legal system adopted by the country, every Muslim is obliged to pay Zakah as long as the person fulfils the religious requirements to give it. In simple term, zakah can be defined as almsgiving. Zakah literally means to purify or increase or grow. This literal meaning of zakah indicates that via zakah a person's wealth can be purified and this lead one's wealth to grow and be increased not only physically, but spiritually as paying zakah leads to increase of barakah (blessing) of Allah (SW) in one's wealth. In the Holy book of Muslim, Al Quran, more than 30 different verses Allah (SW) has mentioned zakah. In al-Quran Zakah has been described as a way in which the redistribution of wealth is practised in an economy considering the rights of the poor that must be fulfilled by those who are financially capable in the society.

Indonesia, is the largest country in terms of Muslim population. It is estimated that there are approximately 231 million adherent Muslims in Indonesia accounting for with 86.7% of the Indonesian population and there is no exact estimate on how much Zakah is collected in "The collection of zakah at the center is quite good, every year it increases. In 2020, we got 387 billion, now it's almost 500 billion more. There is a significant increase every year," he said when he was a resource person at the Ijtima Sanawi held by the National Sharia Council (DSN MUI), Thursday (02/12/2021), reports MUI.or.id.

As such, administration of zakah in Indonesia is important and there is a need to effectively manage zakah. The objective of this paper is to suggest the ways in which technology could enhance the administration of zakah in Indonesia.

Currencies have been invented since ancient times to facilitate transactions between the societies and their members. Naturally, with the invention of the Internet, digital communications and the advent of the virtual community, some form of digital currency was invented for transactions in virtual space. Cryptocurrencies, supported by blockchain technology, fall into this category. In other words, cryptocurrencies represent a natural evolution of the currency as it adapts to the growth of internet and online transactions.

The test ventures for the cryptocurrency zakah installment stage found are all from private activities exterior Malaysia. None of the states in Malaysia are prepared to acknowledge installment in cryptocurrencies through installment in fiat money can be acknowledge for crypto zakah payment. In May 2018, Shacklewell Path mosque in Hackney, London, begun to acknowledge cryptocurrencies (Bitcoin and Ethereum) for sadaqah and zakah. A modern blockchain-based online stage was developed in collaboration with a start-up company called Combo Innovation. The company specializes in giving blockchain financial arrangements. Within the case of the London mosque, the company provides Islamic compliant budgetary arrangements permitting the mosque to get sadaqah and zakah in cryptocurrencies. Concurring to its website, gifts can be made through a QR code, and givers will then be electronically exchanged to its crypto-currency difficult wallets. Each exchange will be straightforward to counter and minimize cash laundering exercises. The gotten sadaqah or zakah will be traded to fiat cash through a crypto trade like Local Bitcoin UK.

Another reference site is Bloom ack a US-ased company with offices in Jakarta Indonesia. He advertises a free service as a private company to help transfer crypto-zakah money from cryptorich people to zakah-eligile institutions in Indonesia. According to their wesite people should contact the company y mail in case they need to pay zakah for their crypto. Cryptocurrency Zakah payments can be made by sending payments to Bloom-controlled crypto wallets held in a crypto exchange in Indonesia.

The resulting cryptocurrencies will then be replaced by Indonesian rupiah by Bloom distributing them to qualified co-conspirators of nice nonprofits. The company claims to disperse in general to the poor and the poor especially the dead and the vagrants of central Java and Sumatra. The benefit seems to be to

include or perhaps unmistakably steps that require the calculation of zakah and email communications yourself. It doesnt seem to offer the client meeting a comprehensive program for zakah benefactors and payers.

Islamichain is possibly a Dubai-based startup focused on harnessing blockchain innovation to ring simplicity to zakah sadaqah and waqaf. According to the companys website the company claims that "magnanimity" generates up to \$1 trillion a year. Therefore due to various complex variables such as coordination legislation and neighborhood its useful effect is often the need for transparency and responsible transport components. It is very easy for the program to encounter a situation where we have to send the contact information of the cross-order alms to the beneficiaries abroad. Sending cryptocurrency is much less complicated and simpler than conventional methods. Cryptocurrencies and blockchains can enhance the speed and transparency of the transfer of computing resources through cross-order zakah sadaqah and waqaf installment payments.

LITERATURE REVIEW

Administration of Zakah in Indonesia

Pursuant to Law No. 23 of 2011 zakah management is an activity of planning implementing coordinating distributing and using zakah (Republik Indonesia 2011). The management of the zakah in Indonesia is always changing and evolving from time to time depending on the time and the government regulations applicable at that time. Below is a brief explanation of the zakah management model in Indonesia from the pre-independence period the independence period the reform period until the post-modernization period or commonly known as digitization era.

Zakah during the reform period significant changes in the administration of zakah occurred during the reform period that is since Indonesian law as know as Undang-Undang (UU) No. 38 in 1999 was issued on the management of zakah Ministerial Decree Religion No. 581 and Haj Case No. D291 of 2000 on Zakah Management Technical Guidelines (Fakhruddin 2008). Regarding the settlement Fakhrudin said the settlement becomes the official

legal basis for the management and distribution of zakah in Indonesia. Fakhrudin also said the government has an obligation to facilitate the establishment of zakah authorities at both central and regional levels. If at the beginning of independence until the New Era the collection of zakah was only done on zakah fitrah and zakah on property (but zakah payment on property is not global because there is no mandatory regulation. forced) then in this reform. At that time it was also mentioned in the law regarding the types of property that are subject to zakah one of which is the property of income and services. This asset class in UU No. 38 of 1999 should e classified as an income class known only in modern times and did not exist during the time of the Prophet Muhammad. This zakah is called professional zakah (Muhammad 2002). Since the Indonesian law as know as Undang-Undang was issued the management of the zakah fund has become more organized transparent and also more professional. Indeed the administration of zakah at each facility is overseen by the government religious and community leaders. In case of error or negligence in the registration of zakah property it is severely punished and even considered an offense (Fakhruddin 2008). The presence of this act also ignited a new enthusiasm among Indonesian Muslims as zakah is no longer considered an exclusively Muslim activity but has become a government program in the socioeconomic sector. Such administration of zakah is in line with what was practiced in the days of the Prophet i.e. zakah is administered by the state and the government acts as a representative of the poor so that they gain rights to the poor. with a portion of the wealth of the rich (Ali 1988).

Zakah during the reform period Significant changes in the administration of zakah occurred during the reform period, that is since UU No. 38 in 1999 was issued on the management of zakah, Ministerial Decree Religion No. 581 and Haj Case No. D291 of 2000 on Zakah Management Technical Guidelines (Fakhruddin, 2008). Since the UU was issued, the management of the zakah fund has become more organized, transparent and also more professional. The presence of this act also ignited a new enthusiasm among Indonesian Muslims as zakah is no

longer considered an exclusively Muslim activity but has become a government program in the socioeconomic sector. Such administration of zakah is in line with what was practiced in the days of the Prophet, i.e. zakah is administered by the state and the government acts as a representative of the poor so that they gain rights to the poor.

However, in 2011 there was an amendment to the Law on zakah management which was replaced by UU No.23 of 2011, in this Law, the zakah institution that has sole authority is the National Zakah Agency (BAZNAS) and any institution that wants to manage it, have to permission to BAZNAS.

Zakah in Digital Era

Mosconi in Rolek Meško and Krapež, (2016) argue that the industry 4.0 phenomenon was first mentioned in 2011 in Germany as a proposal for the development of a new concept of German economic policy based on high-tech strategy. The Ministry of Industry of the Republic of Indonesia (2019) has announced that Indonesia is ready to enter the industry 4.0 era marked y the launch of the Indonesia 4.0 implementation roadmap in April 2018 Digitization computing power and Data analytics has changed people. life in various fields including the institution of zakah.

Zakah institutions in this case the National Zakat Amil Agency (BAZNAS) are implementing various digitalization processes in the management of zakah so that they remain agile in this digital age. BAZNAS has started the digitization phase before launching the Indonesia 4.0 opening roadmap. This means that BAZNAS is one of those organizations that prepared from the ground up before others were ready to enter this era. The development phase of digitalization of zakah management at BAZNAS began in 2017 in cooperation with the portal MatahariMall.com which provides payment services and zakah calculators. In addition BAZNAS cooperates with e-commerce and Elevenia which are shopping centers and online sales. In 2018 Baznas launched zakah service through a digital payment machine MCash located at 700 shopping malls in Jaodetaek. Next BAZNAS partnered with an

app-ased collaorative chat service with financial features called OY! This cooperation makes it easy for Indonesians to give zakah to help those in need. In 2019 GoPay which is an online payment service provided by Gojek in collaboration with BAZNAS introduces an innovation in the easy provision of digital zakah through GoZakah. Not only that Baznas is also working with Monster AR to launch an app called Augmented Reality based on Android. This app allows Android users to scan every BAZNAS logo they come across and the service features will appear until paying with zakah (Repulika.co.id 2020).

Blockchain makes processes traceable, auditable, and irreversible. This is the most important part of successful philanthropy. This was inspired by a pious Muslim who wanted to use cryptocurrency for donation activities but did not have an interesting place. Blockchain has significant potential for use in the world of Islamic philanthropy for the following reason:

- (1) Transparency: Blockchain provides origin, traceability and transparency of transactions;
- (2) Control: Access to the whitelist is restricted to identified users:
- (3) Security: The digital ledger cannot be changed or tampered with after data has been entered. the chances of fraud are very small and easier to spot;
- (4) Real-time information: When information is updated, it is updated for everyone on the network at the same time.

Table 1. 2020 National Zakah Collection and Distribution Based on Data Entry

No	ZAKAT MANAGEMENT ORGANIZATION (OPZ)	Zakah Collection (In Rp)	Distribution
1	BAZNAS	386.203.760.730	326.156.796.566
2	BAZNAS Province	428.549.988.109	406.025.213.388
3	BAZNAS District/City	1.348.522.770.559	1.199.720.391.209
4	LAZNAS	2.462.462.924.177	2.188.385.135.311

No	ZAKAT MANAGEMENT ORGANIZATION (OPZ)	Zakah Collection (In Rp)	Distribution
5	LAZ Province	209.929.277.973	153.805.434.422
6	LAZ District/Province	128.467.852.292	125.316.041.097
	TOTAL	4.964.136.573.780	4.329.408.411.943

Source: 2020 National Zakah Collection and Distribution Based on Data Entry

Note:

- 1. **BAZNAS**: Badan Amil Zakat Nasional/National Zakat Amil Agency.
- 2. LAZNAS: Lembaga Amil Zakat Nasional/National Zakat Amil Institute.
- 3. LAZ: Lembaga Amil Zakat (LAZ)/Amil Zakat Institution (LAZ) Private.

Islamic View about Cryptocurrency

Islamic scholars could not come to an agreement on the matter of cryptocurrencies. There are three different views on the use of cryptocurrencies among Muslims. The different views would directly dictate the status of zakah payment in cryptocurrencies. The three views can be summarized as follows:

Table 2. The three different views on the use of cryptocurrencies among

Witte				
Views	Scholars			
Prohibiting (haram)	Darul Iftaaʻ Misriyyah, Syeikh Ali Qaradaghi, Wifaq al-Ulama, Dr. Ahmad Sufyan Che Abdullah, Datuk Dr. Zulkifli Al-Bakri, MUI			
Permitting	Datuk Dr. Mohd Daud Bakar, Dr. Zaharuddin & Mufti Muhammad Abu Bakar			
Tawaqquf (pending) official view	International Shari'ah Research Academy for Islamic Finance (ISRA)			

Source: Mohd Faiz, Alif, & Raja Rizal Iskandar (2019); International Journal of Zakah and Islamic Philanthropy (2019).

Based on the table above we can conclude that there is three view regarding the Islamic scholars view about cryptocurrency prohibiting, permitting, tawaqquf / pending.

Legal Criterion of Property (Māl) In Islam

In Sharia law the most important aspect of exchange value is that it has the status of māl which means property. Therefore before discussing the state of cryptocurrencies it is essential to understand the concept of māl in Sharia law. When it comes to the concept of property in Islam scholars differ. In Aidin of the Hanafi school of thought defined property as anything that is desired and can be kept for use in the future. According to the Maliki Al Mal are defined property as something at will and whose usage is both customary and legally valid. According to Hanabilah this is something that is often useful. An asset according to the Shafie School is defined as something that is useful or ready to be mined. According to the majority of Muslim scholars māl refers to something of exchangeale value and must be compensated for by anyone who damages it. Islam: mutaqawwam (authorized and legal in Sharia) and customary review (urf).

Mutaqawwam. It is a necessary condition to classify something as māl. Something that is allowed in Sharia is called mutaqawwam. Mutaqawwam was defined y In Āidīn as "something stored or present and authorized for use." So if it is not registered or present it is not considered māl. Sharia he cannot e regarded as māl like dead animals pigs and wine. However it is important to note that according to the majority of scholars (Shafie Māliki and Hanali) al-mal mutaqawwim (valued), namely assets that are allowed to use it by the Shari'ah and has the nature of exclusivity according to syara', such as houses, food, livestock, vehicles and clothing. Kind of treasure it is protected by law and action destruction or elimination of which is subject to sanctions for compensation

'Urf. In the absence of specific judgments or rulings drawn from the scriptures of Sharia (Al Quran and Sunnah) custom plays an essential role. According to jurists what is taken from urf is exactly the same as what is taken from the scriptures. Jurists from the four schools of Islamic law agree that if something increases in value because of custom and acceptance by people it is considered acceptable.

According to the facts and opinions obtained digital assets are still classified as commodities (financial assets) and do not yet qualify as currencies. This is because in order to e considered a currency it must meet certain requirements which digital assets do not. According to the facts and opinions obtained digital assets are still classified as commodities (financial assets) and do not yet qualify as currencies. This is because in order to e considered a currency it must meet certain requirements which digital assets do not. The criteria to qualify are as follows;

- i) Māl (regarded as valuales);
- ii) Accepted and approved as a medium of exchange y all or a large group of people; and
- iii) Thamaniyyah: standard of value and independent unit of account.

The current state of Bitcoin is that it is not an independent indication of value. The value of Bitcoin has always been determined by the value of fiat currency. Thamaniyyah insists on a clear standard of value for money. Bitcoin is not enough to be a standalone store of value. Furthermore for something to be an independent standard of value it must be stale and widely accepted. Bitcoins volatility and instability defeat the purpose of money which is to protect and balance our daily lives. The position and key characteristics of Bitcoin have been lost due to uncertainty and volatility. 12 Thamaniyyahs second function is to act as a unit of account. This is true for those who use it as a primary reference point and yardstick when viewing rates and tracking bonds. It is a unit of measurement used to determine the be value of products and services.

Cryptocurrency is Permissible in Principle

Other researchers argue that bitcoin is in principle permissive. This view can be analyzed on the basis of our earlier discussion of other criteria and definitions of (evil) and monetary assets. There is a well-known legal maxim explained by jurists: الأصل في المعاملات الإباحة. This means that rules of origin are legal in financial and commercial transactions. In other words no matter what unless we can see it clearly it contradicts the principles of Sharia law

- 1. Treated as valuable thing among the people,
- 2. Accepted as medium of exchange by all or substantial group of people,
- 3. It is a measure of value,
- 4. And it serves as unit of accounts.

Therefore any cryptocurrency that meets these conditions (such as Bitcoin) is accepted as currency. The Fatwa Center of the South African Islamic Seminary Darul Uloom Zakariyya has made the point that Bitcoin qualifies for crime and is therefore licensed for trading. However they note that in order to qualify as a currency it must be approved by the relevant government agencies.

Zakah on Cryptocurrencies

Zakah on cryptocurrencies based on the facts and opinions acquired, digital money is to be deemed a commodity or financial asset rather than currency, it is necessary to do study on the zakah rule to determine whether it may be imposed on digital currency or not. To that end, this section will go through the essential aspects of zakah before delving into the zakah judgement for digital money. Zakah, also known as mandatory charity, is a type of duty that every Muslim is required to fulfil according to the fifth pillar of Islam. It is a religious responsibility for Muslims who satisfy the required parameters of a common minimum amount (nisab) and a one-year term (haul) to contribute 2.5 percent of their wealth to eight categories of particular recipients each year. Muslims are exempt from paying zakah if their wealth is less than a certain level known as the nisab.

In addition zakah is not only a spiritual obligation but also an important component of the Islamic welfare system. Zakah acts as a kind of redistribution of wealth benefiting the whole community especially those who have been designated as specific beneficiaries. The Muslim responsibility to pay the zakah is mainly taken from the Quran while the details of the types of wealth owed to the zakah the circumstances and the percentage deducted for the zakah are mainly taken from the hadith Rasulullah SAW. Therefore before considering zakah it is essential to understand the requirements of zakah as well as the elements embedded in it.

Zakah is divided into two types: zakah fitrah and zakah harta or wealth. Instead of zakah fitrah, the debate will center on zakah on wealth. Zakah on wealth is classified into numerous sorts or categories, including zakah on earnings or income, zakah on business, zakah on savings, zakah on gold and silver, zakah on farming, and zakah on animals. As a result, the question of whether digital money fits within the classification of wealth that can be subjected to zakah has emerged. To that end, we must investigate its character in order to determine the right zakah decision. The differing views on the permissibility of digital currency have influenced views on the zakah regulation that can be applied on such currency. Despite the fact that digital currency is an intangible, it has values that can be transferred, distributed, and exchanged. Furthermore, ownership may be transferred from one person to another (peer to peer) without the need for any intermediaries like as financial organizations or banks.

When considering the nature of such a currency (based on previous discussions of digital currencies) it is necessary to infer the judgment of zakah for digital currency in this case. In general the classification of digital currency as a commodity is considered appropriate due to its nature and status as a new financial instrument. Then it is considered as a commodity with characteristics and functions similar to money. However Sharia scholars suggest several cases for enforcing zakah on products including,

- i. The reasons for paying zakah from it is due to the purpose of selling and buying of it.
- ii. The commodity acquired resulted from the transaction of buying and selling.

- iii. The intention to sell the commodity once the commodity has been acquired. This also subjected to those who buy the commodity for his own uses but then decided to sell after the price increases, such act also considered as intention to sell.
- iv. Fulfill the nisab requirement where the minimum amount is benchmarking on the value of gold or silver.
- v. Fulfill the haul requirement where the owner own such assets for one completed owning year.
- vi. The commodity is being valued according to the market value. To that the zakah then will be calculated when the market value fulfilled the nisab requirements.

Under Malaysian law the correct to gather and distribute zakah rests with the state. The mission is allotted y the Islamic State Religious Council (SIRC) or the Majlis Agama Islam Negeri (MAIN). Accordingly any zakah-related fatwa is within the purview of the aforementioned authorities.17 Perlis SIRC is that the only state that has issued a politician statement on the Bitcoin zakah thus far. In 2020 Perlis Fatwa Commission officially announced that Bitcoin (one of the digital currencies) could also be subject to zakah if it meets the shipping and nisab requirements to be classified as a commodity.

Some digital currencies are issued with a particular underlying asset while others are issued to satisfy a particular project or for a selected purpose. Therefore the underlying assets of the digital currency or the rationale for its issuance will determine whether zakah will be imposed thereon. as an example if a digital currency reflects gold united of its underlying assets it's subject to the gold zakah law. additionally he said that issuance of such digital currency must be shariah compliant for the zakah to be applied to that for if the issuance is for non-Sharia compliant purposes or with a digital currency Failure to fits this Sharia will automatically lose valuable elements (mutaqawwam) in shariah law and can now not be considered a sound financial asset under Islamic law.

However since there aren't as many pillars as currency or money digital currencies will be classified as a commodity or financial asset instead of a currency. He then added that

commodity digital currencies are exempt from zakah. However if the holders involved in digital currency trading and making profits from the transaction want to pay zakah he proposes that such action e done by enforcing the zakah regulation on savings in such situations. So my research on this subject is predicated on the idea that such a digital currency can be punished by zakah this is often because cryptocurrency trading generates profits for its owners. This makes it a fantastic property because it meets the expansion criteria (alnama) additionally it's also considered a commodity or financial asset because of its value and characteristics. Accordingly it's going to be profitable to trade such a product making it eligible for zakah. However while we decide to believe that zakah can be applied to digital currency in our research further research is required to see that the imposition of zakah on digital currency is thanks to regulatory authorities. Its abilities and qualities meet the desired criteria of wealth which is accountable for zakah. this can be to avoid those assets being taxed in zakah just to extend zakah revenue.

METHODS

This study is a descriptive study as it has describe or elucidated the combination of cryptocurrency zakah and blockchain in indonesia. The research method used is qualitative. The subjects of this study are zakah organizations in indonesia. The object of this study is the mechanism between muzakki and nadzhir in indonesia. This study further clarified the production mechanism of the zakah lockchain as the authors argue that the management of zakah is not optimal efficient and simple for everyone. It is hoped that the national zakah organizations will e trustworthy responsible and professional with this model. On the other hand this study will give another perspective on the enefits of accepting cryptocurrency from zakah. The source of this research is secondary data which includes previous research lockchainrelated books and national and international journals related to zakah and lockchain. Blockchain zakah description: descriptive analysis is performed to analyze the relationship between zakah

and lockchain and connect zakah to blockchain and create a zakah blockchain model that can be used by zakah stakeholders.

RESULTS

Blockchain is an open distributed database that executes transactions on an open decentralized ledger (Nor Rahman Rahman & Abdullah 2017). Specifically it's an information series of user-to-user transactions stored in locks where each lock records a particular amount of information encrypted through cryptographic hashing. If the user wants to create a transaction he must announce the transaction to any or all other users on the network to verify the authenticity of the transaction. Each user will have a duplicate of the info registry; As a result all transactions are visible and available to any or all making any fake transactions fraudulent actions or hacking activities impossible additionally to transparency reliability and precise and detailed monitoring of funds the decentralized structure of the blockchain network reduces transaction costs by eliminating any middlemen. The process of promoting transactions within the blockchain first begins with the generation of a digital security token by implementing encryption. The second step is where the user tries to authenticate the transaction while preserving personal information. Finally the transaction is thus recorded as immutable and automatically distributed to any or all users (Changa Baudier Zhangc Xua Zhanga and Aramid 2020). the method explained above is illustrated within the following figure 1



Figure 1. Blockchain Promote Transaction

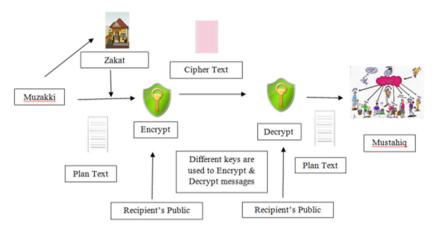
Blockchain may be a new technology that has been known after the 2008 financial crisis (Nakamoto S., 2008), and everybody can accept and has been adopted by everyone. Blockchain will be

understood as a digital record of block transactions. to confirm transactions, cryptography is employed supported a digital signature chain. Each block may be a group of transactions that are added to the ultimate block by reaching a consensus on authenticity among users; The block is then passed to every network user to update their database. The blockchain system records all transactions that are made, shared by consensus, distributed and shared among the users of every participant, and it's very difficult to enforce it because each process is entered with two keys and every transaction is cryptographed and maintained simultaneously within the distributed ledger of every node, making it nearly impossible to hack, as stated by Alessio et al (2019) following figure 2



Figure 2. How Blockchain Promotes Transaction

Currently, zakah funding is just 10 trillion out of a complete potential of 217 trillion. Therefore, technology is required to facilitate and accelerate access from receiving zakah, recording zakah to distributing zakah to mustahiq with zakah blockchain technology to create everything easier in any case associated with zakah. Below is illustrated the mixture of zakah and blockchain so muzakki, mustahiq and muzakki are more focused and arranged in zakah management figure 3



Source: Model has modification from Hazik Mohammed, 2017 Figure 3. Model Zakah Blockchain

Muzakki transfers zakah funds to zakah institutions, both Baznas and Laznas because only two of those institutions have a mustahiq zakah database. It encompasses information about whether compulsory zakah is in accordance with the nisab or not when it's checked, and amil will send muzakki funds within the sort of cryptocurrency. Technically, people won't use cryptocurrency quite a medium of exchange during the method, and for this, individuals will adopt a set parity exchange system from one local currency to at least one cryptocurrency unit to avoid fluctuations in value (An & Seo, 2018)

Individuals use stable coins, a sort of cryptocurrency designed to supply security regarding other major currencies that leading central banks struggle to keep up purchasing power over time within the crypto-asset market (Bullmann, Klemm, & Pinna, 2019). this kind of cryptocurrency is characterized by extremely low volatility (usually near zero). "Tether" is employed, which is that the most well-liked and commonly used cryptocurrency for this operation type. the massive specialty of Tether is that it belongs to the category of fiat currency stabilized stable coins. Tether holds parity of 1 Tether unit (1USDT) for one dollar. Connecting Mustahiq to the network, every mustahiq identified in zakah institutions' database will automatically have a blockchain

account on the network. He receives these zakah funds in cryptocurrency and so transfers them in folding money on the exchange platform.

In terms of sending zakah funds, the muzakki can trace the whereabouts of the zakah funds, where the amil zakah party only checks the database that the zakah funds have reached their haul or nisab, and the level of zakah value is appropriate; because the database must always be updated, whether the mustahiq died or has turned into muzakki. There are two binding passwords in blockchain zakah, and no one can change this; even if something changes later, encryption and other descriptions will lock and fix each other, so it is not affected by only one key aspect or item. Thus, the process will be traceable, auditable, and irreversible, which are the main qualities to ensure a successful zakah collection system (Elasrag, 2019).

The muzaki registered on the blockchain network of zakah institutions will automatically have a permanent account. Their zakah fund will thus be represented in the Tether cryptocurrency. On the other hand, each mustahiq who has been recorded in the database of zakah institutions have met the requirements to allow themselves to be part of those who must be given zakah and have a blockchain account. Upon completion, a smart contract will be signed between the institution and the muzaki, where it will be automatically executed, i.e., zakah funds will be collected in the cryptocurrency if the nisâb is reached and remains in possession for one lunar year. Zakah institutions will receive operational funds as an additional cost. Once the funds are raised, they will be exchanged for fiat money on the exchange platform for the parity "1 Tether = 1 Dollar" and transferred to mustahiq (Rejeb, 2020).

There is no fixed recipe for presenting the findings of a study Therefore, first consider general guidelines and then turn our attention to options for reporting descriptive statistics and the results of hypothesis test.

Reporting Research Results

Based on the explanation above we can conclude a formula that, each of crypto owner can registers them self in some

particular platform to give announcement and information to pay the zakah of their crypto with the formula below:

How to Calculate Zakah Cryptocurrency

So how then do you determine how much crypto you have to hold in order to be liable for Zakah. Here are a few rules of thumb:

- 1. Zakah is due on the market value of your Crypto.
- 2. Regardless of whether your cryptocurrency holdings are tokens (utility or work) or exchangeable coins, both are liable for Zakah.

Steps for calculating your Zakah on Crypto:

- a. Find the value of 85 grams of gold in your crypto currency.
- b. If you've had a consistent value greater than 85 grams of gold in your wallet on the month's end for an entire 12 months, then you will pay Zakah on the total value of your wallet.
- c. Pay 2.5% of your wallet's value either in the same cryptocurrency or in it's value of flat currency or precious metals.

If you cannot find a reliable market quote for converting your crypto value into gold, you can take the market price for gold in your local currency, then convert your crypto value into your local currency to find out how much you should give. There is no fixed recipe for presenting the findings of a study. We will, therefore, first consider general guidelines and then turn our attention to options for reporting descriptive statistics and the results of hypothesis test.

DISCUSSION

Blockchain is an open dispersed data set that executes exchanges on an open decentralized record (Nor Rahman and Abdullah 2017). Explicitly it's a data series of client to-client exchanges put away in locks where each lock records a specific

measure of data encoded through cryptographic hashing. To make an exchange he should report the exchange to any or any remaining clients on the organization to check the credibility of the exchange. Every client will have a copy of the information vault; thus all exchanges are noticeable and accessible to any or all making any phony exchanges deceitful activities or hacking exercises unimaginable also to straightforwardness dependability and exact and nitty gritty observing of assets the decentralized design of the blockchain network diminishes exchange costs by wiping out any mediators. The most common way of advancing exchanges inside the blockchain initially starts with the age of a computerized security token by executing encryption. The subsequent advance is the place where the client attempts to validate the exchange while saving individual data.

Blockchain can be a brand new generation that has been acknowledged after the 2008 monetary crisis (nakamoto s., 2008), and all of us can receive and has been followed via way of means of everyone. Blockchain might be understood as a virtual report of block transactions. To verify transactions, cryptography is hired supported a virtual signature chain. Each block can be a set of transactions which are introduced to the last block via way of means of attaining a consensus on authenticity amongst customers; the block is then handed to each community consumer to replace their database.

Technically, people won't use cryptocurrency quite a medium of exchange during the method, and for this, individuals will adopt a set parity exchange system from one local currency to at least one cryptocurrency unit to avoid fluctuations in value (An & Seo, 2018) Individuals use stable coins, a sort of cryptocurrency designed to supply security regarding other major currencies that leading central banks struggle to keep up purchasing power over time within the crypto-asset market (Bullmann, Klemm, & Pinna, 2019). the massive specialty of Tether is that it belongs to the category of fiat currency stabilized stable coins.

So how then do you determine how much crypto you have to hold in order to be liable for Zakah Steps for calculating your Zakah on Crypto:

- Find the value of 85 grams of gold in your crypto currency.
- If you've had a consistent value greater than 85 grams of gold in your wallet on the month's end for an entire 12 months, then you will pay Zakah on the total value of your wallet.
- Pay 2.5% of your wallet's value either in the same cryptocurrency or in it's value of flat currency or precious metals.

CONCLUSION

Blockchain technology are often applied in national zakah institutions, both Baznas and Laznas, because this mechanism can bring significant changes within the world of national zakah. during this case, the role of amil zakah and Muzakki is that the key in implementing zakah using blockchain technology in managing zakah that's quality, efficient, accountable, and professional in distributing zakah to asnaf. Blockchain technology is that the answer to time and financial efficiency and cryptocurrency technology, making Muzakki more confident about zakah management meted out by amil because all data sources are tracked.

Muhammadiyah as the largest Islamic organization in Indonesia must immediately be aware of this potential, take advantage of existing opportunities so that later they will not be left behind in receiving crypto zakah. Majelis Tarjih Council can conduct more in-depth research related to the potential and law of crypto zakah, facilitate parties who will pay zakah using crypto by creating applications or payment media that are easy and safe.

REFERENCES

Abu-Bakar, M. M. (2018). Shariah analysis of bitcoin, cryptocurrency, and blockchain. Shariah Analysis in Light of Fatwas and Scholars' Opinions.

Bakar, N. A., Rosbi, S., & Uzaki, K. (2017). Cryptocurrency framework diagnostics from Islamic finance perspective: a new insight of Bitcoin system transaction. International Journal of Management Science and Business Administration, 4(1), 19-28.

- Bullmann, D., Klemm, J., & Pinna, A. (2019). In search for stability in crypto-assets: are stablecoins the solution?. ECB Occasional Paper, (230). https://doi.org/10.2866/969389
- Chang, V., Baudier, P., Zhang, H., Xu, Q., Zhang, J., & Arami, M. (2020). How Blockchain can impact financial services— The overview, challenges and recommendations from expert interviewees. Technological forecasting and social change, 158,120166. https://doi.org/10.1016/j. techfore.2020.120166
- Elasrag, H. (2019). Munich Personal RePEc Archive Blockchains for Islamic finance: Obstacles Challenges.
- Fakhruddin, F. (2008). Fiqh dan manajemen zakat di Indonesia. UIN-Maliki Press.
- Hamdani, L. (2020). Zakat Blockchain: A Descriptive Qualitative Approach. *EkBis: Jurnal Ekonomi dan Bisnis*, *4*(2), 492-502. https://doi.org/10.14421/ekbis.2020.4.2.1270
- Kumar, D. S., & Rahman, M. A. (2017). Simplified HDFS architecture with blockchain distribution of metadata. *International Journal of Applied Engineering Research*, *12*(21), 11374-11382.
- Nakamoto, S. (2008). Bitcoin: A peer-to-peer electronic cash system. *Decentralized Business Review*, 21260.
- Paizin, M. N. (2017). Usage of Islamic Alms's Online Portal: Case Study on Pusat Pungutan Zakat (PPZ), Federal Territories of Malaysia. *Intel Prop Rights*, 5(175), 2.
- Paizin, M. N. (2021). Community Views About Zakat on Cryptocurrencies. *Al Qalam: Jurnal Ilmiah Keagamaan dan Kemasyarakatan*, 15(2),146-165. https://doi.org/10.35931/aq.v15i2,
- Rejeb, D. (2020, October). Blockchain and Smart contract's contributions to Zakat management system. In *International Conference of Zakat* (pp. 15-24).
- Roblek, V., Meško, M., & Krapež, A. (2016). A complex view of industry 4.0. *Sage open*, *6*(2), 2158244016653987.

- Rofiqo, A., Muslih, M., & Sari, D. N. (2021). Reputation, Transparency, Trust and Waqif's Perception on Nadzir's Professional Toward Intention to Act Waqf: Empirical Study in Pondok Modern Darussalam Gontor (PMDG). *Journal of Islamic Economic Laws*, 4(2), 42-66.
- Yusof, M. F., & Rasid, L. A. (2021). Perilaku Pembayaran Zakat Mata Wang Digital Kripto: Isu, Cabaran Dan Strategi. *International Journal of Behavioral Analytics*, *I*(June), 0–12.