

The copyright © of this thesis belongs to its rightful author and/or other copyright owner. Copies can be accessed and downloaded for non-commercial or learning purposes without any charge and permission. The thesis cannot be reproduced or quoted as a whole without the permission from its rightful owner. No alteration or changes in format is allowed without permission from its rightful owner.



CRYPTOCURRENCY IN THE PERSPECTIVE OF SHARIAH

NAIM BIN ABDUL RAHAMAN



MASTER IN ISLAMIC FINANCE AND BANKING
UNIVERSITI UTARA MALAYSIA
JUNE 2018

CRYPTOCURRENCY IN THE PERSPECTIVE OF SHARIAH

By



Research Paper submitted to

Othman Yeop Abdullah Graduate School of Business,
Universiti Utara Malaysia,

In Fulfilment of the Requirement for the Master of Islamic Finance and Banking



PERAKUAN KERJA KERTAS PENYELIDIKAN
(*Certification of Research Paper*)

Saya, mengaku bertandatangan, memperakukan bahawa
(*I, the undersigned, certified that*)

NAIM BIN ABDUL RAHAMAN (821928)

Calon untuk Ijazah Sarjana
(*Candidate for the degree of*)

MASTER IN ISLAMIC FINANCE AND BANKING (MIFB)

telah mengemukakan kertas penyelidikan yang bertajuk
(*has presented his/her research paper of the following title*)

CRYPTOCURRENCY IN THE PERSPECTIVE OF SHARIAH

Seperti yang tercatat di muka surat tajuk dan kulit kertas penyelidikan
(*as it appears on the title page and front cover of the research paper*)

Bahawa kertas penyelidikan tersebut boleh diterima dari segi bentuk serta kandungan dan meliputi bidang ilmu dengan memuaskan.

(*that the research paper acceptable in the form and content and that a satisfactory knowledge of the field is covered by the research paper*).

Nama Penyelia : **DR. MOHAMAD NOOR HABIBI BIN HAJI LONG**
(*Name of Supervisor*)

Tandatangan : 
(*Signature*)

Tarikh : **23 MEI 2018**
(*Date*)

PERMISSION TO USE

In presenting this dissertation in partial fulfilment of the requirement for a Post Graduate degree from the Universiti Utara Malaysia (UUM). I agree that the Library of this university may take it freely available for inspection. I further agree that permission for copying this dissertation in any manner, in whole or in part, for scholarly purpose may be granted by my supervisor or in their absence, by the Dean of Othman Yeop Abdullah Graduate School of Business where I did my dissertation. It is understood that any copying or publication or use of this dissertation parts of it for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to the UUM in any scholarly use which may be made of any material in my dissertation.

Request for permission to copy or to make other use of materials in this dissertation in whole or part should be addressed to:

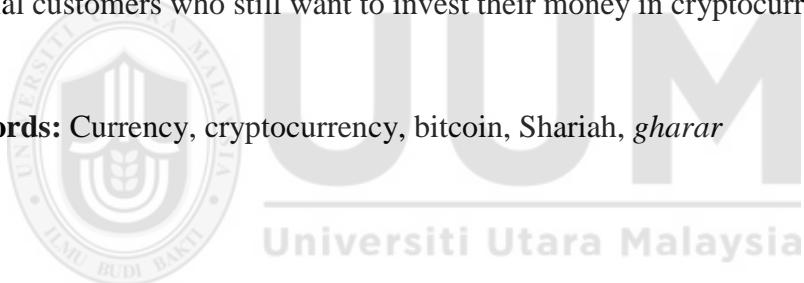
Dean of Othman Yeop Abdullah Graduate School of Business



ABSTRACT

The purpose of this study is to investigate one of the types in Fintech area, which is cryptocurrency from the perspective of Shariah. Until now, there are around 1,600 types of cryptocurrencies around the world. However, one of the most sought cryptocurrency in Malaysia is Bitcoin. Since it is still a new in Malaysia, the in-depth study on this has not yet been fully completed. By the realization to study this issue, a research has been conducted to become an eye-opener for those who want to dig deeper to gain the knowledge about this especially on the views from Islamic perspective or to be specific, from Shariah views. On the other hand, many issues arise regarding this cryptocurrency especially bitcoin. Therefore, this research will investigate the concept of money with its characteristics, and analyze if cryptocurrency does have all the characteristics of real money in it. Move forward to the next objective, this study will also explain on the Islamic perspective, and to be exact, Shariah views of cryptocurrencies as the currency or as a medium of exchange. Until now, there is still not much current views from the current scholars on this exact matters. Most of the views are regarding on whether their countries accepting it to be used or not, and the majority are the views from the government. Still, there is no specific *hukm* on the uses of cryptocurrencies. So, the outcome of this study will provide an important insight for potential customers who still want to invest their money in cryptocurrencies.

Keywords: Currency, cryptocurrency, bitcoin, Shariah, *gharar*



ABSTRAK

Tujuan kajian ini adalah untuk mengkaji salah satu jenis di teknologi kewangan (Fintech), iaitu matawang kripto dari perspektif Maqasid Shariah. Sejak beberapa tahun yang lalu, kira-kira 1,600 jenis matawang kripto telah dicipta. Salah satu matawang kripto yang paling diberi perhatian di Malaysia ialah Bitcoin. Oleh kerana ia masih baru di Malaysia, kajian mendalam mengenai perkara ini belum selesai sepenuhnya. Dengan kesedaran untuk mengkaji isu ini, satu kajian yang mendalam telah dijalankan untuk menjadi pembuka mata bagi mereka yang ingin mengetahui dengan lebih mendalam untuk mendapatkan pengetahuan mengenai hal ini terutamanya pandangan daripada perspektif Islam dan secara spesifiknya daripada kaca mata Shariah itu sendiri. Sebaliknya, banyak masalah timbul mengenai matawang kripto ini terutamanya bitcoin. Oleh itu, kajian ini akan mengkaji konsep wang dengan ciri-cirinya, dan menganalisis jika matawang kripto mempunyai semua ciri-ciri wang sebenar di dalamnya. Terus ke objektif seterusnya, kajian ini juga akan menerangkan tentang pandangan daripada perspektif Islam, dan secara spesifik adalah pandangan Shariah terhadap matawang kripto sebagai matawang yang sah dan sebagai medium pertukaran. Sehingga sekarang, masih tidak begitu banyak pandangan daripada para alim ulamak dalam isu yang diketengahkan ini. Kebanyakan pandangan yang diberikan adalah lebih kepada sama ada negara tersebut dibenarkan untuk menggunakan matawang kripto atau tidak, dan secara majoritynya adalah pandangan daripada kerajaan negara tersebut. Namun, masih belum terdapat hukum yang jelas dan spesifik tentang penggunaan matawang kripto sama ada diharuskan atau diharamkan atau lain-lain. Hasil kajian ini akan memberikan wawasan yang penting bagi bakal pelanggan atau pengguna lain yang masih ingin melaburkan wang mereka dalam matawang kripto ini.

Kata kunci: Matawang, matawang kripto, bitcoin, Shariah, *gharar*

ACKNOWLEDGEMENT

Alhamdulillah, in the name of Allah SWT, the Most Compassionate and the Most Merciful. All praise and gratitude to Him for giving me strength, courage, patience and ability to complete this study. The completion of this study would not been possible without His help.

My deepest appreciation and thankfulness to everyone who guide and support me directly and indirectly. My highest gratitude towards my supervisor, Dr. Muhammad Noor Habibi bin Hj. Long for guiding me through the completion of this study. With his guide, I manage to realize the steps to reach the purpose of this research starting from an issue of this research. A sincere appreciation and thankfulness also goes to our Islamic Business School's Dean, Prof. Dr. Asmadi Mohamed Naim, Dr. Nashirah Abu Bakar, Prof. Madya Dr. Ahmad Fauzi bin Idris (Director of Postgraduate and Research Center of UniSHAMS), and Dr. Wan Nazjmi Bin Mohamed Fisol (Deputy Rector of Student Affairs and Alumni UniSHAMS) for their time given to finish this research.

My utmost and genuine appreciation to my beloved parents, Abdul Rahaman Hj. Abdullah and Aishah Hj. Ahmad, for their countless prayers and constant encouragement, support and motivation that give me strength to complete this study.

Finally yet importantly, a special appreciation to my friends who are always give me a great support throughout the study and also not forget to their assistance, guidance, comments and for their supportive act directly and indirectly in giving the added value to the writing of this research. May Allah repay your kindness.

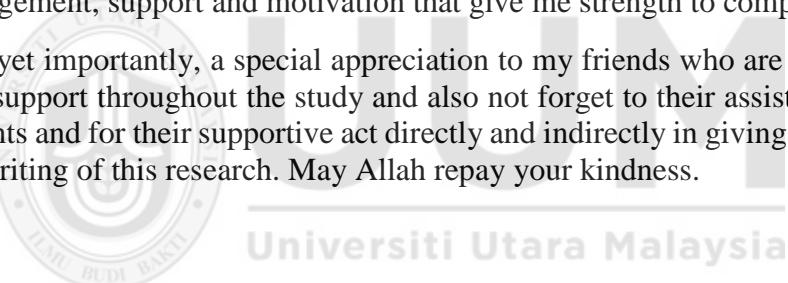


TABLE OF CONTENTS

PERMISSION TO USE	i
ABSTRACT	ii
ABSTRAK	iii
ACKNOWLEDGEMENT	iv
TABLE OF CONTENTS	v
LIST OF TABLE	vii
LIST OF FIGURES	viii
LIST OF ABBREVIATIONS	ix
CHAPTER 1: INTRODUCTION	1
1.1 Background of Study	1
1.2 Problem Statement	5
1.3 Research Questions	6
1.4 Research Objectives	7
1.5 Significance of Study	7
1.6 Scope of the Study	8
CHAPTER 2: LITERATURE REVIEW	9
2.1 Introduction	9
2.2 Concept of Money and Cryptocurrency	9
2.3 Concept of Shariah and Maqasid Shariah	15
CHAPTER 3: RESEARCH METHODOLOGY	27
3.1 Introduction	27
3.2 Research Design	27
3.3 Data Collection	28
3.3.1 Documentation	28
3.3.2 Interview	29
3.4 Data Analysis and Interpretation	31
3.5 Conclusion	32

CHAPTER 4: ANALYSIS AND FINDING	33
4.1 Introduction	33
4.2 Analysis of Cryptocurrencies from Shariah Perspective	34
4.3 Definition, Functions and Characteristics of Money	38
4.4 Definition of Cryptocurrency and the Difference with Currency	39
4.5 Conclusion	43
CHAPTER 5: CONCLUSION AND RECOMMENDATION	44
5.1 Introduction	44
5.2 Research Summary and Findings	44
5.3 Recommendations	48
REFERENCES	50



LIST OF TABLE

2.1	Division of Jahl al-Masalih	23
-----	-----------------------------	----



LIST OF FIGURES

2.1	Flow from Encryption to Decryption of Hash Functions	13
4.1	Blockchain Technology	40
4.2	Blocks of Blockchain also can be referred as Public Ledger	41



LIST OF ABBREVIATION

AI	Artificial Intelligences
BNM	Bank Negara Malaysia
IMF	International Monetary Fund
POS	Cloud-based Point of Sale
SaaS	Software-as-a-Service
SHA	Secure Hash Algorithm



CHAPTER 1:

INTRODUCTION

1.1 Background of the Study

Money is anything that has value and it is generally accepted as a medium of exchange. It is also can be used once it is accepted as a store of value and unit of account. Since decades ago, the use of money as the exchange rate has long been used. The only different between now and then is the medium of exchanged used. As early as 9000 BC, people would barter their goods if they have surplus for ones they lacked. Cattle and grain were popular goods to barter. The first bartering system was recorded in Egypt. During 1100 BC, people in China started to use replicas of goods cast from bronze (Wray, 2012). King Alyattes of Lydia from the modern day Turkey minted the first official currency in 600 BC. The coins were developed into rounded shape of coins. It were developed out of lumps of silver. The standardized coinage allowed trade to flourish across the Mediterranean world.

Up until year 1250 AD, a gold coin that was minted in Florence was widely accepted across Europe. The widely accepted gold coin has encouraging the international commerce. In 1290, a traveler named Marco Polo has travelled to China to introduce the idea of paper money to Europeans. However, in 1661, the paper money did not catch on for quite some time with the first bank notes being printed in Sweden even the paper money was great for business because it does not need to rely on raw metals to produce it. The history of money continue until year 1860 where an industry

giant company named Western Union spearheaded e-money with electronic fund transfer via telegram. 139 years after that, in 1999, European banks began to offer mobile banking for whole world and even in 2008, the contactless payment were issued in the UK for the first time. Following 6 years later, because of a constant demand for ways to ensure businesses can trade easily. New innovation are constantly being introduced and refined (Burn-Callander, 2014).

Because of the innovation for easy ways to trade in business, Bitcoin was established as the first cryptocurrency in 1998. However, it said that Mr. Satoshi Nakamoto is the founder if Bitcoin, a peer-to-peer electronic cash system. 2010 is the year for Bitcoin to be valued for the first time. It happened when some person decided to sell their 10,000 Bitcoin for two pizzas. Because of their initiative, the Bitcoin has increased its popularity. The consequences of that situation is that the first alternative cryptocurrencies has appears because of the ideas of decentralized and encrypted currencies (Marr, 2017).

Nevertheless, Bitcoin can also be considered as money even it is not legal tender. According to International Monetary Fund (IMF), Bitcoin can also be known as virtual currency as its function is similar to fiat money. Both fiat money and virtual currency does not have intrinsic value but can be considered as modern money if they have some characteristics of money mentioned by scholars. The different is that the government created fiat money and its value is based on the countries' economic factors and the demand supply. However, it is different with the virtual currency where

it was created by anonymous and the value based on the demand supply. (Zaharuddin, 2018).

According to Zaharuddin also, Bitcoin also known as speculative digital asset that are unstable on its real value and need some times to become stable. Because of that, it have a high risk of becoming the scammer's tool through the money game scheme. It is also possible to be used by the criminals to bypass the security by the government when they want to transfer the money.

In maqasid Shariah, there are five foundational goals, which are the preservative of faith (*Deen*), life (*Nafs*), lineage (*nasl*), intellect ('*aql*) and wealth (*mal*). The discussion of maqasid Shariah for Bitcoin is pointing to the preservation of wealth. The preservative of religion by not engaging in illegal things when looking for some money and preserve it. Among the components of a forbidden contract are *gharar* and *jihalah*. Scholars agree to the prohibition of *gharar* is more towards *gharar fahish* (excess *gharar*) (Asmadi, 2018).

Financial market has been rapidly developing nowadays. In line with the rapidly develop of financial market, its operation also need to be changed so that the participants can compete well within the market. Since 1950s, with the start of credit card, ATM to replace tellers and until 1990s where the e-commerce and Internet start to be developed and used widely in the whole world, a financial technology (fintech) infrastructure has been created. However, the development of fintech has creating

more risk management, treasury management, trade processing and the institutional level of data analysis tool for banks and financial services firms (Desai, 2015).

The phrase ‘financial technology’ is commonly known as the term ‘FinTech’. It has taken the banking and finance sector to grow rapidly. Fintech is a technology developed by making use of any modern technology or software for aiding the financial and banking sector. There are several types of fintech, which are as below:

- i. Payments and remittances – it contains three types of financial technology to assist this type of products (payments gateways, e-wallet and remittance tech).
- ii. Digital banks – it is an online version of any banks that support online banking and it support checking saving account, transfer facility and other products support by certain banks.
- iii. Enterprise tools software – it contains two types, software-as-a-service (SaaS) and cloud-based point of sale (POS).
- iv. Cryptocurrencies and blockchain – cryptocurrency is a form of virtual money while blockchain is a technology that allow the movement of bitcoin from one person to another.
- v. Advice and personal finance – it allows customer to compare, manage and use artificial intelligence (AI) to provide advice for financial suitability with the customer.
- vi. Crowdfunding – it intention is to help users raise capital from anyone and it is based on rewards, donation, equity and debt.

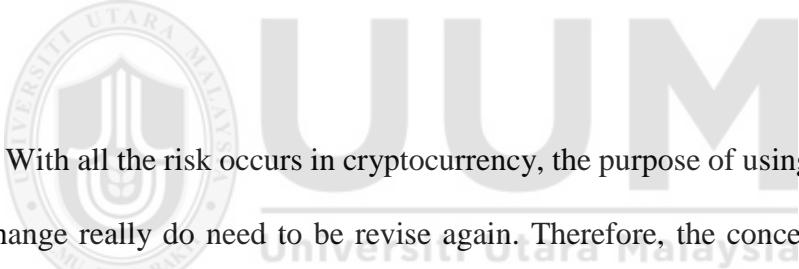
This paper will analyze more on the concept of real money and on the same time discuss about its function and characteristics. On the same time, it will discuss on definition of cryptocurrency and whether it carry the real money's characteristics in it. On the same time, this research will study on the involvement of cryptocurrency in maqasih Shariah whether it is in line with maqasid or not.

1.2 Problem Statement

Financial technology (fintech) is a term to describe a company that used and apply any kinds of technology such as cloud-based tools and open source software to improve banking and investing. According to Robinson (2017), fintech can be divided into two spheres. The first one is the companies-facing companies that offer tools digitally in order to improve the way some people borrow the money, managing it and finance startups. The other one is the back-office ventures. It help some financial institutions behind the scenes to streamline their operations.

Cryptocurrencies is one of the types in fintech. Some people thought that cryptocurrencies is a real physical coin whereas it is only a virtual currency. It is a medium of exchange that use cryptography to control the transaction and controlling the creation of new units. The characteristics of cryptocurrencies are that they do not have intrinsic value, do not have physical form since they are only exists in virtual system and internet networks, and the supply does not offered by any national banks. (Asmadi, 2018).

To become a real money, there are six characteristics identified by economists for money to serve its functions, which are acceptability, divisibility, portability, scarcity, durability and stability. However, in early July 2017, 30,000 customers' data from one of the largest bitcoin exchange was hacked and compromised. It is the result from the nature of bitcoin itself, which is lack of security. So, the hackers and fraudsters become attracted to compromise the system. The other risk if money laundering risk. The decentralization of bitcoin itself can provoke money laundering. Security risk definitely causes this money laundering risk because a temporary simple alphanumeric composed between 27 and 34 characters identifies the bitcoin user's identity. Therefore, any industry or organization that used bitcoin as their medium of exchange really need to use advanced anti-money laundering protocols (Faraz, 2017).



With all the risk occurs in cryptocurrency, the purpose of using it as a medium of exchange really do need to be revise again. Therefore, the concept of Shariah is important to know more about cryptocurrency.

1.3 Research Question

Based on the previous problem statement, this research comes out with two research questions:

1. Can cryptocurrency been used as a medium of exchange similar with the used of physical money and fiat money?
2. What does the Shariah view to cryptocurrency as a means of transaction?

1.4 Research Objective

1. To analyze the real definition of money as the medium of exchange and the suitability of cryptocurrency to become the alternative.
2. To find out how Shariah views the cryptocurrency as the currency or as a medium of exchange.

1.5 Significance of Study

This study particularly focuses on the cryptocurrencies in the perspective of Shariah. As to know whether Shariah views the cryptocurrencies as a currency and a medium of exchange or not, this research will need to study more on the real definition of money as a medium of exchange and the definition and views of Shariah. However, there are only a few studies on this topic. Even from the perspective of the whole Shariah itself also can be claimed as very few studies has been made. Therefore, this study can be used as a future references regarding the cryptocurrency in the perspective of Shariah.

Furthermore, this study will be very helpful for people out there to know how it is related with Shariah due to the facts that many cryptocurrency buyers just lookup for the profit. As long as they got the profit from the investment in cryptocurrency, and does not violate the human law, everything is legit. However, they forgot to seek for the Islamic law (*hukm*) on this matter.

Lastly, the finding of this study will hopefully give benefit towards regulators, legal practitioners, banker, financiers, students and public in general. It is especially towards Muslims. As the God's servant, obey the His rule is the best thing to do. In order to do that, this study's main purpose is to help people out there to find out the perspective of maqasid Shariah on cryptocurrency so that they can help themselves from the loss in this world and Hereafter. Thus, it is crucial to know the finding of this study.

1.6 Scope of the Study

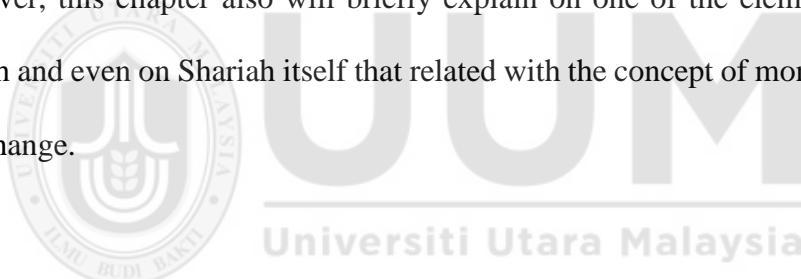
This study is focusing on the recent issues of cryptocurrency and the perspective of Shariah on this matter. Apparently, there is not so much factual study on this matter. Mostly only on the article without an actual fact. This research focused to the documentation research and interview method. The documentation research is more to get the information on Shariah that was discussed by previous scholars. On the other hand, it is also to find the current research that applicable in the current situation. There are some article published by some journal that study on cryptocurrency from Islamic perspective. Regarding that matters, interview method can be the complementary for both method. From the interview, in can focused more on assessing the current view on cryptocurrency with the view from the perspective on Shariah.

CHAPTER 2:

LITERATURE REVIEW

2.1 Introduction

The purpose of this chapter is to review the concept of money as a medium of exchange, its related history timeline from the use of barter system to the use of cryptocurrency. From the concept of money, this chapter will shift the focus to Shariah as this study will need to know the perspective of Shariah on cryptocurrency. Moreover, this chapter also will briefly explain on one of the elements in maqasid Shariah and even on Shariah itself that related with the concept of money as a medium of exchange.



2.2 Concept of Money and Cryptocurrency

According to Seitz (2017), money is a connector or medium of exchange and a non-object based in human action. It is based on the discussion of Aristotle and Plato suggested. On the other hand, from the perspective of the nature of money, materiality and quantity are properties.

In Islamic point of view, money does not being recognized as a subject-matter of trade. Nevertheless, there are exception on some special cases. Money is only a

medium of exchange since it has no intrinsic utility. Therefore, there is no room to get profit by exchanging each unit of money to another unit of money in the same denomination. This is because, both unit of money is exactly equal with one another (Adam, 2017).

Something need to have the intrinsic utility and is sold for money to generate the profit. On the other hand, profit also can be generated by the exchange of different currencies. However, if profit earned through the dealing of money from the same type of currency or the represented paper is interest (*riba*), hence prohibited (Uthmani, 1998). In order to derive the benefit from money, the owner must put labour or spent on something. However, if the money is lending from a loan, interest cannot be charged on the loan. Moreover, money is not a commodity in Islam a money is simply just a unit of measurement. It cannot guarantee the reward, instead, it is depend on the result of the production of some productive activity that generates surplus value (McLeay, 2014).

Everything have their own characteristics. Even the money also has its own characteristics. Six characteristics of money are important for anything money serves in a modern economy, which are durable, not easily reproduced by people, relatively scarce, not too scarce, portability and divisibility (CFEE, 1994). For the first characteristics, money need to be durable as a medium of exchange. The durability of money can be easily explained by an analogy. If money does not exist, try changing it into an apple as a medium of exchange. Maybe a quantity of apple can be used as money and pay for everything. However, problem occurs when the apples rot. People

will not take rotten apple to use it as a medium of exchange. This simple analogy can explained the durability of money.

Second, people cannot easily reproduce money. It should also be relatively scarce. The reason behind that is simple. Money need to be relatively scarce so the demand and value of money will be higher. If people can easily reproduced the money, even the government would not be able to control the supply. When there are uncontrollable supply of money, the value of money will go down. Maybe it will need a large sack of money just to buy bread and milk.

Third, although money need to be relatively scarce, however it cannot be too scarce. The reason is that with the sufficient quantity of money, it can serve the money well in enabling all the exchange if the economy to take place. Fourth is that the money need to be easy to transport or portability. Money need to have the ability to be carried anywhere from one place to another without the need of huge effort.

Last, the divisibility of money. For the money to be useful, it need to be able to be divide into smaller units. The analogy is when people want to buy a smaller item with smaller value. If they do not have a smaller unit of money, it would be such a waste of money to buy it with a higher unit of money. However, the most essential characteristics of money is it acceptability. It need to be accepted by whole people in the economy or the country.

According to Mufti Faraz Adam (2017), there are three opinions of Islamic scholars on the meaning of money. The first group said that money is consist of gold and silver. While the second group considers money as minted coins regardless of type of metal it's composed of. On the other hand, the third group of scholars said that gold and silver are real and this group accepted any forms of money as long as its fulfill certain requirements of money.

Cryptocurrency is an alternative for fiat money to be used as a medium of exchange such as USD, MYR and so on. However, it is designed with the purpose of exchanging a digital information through a process that can be made possible by a certain principles of cryptography. On the other hand, cryptography is a process used to secure the transaction of cryptocurrency and to control the new coins' creation. To put it simple, cryptocurrency is a digital currency. It is considered as decentralized system, which means that they do not have the central authority (Gandal, 2014).

The first cryptocurrency created was Bitcoin. Its founder is a developer named as Satoshi Nakamoto. It used a set of cryptographic hash functions named SHA-256, which is designed by the United States National Security Agency. Around April 2011, a first alternative Bitcoin or known as altcoin, Namecoin, was created in order to form a decentralized DNS. It will make internet censorship more difficult. Later in October on the same year, Litecoin was released. It has became a first successful cryptocurrency that use scrypt (a password-based key derivation function designed to producing the coins by using a proof of work algorithm) as its hash function rather than bitcoin that use SHA-256.

The meaning of “SHA” from SHA-256 of Bitcoin cryptocurrency hash is Secure Hash Algorithm. The U.S. National Security Agency (NSA) designs this set of cryptographic hash functions. In simple words, the use of cryptocurrency hash is to convert the data into a particular form of 64 alphanumeric symbols so that only those specific people can read and process it. The process of converting a readable message into an unreadable message is called encryption. While decryption is process of converts back the unreadable message to readable message. The process is as below:

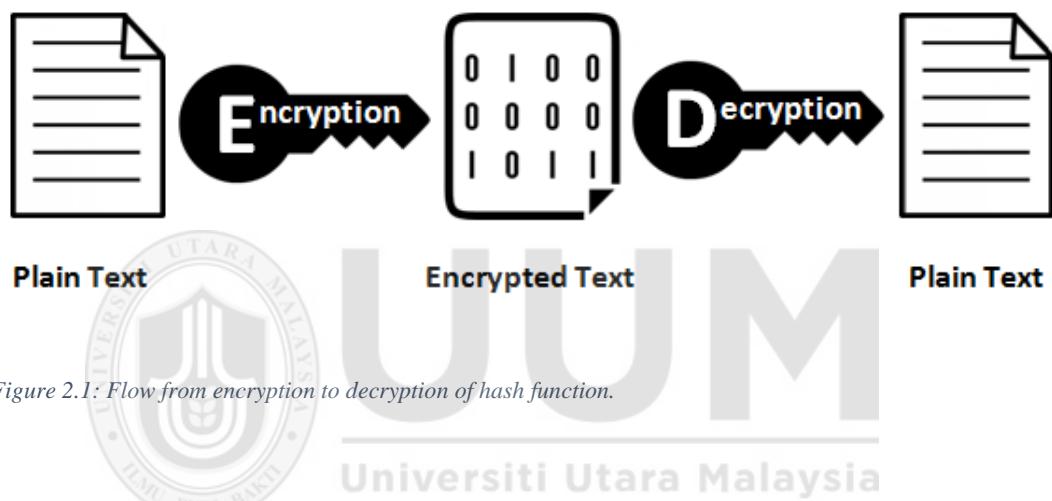


Figure 2.1: Flow from encryption to decryption of hash function.

The output of fixed bit size is what is called as a hash. In the case of bitcoin, it used SHA-256 as its cryptographic hash functions. Its output bit size it 256-bit.

There are many types of cryptocurrencies other than Bitcoin like for the examples Namecoin, Litecoin, Etherium, Steem, Lisk, NEO, Komodo, Stellar, Cordano, BitShares, Verge, Waves and more. Different with Bitcoin, other types of cryptocurrencies use scrypt as explained before. To mine the Bitcoin, individuals were able to use their Graphic Processing Unit (GPU). As its popularity grew higher, a machine named ASIC SHA-256 was built specifically to mine the Bitcoin. This machine is so powerful that it can mine 6 Trillion Hash per second (TH/s) instead of

normal machine with four GPUs, it can only mining 3.4 MH/s. On the other hand, to remove the worries of individuals on getting profit of mining from their home as the network become less decentralized, scrypt hash was implemented with the promise of resisted to ASIC as it requires lots of memory. GPU are already designed to handle these lots of memory while the ASIC machine were not. But the other side is that, scrypt requires a lot of energy to mine, and scrypt-ASIC machines then were designed to address the problem (Muhd Rosydi, 2017).

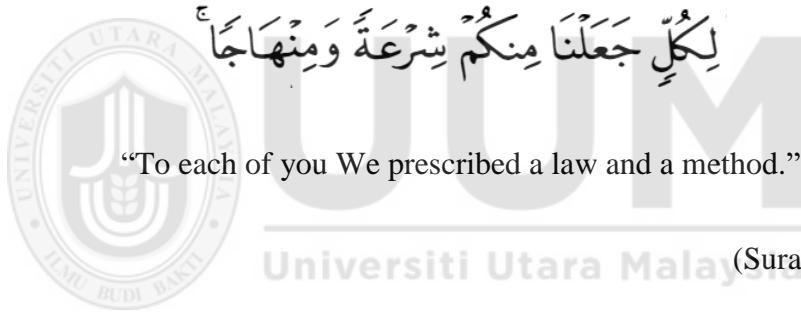
According to an expert, the scholars are still conducting studies on digital currency such as Bitcoin and others. This currency is supported by Blockchain's powerful and sustainable technology. The data in Blockchain cannot be changed to an end to its technological superiority. Many people claim that Bitcoin is vulnerable to uncertainty/*gharar* because it may disappear, the owner is unclear and so on. Actually, there is a difference between risk (*khatar*) and uncertainty (*gharar*).

Actually, not all things on the world will be out of risk including gold and fiat money. Risk is *fitrah* that does not affect the law of a matter. For example, today's gold price may be lower than last month. While the uncertainty is related to the item itself like the obscurity in its shape and so forth. It affects the law.

2.3 Concept of Shariah and Maqasid Shariah

There are rules of life or law for every human. In Islam, this living rule and law is called Shariah, which includes the rules of life of individuals, communities and nations. In fact, these rules cover all areas of human life such as religious, moral, family, social, economic, nationality, judicial systems, the laws of war and peace and as well as the international relations.

In terms of language, Shariah means a straight path. As His saying in Al-Quran:



While the meaning in terms of *istilah*, sharia is the law or regulations that govern the relationship between man and Allah SWT, as well as the relationship between man and man. The application of sharia in every human life is intended to enable people to have higher dignity and degrees from other creatures of Allah SWT. Shariah generally means all orders revealed by Allah SWT to man in terms of faith, *amaliyyah* and morals. However, in a particular sense, Shariah refers to God's commands s.w.t. in terms of *amaliyyah* only. The *amaliyyah* aspect refers to human practices and activities. In this particular sense, Shariah does not involve the aspect of *iman* (faith) because faith refers to man's beliefs, while morality refers to the purification of the heart and soul of man.

Shariah in this particular sense can also be divided into four main elements:

- i. *Ibadah* - The aspect that governs the relationship between Allah SWT and man.
- ii. *Munakahat* - The aspect that governs family affairs.
- iii. *Jinayat* - The aspect that regulates the wrongdoings and the methods of trial.
- iv. *Muamalat* - Aspects that govern the activities of human life and human relationships and the environment.

In terms of regulations or provisions concerning *muamalah*, everything can be done unless originally existing prohibitions. As for the example, Allah SWT allows people to trade, but forbids people to make usury or money (Abd. Jalil, 2002). Al-Quran contains 6235 verses which are divided into 114 chapters. Out of all the verses, 350 verses are relating to laws and rules as below:

- a. *Ibadat* – 140 verses.
- b. *Munakahat* – 70 verses.
- c. *Muamalat* – 70 verses.
- d. Other matters – 70 verses.

Usually, books on Islamic law mention four sources of the Shariah which are Al-Qur'an, As-Sunnah, *ijtihad* and *ijma'*. The primary source of the Shariah to be derived as *hukm* is Al-Qur'an and As-Sunnah. The scholars then interpreted the Shariah derived from Al-Qur'an and As-Sunnah into a *fiqh*. *Fiqh* in the meaning of language means knowing and understanding, and according to the term means a science that explains all the laws of Shariah that are based on the Qur'an and As-Sunnah which is interpreted through deep research and pertaining the detail of the Shariah.

While for the secondary sources are based on *ijtihad* and *ijma'*. Ijtihad is an effort to solve a problem that is not mentioned in the Qur'an, as well as the Hadith or as-Sunnah, by using a healthy and clear mind, and guiding the ways of prescribing the laws that have been determined. The result of *ijtihad* can be the third source of law. Islam does not only allow differences of opinion as a result of *ijtihad*, but also stressed that the differences of opinion that it will bring blessings to mankind. By executing one's *ijtihad* it can take it by means of *ijma'* and *qiyyas*. *Ijma'* is a consensus of all mujtahid priests and Muslims during a period of time after the death of the Messenger of Allah. Adhering to *ijma'* results is allowed, it even becomes imperative. *Qiyyas* is to link an incident that has no law with another occurrence which has its law because between the two are same *illat* or the reasons. Other types of *ijtihad* are as below:

- a. *Istihsan/Istislah*, that is to impose the law of an act that is not clearly explained in Al-Quran and hadith based on the common interest or generosity or for the sake of justice.
- b. *Istishab*, which is to continue the occurrence of an existing law and has been established a proposition, until there is another proposition which alters the position of the law.
- c. *Istidhal*, which stipulates a law of deeds that is not mentioned clearly in Al-Quran and hadith based on it because it has become the customs or habits of the local community.
- d. *Maslahah mursalah*, is a *maslahah* that is in accordance with the purpose of Islam that is not obtained from the teaching of the direct and clear evidence of the *maslahah*.

- e. *Al-'Urf*, is a matter agreed upon by a group of people in the development of his life.
- f. *Zara'i*, are the works that are the way to achieve *maslahah* or to eliminate harm.

Apart from that, Shariah has the objectives, which is called as Maqasid Shariah. Maqasid derived from the word *madsud* (المقصود) or *maqsad* (المقصد), which means desire, aim or purpose (Rosli Mokhtar, 2007) as well as the goal to achieve in doing something and it is also a goal laid down by syara' in contemplating the law (Nafsiah Huzaimah, 2012). While Shariah is something that are related with the laws in Islam (Kamus Dewan, 2005) that involving the legislation aimed to manage the lives of individuals, families, communities and countries. Its involved the law related to *munakahat*, *muamalat*, *jinayah* and so on (Mohd Kamal, 2015). On the other hand, Shariah scope consists of three categories which are the relationship between human and Allah and unseen, relationship between human, and relationship between human and other creatures in this entire world.

According to Zaharuddin Abd. Rahman (2014), in order to achieve maqasid Shariah, first is to know the ways in which the law is set up, that is, by referring the opinions of jurisprudents who are experts in this field. If referring to the earlier scholars, they never stops discussing about it. Imam al-Ghazali stated in chapter *istislah* (a proper ground for legislation when a *maslahah* is identified), the ways to know maqasid Shariah is through Al-Quran, Sunnah and *ijma'*.

According to Wan Mohd Nasir (2011), in *al-Ushul al-‘Ammah wal-Qawa’id al-Jami’ah lil-Fatawa Asy-Syar’iyyah* (1/19) from Dr. Husain bin ‘Abdul ‘Aziz, he define maqasid Shariah as:

“The purpose of Maqasid Shariah is the objectives which, in turn, are the rule of law, to realize those objectives. It is the virtues that return to the slaves, to make them happy in the world and in the hereafter, whether those objectives are achieved through the gain of benefits or rejection of *mudharat*. Some scholars describe Maqasid as saying: ‘Maqasid is the fulfillment of the meanings and wisdoms which Allah has maintained in all or most of the state of affairs.’ The better definition of that is the wisdom that Allah Almighty requires, in all circumstances of the creation.”

According to Wan Mohd. Nasir (2011) also, among the benefits of Maqasid Shariah knowledge are:

1. Knowing the perfection of the Almighty Allah, because He does nothing but with the perfect wisdom, whether known to His servant or not.
2. Knowing the different levels of benefits, harm and practice, in the view of Islam and reality. This is very important when making comparisons and judgments between different *hukm*. Therefore:
 - i. Anything that is of more good and less harmful will be preferred over the opposite,
 - ii. Greater disadvantages are avoided by lesser disadvantages,
 - iii. Greater benefit is preferred, even if it is forced to release smaller benefits.
3. Being able to perform *qiyas* from the original question to the new question, from the law of *kulli* to the law of *juz'i*, and from the rule of law to its *furuk*.

4. Add peace and self-confidence to Islamic law and its laws. Naturally, people will be more submissive to the law that they know of the cause and the wisdom behind it.

Ibnu Taimiyah al-Harrani's opinion about this matter is based on the conclusion made by Yusuf al-Badwi through his works, namely:

- i. Research on proposition (*dalil*) from Al-Quran and As-Sunnah.
- ii. Understanding and refining the knowledge on Arabic language.
- iii. Mastering the context of *nas* and its style of language.
- iv. Exemplify *sahabah*, as they are the people who are most understand maqasid Shariah after the Messenger of Allah.
- v. Through the meaning behind maqasid *taba'iyyah* (branch) that is understood from maqasid *asliyyah* (main).
- vi. If *syariat* does not mention the *hukm*.

On the other hand, Imam Asy-Syatibi discussed this in two methods. First, can be found in the usual way like *ijmak*, *nas*, *isyarat*, *sabr* (news/origin), *munasabah* (suitability), and others. Second, cannot be found in the usual way as in the first method, but with revelation. Among the methods mentioned in his book, *Al-Muwafaqat*, are:

- i. Through command and prohibition.
- ii. Understanding '*illah* behind the command and prohibition.
- iii. Maqasid *asliyyah* and maqasid *taba'iyyah*.
- iv. If *syariat* does not mention about it.

v. *Istiqla'*. This way is not clearly mentioned as the four ways above, but merely affirm it and call it a glance in writing.

vi. Understanding maqasid based on Arabic language. He said: "Arabic language is a translator to maqasid Shariah."

Muhammad Thahir ibnu Asyur also contributed his opinions on this subject in three ways, *istiqla'*, clear arguments (*dalil*) from al-Quran and *Sunnah mutawatir*.

Generally, maqasid Shariah means the purpose, result or the definition required by *syara'* through its sources from al-Quran and as-Sunnah (Rosli Mohd Fikri, 2007), while Muhammad Zahir Halim et al. (2014) defined it as something that give the meaning, wisdom and something accepted by Him. It is required in order to enumerate a general or specific *hukm* aimed at realizing the welfare of the servant. It is divided into three parts namely *dharuriyyat*, *hajiyat*, and *tahsiniyyat* (Wan Mohd Nasir, 2012).

Dharuriyyat is the inevitable thing in the interest of religion and the world that if it does not exist, the world will be damaged and the loss in the hereafter will occur. *Hajiyat* is needed to provide convenience and avoid difficulties. If it is not preserved, the mukallaf will face difficulties but it does not reach the level that can cause severe damage as happened in *dharuriyyat*. However, *hajiyat* is complement to *dharuriyyat*. *Tahsiniyyat* according to Imam asy-Syathibi is practicing what is worthy of good manners, and avoid from the defamatory conditions which are rejected by rational minds. It is all contained in the category of noble character. To make it simple,

tahsiniyyat refers to the good things that are in addition to the *dharuriyyat* and *hajiyat* because the absence of *tahsiniyyat* will not give bad effect on them (ibid.).

Some of the goals of Islamic sharia include enforcing justice, organizing human life, educating individuals, carrying on social goals and goals towards realizing true morals and establishing rules and justice to safeguard human well-being (Ab. Latif, 2003). While Siti Zalikha et al. (2001) more directed to what is stated by the scholars of the five key fundamental of *jalb al-masalih*, namely belief (*ad-deen*), life (*an-nafs*), intellect (*al-'aql*), lineage (*an-nasl*), and property (*al-mal*).

The basic of the administration of a country is *jalb al-masalih* (providing benefit) and *dar' al-mafasid* (preventing harm). In addition, every *syariah* argument confirms the rule of "*jalb al-masalih wa dar' al-mafasid*". Therefore, every command has a purpose as if it does not attract *maslahah*, it must prevent *mafsadah*; both the world and the hereafter, now and then. Every appeal to do good, do justice, and wisdom, will be bring to the *maslahah*. Vice versa; every appeal to abandon the ugliness, the destruction, the wickedness, that is to prevent the harm or *dar' al-mafasid* (Amir Husin, 2012). According to Azliza (2017), all these five fundamental are being preserved in these three level of priority, which are *dharuriyyat*, *hajiyat* and *tahsiniyyat*. The division of *maqasid* is shown as below:

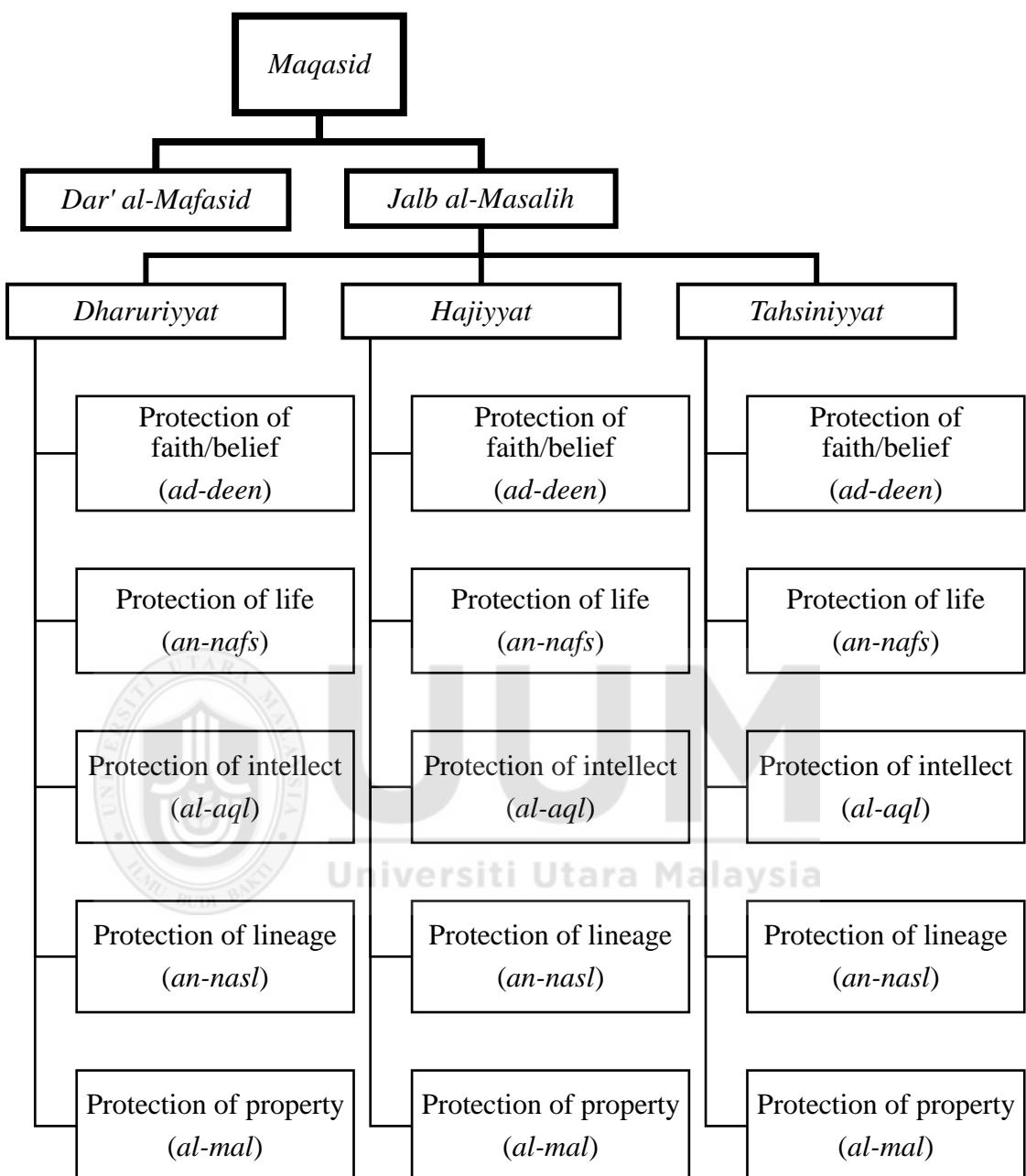


Table 2.1 Division of Jalb al-Masalih

To safeguard the first fundamental, Islam forbids all things that can threaten religion, such as *kufur*, *syirik* and so forth. The main task of *syariah Islamiyah* is to

safeguard the religion (*aqidah*) and beliefs (*imaan*) of the *ummah* as the word of Allah in Surah ali 'Imran verse 19:

إِنَّ الدِّينَ كَعِنْدَ اللَّهِ أَلْأَسْلَمُ

"Indeed, the religion in the sight of Allah is Islam."

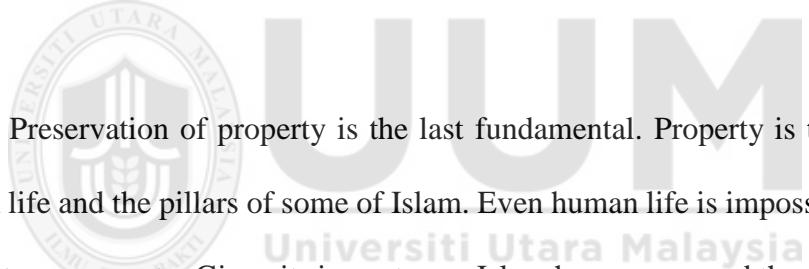
The word "religion" here summarize three simple meaning, the revelation to the Messenger, the law involving faith in Allah, the Messenger and the Day of Judgment, and the laws concerning the realm of human life.

To realize the preservation of life, Islam prohibits any act that can threaten one's self, soul or life, either self or others. Islamic law (*syari'ah Islamiyah*) protect human life and emphasizes the fundamental rights of others. The *qiyas* and *diyat's* punishment is prescribed to safeguard the life of a human being. To take care of human life for the better, God has outlined marriage laws, divorce, *iddah*, refer, *hadhanah*, living and so on. Allah has also banned any aggression against humanity and human life such as doing something harmful and committed any murder (Mohd Fikri, 2012).

To maintain and preserve the third fundamental, which is *aql*, Islam prohibited any actions that can either threaten one's self to others like drinking and selling alcohol, drugs, and fantasy pills and so on. In order to safeguard the well-being of the mind, Islam has suggested that every Muslim should seek knowledge started from *fardhu 'ain*, which is focused on the individual's personality. Then, towards *fardhu*

kifayah, which is more general and focused on individual responsibilities in a society (Rosli, 2007).

The forth fundamental is lineage. It includes dignity. However, some scholars consider dignity as a separate *dharuriyyat* so *dharuriyyat* becomes six in all. In keeping the lineage, Islam forbids anything that can be harmful to the lineage, whether directly or indirectly. Islam has emphasized the aspect of guarding the lineage because it guarantees the life and the body. Starting with a good personalities and deeds will lead to useful benefits to the community. Islam has also place laws carefully to safeguard the *maslahah* of human descent (ibid.).



Preservation of property is the last fundamental. Property is the lifeblood of human life and the pillars of some of Islam. Even human life is impossible to carry on without any property. Given its importance, Islam has encouraged the quest for wealth and sustenance by the way and the right way. Islam requires some *maslahah* in the property ownership. Among them are:

- i. Agreement between buyer and sellers is a requirement and basic in trading and *muamalah*.
- ii. Rules in *zakat*, charity (*sadaqah*), *waqf*, debt and others.
- iii. Promoting a positive investment and expanding economic benefits.
- iv. Prohibiting the acquisition of property through oppression, fraud, and invasion of the rights of others. By that, Islam prohibiting robbery, involve in interest (*riba*), smuggling, gambling, cheating, corruption and others.

Regarding the crime of robbery, Allah says in surah al-Ma'idah, verse 33:

إِنَّمَا جَرَّبُوا الَّذِينَ يُحَارِبُونَ اللَّهَ وَرَسُولَهُ، وَيَسْعَوْنَ فِي الْأَرْضِ فَسَادًا أَنْ يُقْتَلُوا أَوْ يُصْلَبُوا أَوْ تُقْطَعَ أَيْدِيهِمْ وَأَرْجُلُهُمْ مِنْ خَلْفٍ أَوْ يُنْفَوْا مِنَ الْأَرْضِ ذَلِكَ لَهُمْ خَرْجٌ فِي الدُّنْيَا وَلَهُمْ فِي الْآخِرَةِ عَذَابٌ عَظِيمٌ

“Indeed, the penalty for those who wage war against Allah and His Messenger and strive upon earth (to cause) corruption is none but that they be killed or crucified or that their hands and feet be cut off from opposite sides or that they be exiled from the land. That is for them a disgrace in this world; and for them in the Hereafter is a great punishment.”



(Al-Ma'idah, 5:33)

Besides Maqasid Shariah, the establishment of the *hukm* also refers to the *qawa'id fiqhiiyah* (legal maxims) and *usul fiqh* (jurisprudence).

CHAPTER 3:

RESEARCH METHODOLOGY

3.1 Introduction

The aim of this this chapter is to set out the method of this research conducted to discover the studies on the issues regarding cryptocurrencies from the perspective of Shariah. This chapter will present the methodological approach adopted. It will present the sample question which was selected towards the respondents and will set out the method used for data collection along the process data analysis. Finally, it will discuss on the limitations associated with this study.

3.2 Research Design

For this research, a qualitative approach was taken. The process of research involves empirical work being carried out with the collection of data which can concur refute or contest theories which in turn allows for understanding and clarification for different observations (May, 1997). Qualitative research involve "... an interpretive naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of or interpret phenomena in terms of the meanings people bring to them" (Denzin and Lincoln, 2005). A qualitative approach was considered as the best option for this research as we need to know the respondents' opinion on the matters of our research as it is allowed greater capacity to gain more

depth on an individual's knowledge and opinion on the relationship of cryptocurrency and Shariah itself. The main reason for qualitative approach to become the most suitable type of research adopted in this study is that any statistical data does not involved in the data analysis.

3.3 Data Collection

In this research, the collection of data will be obtain through documentation and interview method.

3.3.1 Documentation



Documentaries data refers to the documentaries materials such as journal article, thesis, dissertation, magazines, encyclopedia, newspaper and related materials. These data are consists of the published and unpublished materials that are available in the library and higher education's institutions. On the other hand, some materials can be retrieve through the official webpage of journals and some scholars.

References to these two categories of the materials contributes to the first and second objectives, which are, analyze the real concept of money as the medium of exchange and its characteristics, and analyzing the Shariah itself. This method were used by researchers to form a study framework by looking at past studies and are used to look at the research conducted especially the one that is related with this topic. Through this method, all the information regarding the topic will be obtain as well as

evaluating the advantages and disadvantages of the study and disclosing information about unpublished studies. It is also important to fulfil the second objectives namely to form the basis of the concept of Shariah itself.

3.3.2 Interview Method

To get the findings for this research, a semi-structured interview were selected. This type of interview will allow the respondents to elaborate more on the questions given to them. In addition, with that, it will give the opportunity to them to responses further. By definition, a semi-structured interview needs to have some structure, and the open-ended questions. Kumar (2005) views the interview as the most suitable approach for studying complex and sensitive areas as the interviewer has the opportunity to prepare a participant before asking sensitive questions and to explain complex ones to them in person.

According to McNamara (1999), interviews are particularly useful for getting the story behind a participant's experiences. The interviewer can pursue in-depth information around the topic. Interviews may be useful as follow-up to certain respondents. By doing the interview, sometimes it can prove to be a difficult task to gain reliable data on the research subject if there are a small number of respondents involved. It is different with the quantitative approach which is involves a higher number of participants and in addition, certain circumstances can provide more reliable data results.

Interviews conducted with experts in the field of Shariah and finance. There are some academic experts were interviewed in order to dig deeper on the real definition of money and Islamic law. Some of the academic experts interviewed by were:

- i. Prof. Madya Dr. Ahmad Fauzi bin Idris:
Director of Postgraduate and Research Center UniSHAMS
- ii. Dr. Wan Nazjmi Bin Mohamed Fisol:
Deputy Rector of Student Affairs and Alumni UniSHAMS
- iii. Dr. Nashirah Abu Bakar:
Lecturer from Islamic Business School, UUM.
- iv. Prof. Dr. Asmadi Mohamed Naim:
Dean of Islamic Business School UUM and one of the Shariah Advisory Council for Central Bank of Malaysia.
- v. Other experts on cryptocurrencies and Shariah.

The semi-structured interview method used in this research is more flexible and since it is not only useful for researchers to re-examine the question, even the semi-structured questionnaires listed first also enable further questions to be followed for more information. In other words, some spontaneous follow-up questions during interviews using the semi-structured interview protocol allow researchers to ask questions based on respondents' responses to previous questions.

The interview session made with the academic experts provides deeper information on matter that requires further clarification such as the real definition of money as a medium of exchange and the possibilities of cryptocurrency to be used as the alternatives. Through the information gathered by the interviews, both objectives are achieved which are to analyze the real definition of money as the medium of exchange and the suitability of cryptocurrency to become the alternative, and to investigate the views of Shariah towards the cryptocurrency on its uses as the currency and the medium of exchange.

3.4 Data Analysis and Interpretation

Wolcott (1994) states the term analysis is a generic term that embraces the three basic categories when analyzing data: description, analysis and interpretation. Once the data was received, and then transcribed, it was then coded, analysed, interpreted and verified. The reading of the data to follow the criteria to inclusion on the database, leads to initial interpretation and understanding of the concepts, and it depends on the researcher, the analysis can begin while collecting data (Marshall & Rossman, 2006).

The process of transcribing the data can help us to understand more on what the respondents give their answers. It is the part where we need to keep listening and read repeatedly to the answer given by them. When all the data are fully transcribed, then the coding part will begin. The codes applied are keywords, which are used to categorize or organize text and are considered an essential part of qualitative research (Sarantakos, 1998).

After the coding, the process of analyzing data will be started. It was then categorized and organized into themes related with their group of respondents. The themes then assigned into a specific code accordingly. The next step is to interpret it. This stage involved the interpreting of data that was identified within the themes throughout and highlighting any similarities and differences in data. The last stage is then, verifying the data. This process involves a process of checking validity of understanding by rechecking the transcripts and codes again, thus allowing the researcher to verify or modify hypotheses already arrived at previously (Sarantakos, 1998).

3.5 Conclusion



As for the conclusion, this chapter is focused on the method to collect the data for the research and analyze it in order to get the finding. It has been carefully elaborated in forms of the set of rules for the procedures to conduct this study. This qualitative research involve the documentation research through analyzing any documents related with this study and interview method. It is also use to find the latest article regarding this matter. Finally yet importantly, the interview method is the complementary for both method mentioned earlies as it can derive the information taken from the respondents whether on their knowledge of Shariah, or their knowledge on cryptocurrencies. The results for the analysis led to the achievement of both objectives of this research.

CHAPTER 4:

ANALYSIS AND FINDING

4.1 Introduction

This chapter will analyze the response towards the interview taken and from the documentation research. It will be divided into two divisions of analysis based on the objectives in this study. First, analyzing the real definition of money as the medium of exchange and the suitability of cryptocurrency to become the alternative of fiat money. The second objective is to know the Shariah views on cryptocurrency as a currency and the medium of exchange.

The main purpose of this chapter is to reveal and disclose the relation of fiat money's characteristics with the cryptocurrency. Therefore, it will be a revelation for those who really attach with the cryptocurrency without knowing its real characteristic. However, the results may relate with the second objective of its relationship with Shariah. Thus, it is important to know the real basic of something in order to know the relationship with the next level of information.

4.2 Analysis on Relationship of Cryptocurrencies with Shariah

Maqasid Shariah is the purpose or meaning required by *syara'*. There are three level priority in maqasid, which are the necessities (*dharuriyyat*), the needs (*hajiyat*) and the complementary (*tahsiniyyat*). According to one of the respondent, either the cryptocurrency can be use as the alternative of money or as a valuable items from the perspective of *syara'*. From the perspective of *syara'*, either it can be trade or not.

The necessities (*dharuriyyat*), the needs (*hajiyat*) and the complementary (*tahsiniyyat*) all contain five categories of protection and preservation, which are:

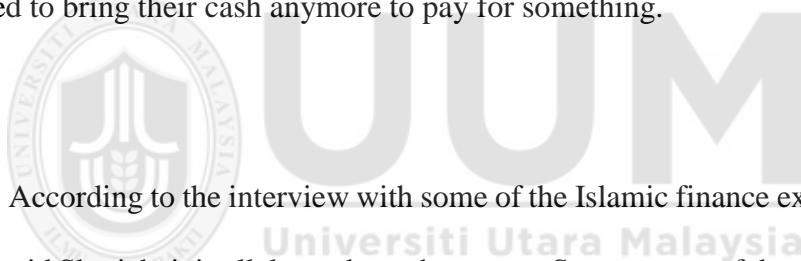
- i. Protection and preservation of religion (*ad-din*)
- ii. Protection and preservation of life (*al-nafs*)
- iii. Protection and preservation of dignity (*an-nasl*)
- iv. Protection and preservation of intellect (*al-aql*)
- v. Protection and preservation of wealth (*al-mal*)

It seems like this research might be fall in the category of protection and preservation of wealth. However, the relationship with it does not achieved. Then, it goes back to the three level of maqasid. The first level of maqasid, *dharuriyyat* cannot be achieved and the same goes with *hajiyat*.

On the third level of maqasid that is the complementary or *tahsiniyyat*, it may have the relationship with it in terms of the ways in which it facilitates transaction virtually. Malaysia does not prohibit cryptocurrency. The same situation goes with

wine and gambling. However, the customers need to bear their own risk as all of them contain a very high risk of consequences. Many scholars have stressed that it is based on *saddul zarai'*, preventing the wrongdoings (*mungkar*) from entering the society, which may lead to *riba* (interest), and illegal transactions.

On the discussion of *tahsiniyyat*, it falls under the preservation of wealth (*al-mal*). As the *tahsiniyyat* is shown that by practicing this *hukm*, we are completing the practicing of Islam. It a complementary that cryptocurrency can make it easy to involve in any transaction as it is only need to bring the e-wallet that is installed in the mobile phone. By using cryptocurrency, it can be convenient towards individuals as they do not need to bring their cash anymore to pay for something.



According to the interview with some of the Islamic finance expert, in the term of maqasid Shariah, it is all depends on the owner. Some owner of the cryptocurrencies might fall into the level of *dharuriyyat*. For an example, he works in a company that sell and trade the cryptocurrencies. In order to work there, he must buy the coin to do the transaction for example. Therefore, for him, it is *dharuriyyat* for him to own the coin. On the other hand, some other people might falls into the level of *hajiyat* and *tahsiniyyat*. Maybe for the owners to own it are just the complementary. They got some extra money, so they decide to do some investment in the cryptocurrencies. It can be shown by an analogy for a car. Some people might be obligatory for them to own a car as they have their family, and they need to use for their work or maybe sending their children to the school. However, some people might not need the car, they just use the

motorcycles or maybe public transport. So, the maqasid for cryptocurrencies is depends on the individual either he falls into *dharuriyyat*, *hajiyat* or *tahsiniyyat*.

The discussion on bitcoin mostly ranges from the following:

- i. The ignorance of the source that is not known who the creator is.
- ii. Doubts to the currency's future.
- iii. The absence of the issuer, or the party that can guarantees its value.
- iv. There is no regulatory body or the legislator.
- v. It have a great speculation and a lack of stability that is related to the value.
- vi. Its usage are more towards illegal activities.
- vii. Unsure the element of wealth, value and price on the bitcoin.

On the same time, there are two different views of scholars towards one of the cryptocurrencies, which is bitcoin. The first view is that it is necessary (*harus*) to use bitcoin. They agreed that bitcoin got value, price and can be benefited according to *syara'* (*mutaqawwim*). Their basis are:

- i. The original *hukm* is necessary unless there are argument (*dalil*) to prohibit it.
- ii. Bitcoin is *mal mutaqawwim* because of the reality is that it is valuable.
- iii. Bitcoin can be alternatives to real money even though any government does not issue it. There is no basis that forbids money being issued by individuals or others.

Due to the views, it deny the negative perception that the price is not fixed as the situation also applied to fiat money and stocks. It does not interfere with the existence of bitcoin's value. The other perception is on the absence of the issuer. The absence of its manufacturer or supplier does not affect the value of bitcoin because of bitcoin depends on the modern technology. This factor does not affect the general law over the necessity of using bitcoin.

The second view says that bitcoin is prohibited (*haram*) on the basis of the same ranges of discussion as the first view. In a statement from an Islamic Economic Forum, all those basis of the discussion contain four main bases:

- i. *Gharar* (uncertainty), *jahalah* and gambling.
- ii. *Saddul zarai'* as it leads to usury and illegal trading.
- iii. It is not *mal mutaqawwim* from the perspective of *syara'*.
- iv. Some scholars give their view that prohibited is more *al-ahwat*.

Shariah on Bitcoin/currency refers to usury while the country's concern on Bitcoin is from the point of stability, how it can be absorbed in the economy, fiscal effects and so on. Bitcoin is submissive from the Shariah point but it may negatively influence money laundering, leakage and unhealthy activities to the country. It may have a big impact if it is not well regulated.

4.3 Definition, Functions and Characteristics of Money

Currency is referring to money in any form including paper notes and coins. A government issued it and the money will be circulate within an economy. The money used as the medium of exchange especially for trade. Basically, any item that is generally accepted as the medium of exchange of goods and services can be regarded as money.

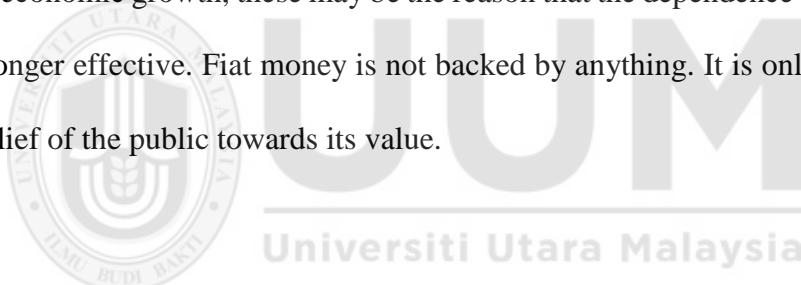
There are several functions of money. The first function of money is as a medium of exchange. It has been used as the intermediary for the purchase of goods and services. The second function of money is to store value for the future use. To be used as a value keeper, it needs to have its own value and can be referred to. The value cannot be change frequently. By that, it will holds the value for a period and can be referred. The last function is that money as a unit of account. It is necessary to determine and know the value of an item, so that the process of transferring the ownership can be carried out effectively.

In order to meet all these three functions of money, there are five characteristics of money to be fulfilled:

- i. Durable – Its value must be stable and the money cannot be easily broken, destroyed lost its structure.

- ii. Not easily reproduced by people – Since the government issues the produce of money, so that its production can be controlled so it will be relatively scarce.
- iii. Generally accepted – Money has its own value or issued by government.
- iv. Portability – It can be easily carried to anywhere.
- v. Divisibility – The value need to be able to divide into smaller units.

Since around 1971, paper notes or mostly known as fiat money was created. However, this paper notes does not back up by gold and silver. Since there are limited amount of gold and silver generated from mining and because of wanting to propel economic growth, these may be the reason that the dependence on physical gold is no longer effective. Fiat money is not backed by anything. It is only based on faith and belief of the public towards its value.



4.4 Definition of Cryptocurrency and the Difference with Currency

Cryptocurrency is defined as a virtual or digital currency in which an encryption techniques called cryptography is used to regulate the control the generation of new units of currency and to secure the transfer of funds. Nevertheless, cryptocurrency does not issued by any authority and government. It is mostly founded by an individual like bitcoin for an example. Therefore, the basic characteristic of money does not fulfilled by cryptocurrency.

When a transaction occurs, the blockchain first verifies it, then executes and records the transaction.

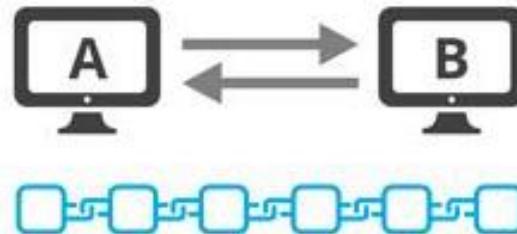


Figure 4.1 Transaction of Blockchain Technology

However, there are steps to understand cryptocurrency, which are blockchain, block, cryptocurrency, mining and miner. First thing that need to be clarify is on the blockchain technology. Blockchain is a technology that allows the movement of bitcoin from one person to another. Just as if a money transferred through bank transfer and the bank will record all the transfer occurs blockchain also has its own list of record and public ledger called block. Every block in the blockchain contains the record of transaction. To easier to understand about blockchain, their job is when a transaction occurs, they will first verifies it, and then they will executes the transaction and records it. Figure below shows the ledger of the transaction called block.

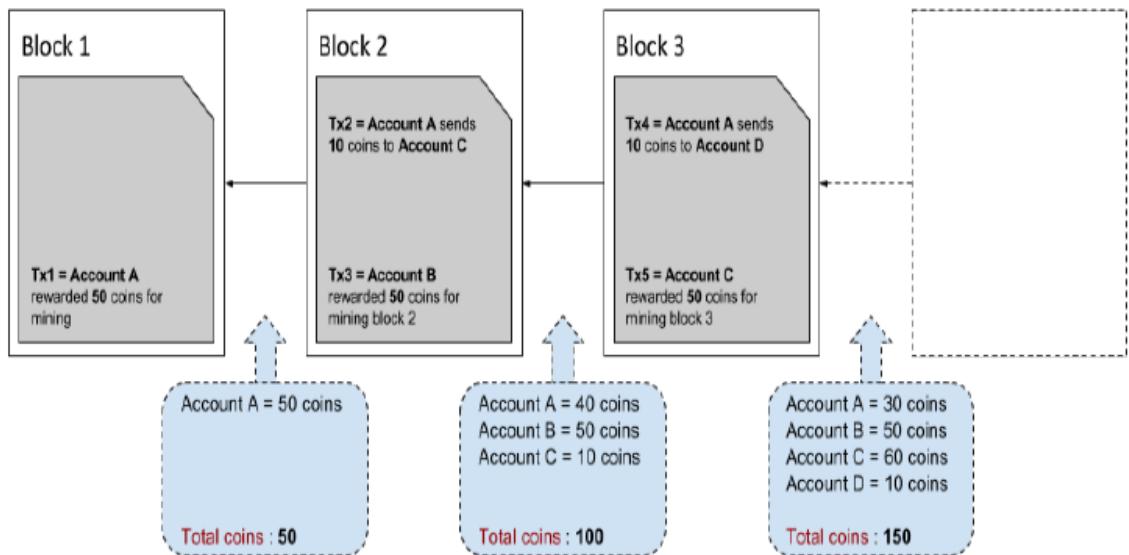


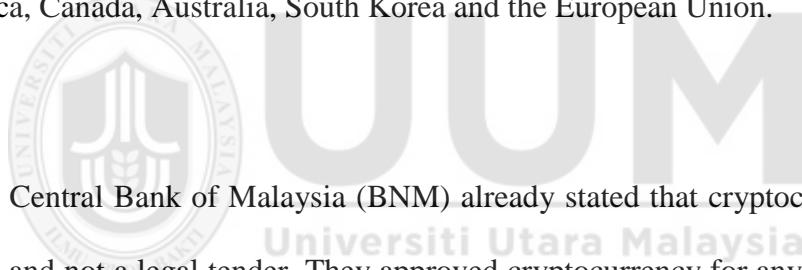
Figure 4.2 Blocks of Blockchain also can be referred as Public Ledger

While for cryptocurrency, it operates on the blockchain technology and can say that it can be the same as the real money that is operates as a medium of exchange. It use an encryption technique named cryptography to secure the transactions and control the generation of the units of currency. However, cryptocurrency does not has intrinsic value, which means the real value of the object used as the money. For an example, a gold coin, it serve as a money as it represent a value. On the other hand, if there are an inflation occurs, the gold value on the coin itself maintain and that is what is called intrinsic value. The other thing that need to be considered is that cryptocurrency does not has physical form. Since it is a virtual currency, so it only existed on network.

Since blockchain is a public ledger for all the transaction occurs in one of the cryptocurrencies which is bitcoin. The person in charge for it is called miner. They used a term called mining to get the bitcoin. Its function is to validate the transactions. To keep the bitcoin network secure, all that miners need to do is to approve the

transactions. It is important to mine the bitcoin as it keeps the bitcoin network safe, stable and secure.

According to the respondents, the cryptocurrency is different with currency in the term of its characteristics. Fiat money is more to work as a medium of exchange and it was authorized and gazette as a legitimate law. Any countries used fiat money as the medium of exchange while cryptocurrency does not accepted by all countries. Even Malaysia does not accept it even though there are some insistence from the inside and outside so that the cryptocurrency is legalized. There are some countries accepted cryptocurrencies especially bitcoin as a medium of exchange like the United States of America, Canada, Australia, South Korea and the European Union.



Central Bank of Malaysia (BNM) already stated that cryptocurrency is not a money and not a legal tender. They approved cryptocurrency for any transaction, but not as the currency. It is mostly serve as a value keeper, nearly the same as in investment. However, the investor needs to keep their own risk as the high-risk characteristic in cryptocurrency. It is required for the company that manage the transaction of cryptocurrency to disclose everything with their customer. This is because it is feared that the value might fall sharply as happened before, from 1 Bitcoin equivalent with nearly 20,000 USD, to around 6,000 USD only.

On the other hand, cryptocurrency does not have the characteristics of money. Those characteristics are durability, not easily reproduced by people, generally accepted, portability and divisibility. From all these characteristics, cryptocurrency

does have only one characteristic, which is portability. The currency can easily carry to anywhere. Nevertheless, in Malaysia, not so many shops accepted this kind of currency. The reason is due to the risk and this country itself does not fully authorized the used of bitcoin as an alternative to the real money.

We can learn that, there are many types of cryptocurrencies and every coins meets different characteristics of the real money. Most of the cryptocurrencies does meet the characteristics of the real money. However, regarding one of the characteristics, which is generally accepted, yes every single types of cryptocurrencies are accepted. But only some countries like Japan, German, Canada and Brazil are accepting one of the types of cryptocurrencies which is Bitcoin. On the other hand, countries like Bangladesh, Japan, Thailand, Iceland and Egypt banned the uses of Bitcoin in their countries.

4.5 Conclusion

The characteristics of money does really play an important part to determine the place of cryptocurrencies in society. It has been the basis of the function of money in every country ever since. Cryptocurrencies mostly carries all the characteristics of real money. However, only a characteristic does not met by the certain countries. On the other hand, according to Shariah perspective, it does contains some issue like *gharar* and *sarf*.

CHAPTER 5:

CONCLUSION AND RECOMMENDATION

5.1 Introduction

This final chapter will summarize and concludes this research, which obtained from the previous chapter. It will point out every single point precisely. After that, this chapter will provides the recommendation and suggestion based on the research findings for further research.

5.2 Research Summary and Findings



Based on the research, the purpose is that to point out about the cryptocurrency's characteristics whether it is comply with the currency or money's characteristics. On the other hand, by accomplishing the first purpose, this research can see whether cryptocurrency does accompany with maqasid Shariah or not. In order to meet these purposes, two objectives had been offered. The first objective is that to analyze the real definition of money as the medium of exchange and the suitability of cryptocurrency to become the alternative of money. The second objective is that to find out how Shariah views the cryptocurrency as the currency or as a medium of exchange.

According to Central Bank of Malaysia (BNM), cryptocurrency is not a legal tender. They already stated clearly on this. However, according to Zaharuddin (2018), bitcoin can also be considered as money even if it is not a legal tender. But in this case, Malaysia does not approve bitcoin as a medium of exchange. Even several countries like Egypt and Indonesia already banned bitcoin from their country. There are some several reason that this country approved the transaction involving bitcoin, but the customers must bear their own risk. The risk is that it might burst as a bubble. It rises its value in a short time, but in the end, it burst out. The value decreasing rapidly and cause a massive loss. It is necessary to own bitcoin only if for transaction purpose only because there are some shop accepted bitcoin as a payment.

Besides that, there are some issues regarding bitcoin. It is at risk being a scammers' tool like the modus operandi on quick-money scheme based on gold. People might attracted to buy bitcoin since the value rising up rapidly. But they don't realized that it is not backed up by anything like the gold dinar is backed up by a real gold. It is also likely to be used as a source of payment for criminals who want to pass the government security measure while transacting the money. Hence, it may make the authorities concerned and worried about the risk of digital currency might involve with crime. Besides, bitcoin also called as a speculative asset with an unstable value. It needs some times to become more stable and because of that, it is very high in risk.

By conclusion, bitcoin or cryptocurrency can fall into a must and it is legitimate side of Shariah. However, it is subject to the law of *riba*. Bitcoin needs to be exchanged with other currencies by spot or within two days (two days is the normal time for due

diligence procedures, currency source verification and other validation processes). It is illegal to convert Bitcoin to another currency on a delayed basis.

Cryptocurrencies is a digital currency that can be used to transact online. One of the cryptocurrencies is Bitcoin. Bitcoin is a currency not regulated by any country. Compared to other currencies, Bitcoin has some advantages, among which is that it can be sent anywhere via the internet without the need for a bank, and this results in a low cost transaction. Bitcoin transactions are also unconditional and have no limit to money transfer.

In particular, this bitcoin has two functions of its use as a medium of exchange and commodity tools. Its use as a medium of exchange is because it has characteristics as a currency because it is accepted as a means of payment (in its community) and its value is maintained through its limited number of publications or by supply and demand. However, it is not a legitimate and official currency because it does not have the authority to issue and regulate, manage circulation and distribution, assure authenticity, and maintain its exchange rate and all such functions are performed by the unclear system.

Islam has called for the publication and distribution of money to be governed by the government so that economic conditions in a region can be controlled. This is because the issue of money and the determination of the number are matters related to the welfare of the people, whereas being irresponsible in the issuance of money will bring great harm to the economy of the people and its *maslahat*. Therefore, in Shariah

perspective, Bitcoin's publication as a currency, the use of bitcoin and its distribution is something that should be avoided as the bitcoin itself has elements of *maysir* and *gharar* in the practice sales of bitcoin. Moreover, it has a lot of harm from the benefits. For now, there are still many currency options that can be used normally to make a valid transaction tool.

Transactions using cryptocurrencies are actually much different from real-world transactions, where the differences are just objects and functions. The sale of cryptocurrencies is a trade that the trading object is the coin itself. However, this is very risky because the coin is in fact are not visible. Anyone who has more coin can sell it at a price at his will, and of course this makes anyone that have control on it or have many coins can control the price possibly by speculation. If that happens then the practice can be said as *maysir* as there is a gambling factor in the trading of cryptocurrencies.

Overall, the rules and regulations relating to transactions between parties using cryptocurrencies, which are *ijab* and *qabul* and objects on the sale of the coin in the virtual world, can be fulfilled. However, there are elements of validity of the contract that cannot be fulfilled in this coin transaction. Among them is that it contains *gharar* in the object of the *akad*. If an agreement does not meet the terms of the contract, then the contract is invalid, and the contract with the cryptocurrencies is included in the *fasid* (corrupt) contract. There are still many other payment instruments that are legitimate and there is still much jobs and ways to acquire property in a *halal* and *thayyib*.

5.3 Recommendations

In order to use cryptocurrency, people tends to use the *hukm* of necessary to use it without further their reading on this matters. The *hukm* necessary only for some situations:

- i. It should have been approved or authorized the use of cryptocurrency as the medium of exchange, only if there are not prohibited by the country.
- ii. To keep the value after a thorough self-assessment for all the risk associated with it.
- iii. Used as a medium of exchange for the purchase of real goods.
- iv. As a hedging function to reduce the cost of currency exchange for the importers and exporters of real commodities.
- v. Make sure the *gharar* is minimized for trading places and the company handle the transaction of cryptocurrency must be a valid and registered company.

Most of the research are done towards bitcoin as it become as one of the most sought after cryptocurrency. There is possibilities those other types of cryptocurrencies might have different outcome as bitcoin. The view that requires bitcoin does not mean promoting bitcoin purchases. It is merely a discussion of its imperative without denying the right of the government to set its foundations.

The other recommendation that can be used is that the used of gold coins. After dealing with a variety of questions in the use of cryptocurrency, now in search of

alternatives to find the best currency to use in the current economic environment, a good currency must meet all characteristics of money. Accordingly, the appropriate currency for being recommended is a gold-coin standard.

Gold-coin standard is a currency that uses gold and silver as currency. It does not use 100% gold reserve because it will limit the creation of credit. To enable the credit creation of the system instead, it will only use a fractional reserve along with the remonetization of both gold and silver. Its implementation is also in line with the central reserve system that will issue banknotes, which in the economy will be simultaneously use gold-coin and central banknotes. This approach is named as a parallel financial system. The choice is also open to individuals whether to use gold coins or central bank notes.



REFERENCES

Ab. Latif, M. (2003). *Pengantar Syariah dan Teori Fiqh*. Kuala Lumpur: Pustaka Salam.

Abd. Jalil, B. (2002). *Pengantar Perundangan Islam*. Johor: UTM Press.

Adam, Faraz (2017), *Bitcoin: Shariah Compliant?*, Retrieved Apr 9, 2018, from <http://darulfiqh.com/wp-content/uploads/2017/08/Research-Paper-on-Bitcoin-Mufti-Faraz-Adam.pdf>

Ahmed, H. (2011). *Maqasid Al-Shariah and Islamic Financial Products: A Framework for Assessment*. ISRA International Journal of Islamic Finance, 3(1), 149–160. https://doi.org/10.1142/9789812569394_0005

Al-Qaradhawi, Yusuf (2007), *Fiqh Maqasid Syariah: Moderasi Islam antara Aliran Tekstual dan Aliran Liberal*. Jakarta Timur: Pustaka Al-Kautsar.

Asmadi, M.N. (2018), *Bitcoin dan Analisis Pandangan Fiqh Islam*, Paperwork for Majlis Agama Islam Kelantan.

Asyraf Wajdi Dusuki, Nurdianawati Irwani Abdullah. (2007). *Maqasid al-Syariah, Maslahah and Corporate Social Responsibility*. The American Journal of Islamic Social Science, 24(1), 25–45.

Auda, J. (2008), *Maqasid al-Shariah: A Beginner's Guide*. United Kingdom: The International Institute of Islamic Thought.

Auda, J. (2010), *Maqasid al-Shari'ah as Philosophy of Islamic Law: A Systems Approach*. Petaling Jaya: Islamic Book Trust.

Azila, A.S., Alias, A., Norimah, M.D., & Nur Amilin, M.K. (2017). *The Philosophy of Maqasid Al-Shari'ah and its Application in the Built Environment*, Retrieved on May 3, 2018, from www.jbete.com/wp-content/uploads/2017/05/JBETE2_115.pdf.

Birch, D. G. W. (2015). *What Does Cryptocurrency Mean for the New Economy?* In *Handbook of Digital Currency: Bitcoin, Innovation, Financial Instruments, and Big Data* (pp. 505–517). <https://doi.org/10.1016/B978-0-12-802117-0.00025-4>

Brown, S. D. (2016). *Cryptocurrency and criminality*. The Police Journal, 89(4), 327–339. <https://doi.org/10.1177/0032258X16658927>

Buang, A. H. (2016). *Penggunaan Maqasid Al-Syariah Dalam Fatwa Muamalat Di Malaysia : Kajian Literatur*. Journal of Shariah Law Research, 1(1), 1–18.

Burn-Callander, Rebecca (2014), *The History of Money: from barter to coin*, Retrieved Apr 9, 2018, from <https://www.telegraph.co.uk/finance/businessclub/money/11174013/The-history-of-money-from-barter-to-bitcoin.html>

Gandal, N. & Halaburda, H. (2014). *Competition in the Cryptocurrency Market*. Retrieved on Apr 4, 2018, from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2501640

Grinberg, R. (2012), *Bitcoin: An Innovative Alternative Digital Currency*, Retrieved Apr 13, 2018, from <http://www.cs.ucsb.edu/~rich/class/cs293b-cloud/papers/bitcoin.legal.pdf>

Islahi, A. (2010). *Maqasid-e Shariat (Objectives of the Shariah)*. Islamic Economics, 23(2), 235–244. Retrieved from http://www.kau.edu.sa/Show_Res.aspx?Site_ID=121&Lng=EN&RN=58972

Kamali, M.H. (2008), *Maqasid Al-Shariah Made Simple*. United Kingdom: The International Institute of Islamic Thought.

Kumar, S., Krishna, S., Nisar, N., & Raina, E. C. K. (2017). *Survey Paper on Cryptocurrency*. International Journal of Scientific Research in Computer Science, Engineering and Information Technology, 3(3), 307–310. Retrieved from <http://ijsrcseit.com/paper/CSEIT172334.pdf>

Lahsasna, A. (2010), *Q & A in Islamic Finance (Second Edition)*. Kuala Lumpur: CERT Publications.

Lee, D. K. C., Guo, L., & Wang, Y. (2018). *Cryptocurrency: A new investment opportunity?* Journal of Alternative Investments, 20(3), 16–40. <https://doi.org/10.3905/jai.2018.20.3.016>

M.D. Sani1, S. Arfah2, A. K. M. M. and A. A. (2013). *Fractional Reserve Banking and Maqasid al-shariah: An incompatible Practice*. Journal of Humanity & Islam, 3(1), 1–8. <https://doi.org/http://dx.doi.org/10.2139/ssrn.2071164>

Marr, Bernard (2017), *A Short History of Bitcoin and Cryptocurrency Everyone Should Read*, Retrieved Apr 15, 2018, from <https://www.forbes.com/sites/bernardmarr/2017/12/06/a-short-history-of-bitcoin-and-crypto-currency-everyone-should-read/>

McLeay, M., Radia, A. and Thomas, R. (2014), *Money in the Modern Economy: An Introduction*, Retrieved Apr 18, 2018, from <https://www.bankofengland.co.uk/-/media/boe/files/quarterly-bulletin/2014/money-in-the-modern-economy-an-introduction.pdf>

Mohd Fikri, C.H. (2012), *Pengenalan Ilmu Maqasid Syariah*, Johor Bahru: Perniagaan Jahabersa.

Mohd. Kamal, O. (2015), *Hubungan Indeks Syariah dengan Pembolehubah Makroekonomi sebagai Indikator Pasaran Modal Islam*, Retreived Apr 19, 2018, from <http://umt-ir.umt.edu.my/xmlui/handle/123456789/5132>

Muhammad, M. (2017), *Shari'ah Analysis on Cryptocurrency: Bitcoin*, Retreived Apr 15, 2018, from <https://ifikr.isra.my/library/viewer2/10080>

Nafisiah, A. R. & Huzaimah, I. (2012). *Tasawwur Islam*. Selangor: Illi Publication.

Nakamoto, S. (2009), *Bitcoin: A Peer-to-peer Electronic Cash System*. Retreived Apr 17, 2018, from <http://www.bitcoin.org/bitcoin.pdf>

Narayanan, A., Bonneau, J., Felten, E., Miller, A., & Goldfeder, S. (2016). *Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction*. Princeton University Press.

Rahimin Affandi Abdul Rahim, Paizah Ismail, & Idris Awang. (2006). *Pendekatan Baru Maqasid al-Shariah Dalam Pengajian Syariah di Malaysia: Satu Analisis*. Jurnal Fiqh, 3(2005), 35–80. Retrieved from <http://myais.fsktm.um.edu.my/9582/>

Rosli, M. (2007). *Maqasid al-Syariah: Hikmah di sebalik Pensyariatan*. Shah Alam: Karya Bestari Sdn. Bhd.

Sanep, A. & Salmy, E.D. (2012). *Dinar Emas: Sejarah dan Aplikasi Semasa*. Bangi: Penerbit Universiti Kebangsaan Malaysia.

Seitz, E. (2017). What Is Money?, *Social Analysis*, 61(4). Retrieved Apr 18, 2018, from <https://www.berghahnjournals.com/view/journals/social-analysis/61/4/sa610408.xml>

Siti Zalikhah, M. N. et al. (2001). *Al-Syariah: Konsep dan Perundangan Islam Jilid 1*. Selangor: Percetakan Dewan Bahasa dan Pustaka.

Uthmani, M.T. (1998), *An Introduction to Islamic Finance*, Pakistan: Dar al-Isha'at

Vasek, M. (2015). *The Age of Cryptocurrency*. Science, 348(6241), 1308–1309. <https://doi.org/10.1126/science.aab2001>

Wan Mohd Nasir, W.A.B. (2011), *Maqasid Syariah: Cabaran dan Penyelesaian dalam Merealisasikannya*. Shah Alam: Telaga Biru.

Wan Mohd Nasir, W.A.B. (2012), *Maqasid Syariah: Objektif Hukum Hakam Islam*. Shah Alam: PSN Publications.

Wasyith, W. (2017). *Beyond Banking: Revitalisasi Maqāṣid dalam Perbankan Syariah*. *Economica: Jurnal Ekonomi Islam*, 8(1), 1. <https://doi.org/10.21580/economica.2017.8.1.1823>

Wray, L.R. (2012), *Introduction to an Alternative History of Money*, Working paper No.717, Levy Economics Institute

Xiaochao, Q. (2016). *Noncentralized Cryptocurrency with No Blockchain*. ArXiv:1404.4275v9, 1–9. Retrieved from <https://eprint.iacr.org/2014/330.pdf>

Yermack, D. (2013), *Is Bitcoin a Real Currency? An Economic Appraisal (No. w1947)*. National Bureau of Economic Research.

Zaharuddin, A.R. (2014), *Fiqh Kewangan Islam*. Batu Caves: PTS ISlamika Sdn. Bhd.

Zaharuddin, A.R. (2018), *Nota Ringkas : Bitcoin Dan Wang Virtual (Cyrptocurrency)*. Retrieved Apr 15, 2018, from <http://zaharuddin.net/senarai-lengkap-artikel/3/1046-nota-ringkas-bitcoin-a-wang-virtual.html>

Zamri Zainal Abidin, Rosli Mokhtar, & Fakhri Sungit. (2016). *Maqasid As-Syariah Dalam Indeks Syariah Malaysia*. Muzakarah Fiqh & Internasional Fiqh Conference, 22(November), 221–236. Retrieved from <http://conference.kuis.edu.my/mfifc/eprosiding/221-236-mfifc-2016.pdf>