

***FIQHI* THOUGHT OF PRICE VOLATILITY IN CRYPTOCURRENCY**

Mohd Shahid Mohd Noh*

ABSTRACT

Cryptocurrency gains the popularity among digital investors almost in a decade. Starting with bitcoin or BTC as a pioneer coin in the crypto market, today there are more than five thousand different coins are being traded at every second worldwide. The acceptance among giant companies and countries had shown positive trend that this new asset class might have a bright future. Replacing fiat currency as main currency is a possible even there are too many hurdles and challenges to be solved but to be treated as an investment mode could be accepted in today's situation. This paper aims to seek a clarification on how Shariah ruling in trading crypto asset, is it Shariah compliant? or at least Shariah-friendly especially when the digital asset always been criticized for being too volatile in their prices that deemed as gharar. As a result, cryptocurrency in general is a legal asset to be traded from Shariah view even it vulnerable to price volatility due to clarity of the transaction, market factors that create the prices and for security purposes. Besides, the

* Senior Lecturer, Department of Shariah and Economics, Academy of Islamic Studies, University of Malaya. Shahid82@um.edu.my

trade does not contain any riba element, gharar and maysir also involve in prohibited business.

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INTRODUCTION

October 2008 world had witnessed a new digital asset or electronic cash released by Nakamoto, known as a founder of Bitcoin or BTC. Since that date, the coin had attracted debates and research among all shareholders and the media. Some of the governments such as India, Japan dan European Union had embarking in regulating the policies for this cryptocurrency since its relations with another financial assets started to be tracked in the market and potentially could create new challenges for banking and monetary system.¹ So far, the investment amount on this emerging digital coin had reached trillion dollar.²

From the view of researchers, there were numbers of research themes had been carried out so far, for instance, return volatility, hedging capabilities, price clustering, transactions costs, relationship between crypto and other financial assets and so on. As a new innovation in financial atmosphere, it would definitely attract traders to involve in the business at the meanwhile researchers will explore from various corners to understand the behaviors of this digital currency. From Shariah perspective, Egypt Grand Mufti had forbidden the Bitcoin (BTC) for reasons of cheating, fraudulence and ignorance.³ In Malaysia, Mufti of Federal Territory also concludes that the coin could function as investment asset and not fit enough to replace fiat money as

¹ N. Karp, M. Nava, B. Stacey, C. Cuesta, O. Gouvela, A. Neut. (2013). Bitcoin: A Chapter in Digital Currency Adoption. *Economic Watch Global*. Retrieved on September 2021 from https://www.bbvaresearch.com/wp-content/uploads/migrados/130731_EconomicWatchEEUU_Bitcoin_tcm348-398292.pdf.

² Refer to <https://coinmarketcap.com/> on November 2021.

³ <https://www.bbc.com/news/world-middle-east-42541270>

main medium of transaction.⁴ In addition to the fatwa, recently, The Fatwa Committee of Perak State had endorsed the legality of cryptocurrency as medium of payment as well as store value mechanism with several stipulated conditions.

As a response for such innovation from legal framework, Bank Negara Malaysia (BNM) collaborated with Securities Commission Malaysia (SC) had took some initiatives in developing policies and regulation related to this digital asset market aiming to facilitate responsible innovation at the same managing arising risks from this incipient sector.⁵ Prior to that, SC Malaysia and Bursa Saham Kuala Lumpur also had practiced benchmarking for Shariah compliant securities for more than years with several time of amendments as an effort to provide opportunities for investors in Shariah compliant activities, centralized Shariah decisions at Malaysia level and promote the development of Islamic investment instrument towards the building of competitive of Islamic Capital Market.⁶

OBJECTIVE AND METHODOLOGY

This paper aims at elucidating Shariah view on the status of cryptocurrency trading. The critics on this digital innovation also been considered where some scholars argue that the currency is merely speculative in nature, at the meanwhile there are also number of scholars who accept the currency as trading mechanism only but not to replace fiat money's roles.

Using content analysis approaches from the secondary sources like *fiqhi* books, articles as well as contemporary scholars' opinion related to the topic discussed. Several themes from *fiqhi* discussion had been deployed as benchmarking process namely *bay'*

⁴ <https://muftiwp.gov.my/en/artikel/bayan-linnas/2773-bayan-linnas-153-hukum-penggunaan-mata-wang-bitcoin>

⁵ <https://www.bnm.gov.my/-/bnm-and-sc-s-joint-response-on-policy-confusion-over-cryptocurrencies->

⁶ "Shariah Screening Methodology." Bursa Malaysia, accessed September 7, 2021, https://www.bursamalaysia.com/trade/our_products_services/islamic_market/shariah_governance/shariah_screening_methodology

manfa'ah, '*urf*, *maalat al-af'al*, *bay' al-darohim al-magsyusyah* and *al-ghubn* as guidance in justifying Shariah status the subject studied.

PROBLEM STATEMENT

The critics that always been thrown to crypto is the absence of intrinsic value of the asset. Digital asset as we know really does not bear any intrinsic value since it is also free from any physical condition and appearances like gold or other metal and commodity. Cryptocurrency is not like another financial assets where many studies show that the correlation of cryptocurrencies vis a vis traditional assets are very low. Instead, they are suited to be portfolio diversifier to reduce risk from traditional assets.⁷

Trace Mayer, the BTC investor outlines seven network effects that give value to the coin, they are:

- a) Speculation whereby every dollar traded in BTC will add its value.
- b) When a new merchant starts to accept BTC it may increase the value.
- c) When consumer can buy something using BTC the value will increase.
- d) When the three effects above take place, incentives of miners and nodes will increase.
- e) When the moat surrounds BTC increase the value also will increase.
- f) When financial products such as options on crypto and insurance are created it may add the value to the network.
- g) When any fiat currency collapse crypto will get the value increment as happened in Venezuela and countries in Africa.⁸

⁷ Bariviera, Aurelio F., and Ignasi Merediz-Solà. "Where Do We Stand in Cryptocurrencies Economic Research? A Survey Based on Hybrid Analysis". *Journal of Economic Surveys* 35, no. 2 (2021): 377-407.

⁸ Jake Ryan, *Crypto Asset Investing in The Age of Autonomy* (New York: Wiley, 2021), 99.

The services offered by cryptocurrencies considered same as fiat money had performed such scale of value, medium of exchange and store value. But, cost of fund transfer is getting lower and faster since the network is open to users 24/7. Contrast to fiat money, cryptocurrencies are not made with interests or dividends in nature, but profit margin is gained from the spread between buying and selling.⁹ However, Baur et al. (2017) decide that BTC usually used as speculative instrument instead of medium of exchange and alternative currency. Other than that, acceptance of cryptocurrencies globally also could affect the value of major fiat moneys where it could undermine people's trust towards monetary policy.¹⁰

From the economic perspective, cryptocurrencies economy deemed to replicate same effect as real-world economic environments. It supported by blockchain system (BSC) that allows the process of verification, storing, computation and information synchronization to be carried out.¹¹ If we see the roles enjoyed by BCS users such decentralized nature that makes the parties may access the same data, cryptography system that allows data to be tracked according to the hash values that link between the previous and descend blocks, consensus mechanism that ensures the security and immutability by coding transactions into block matched with cryptographic rules.¹²

⁹ Joe McKenzie, *The New Money How and Why Cryptocurrency Has Taken Over the World* (London: LID Publishing Limited, 2019), 15-17.

¹⁰ Baur, D., K. Hong and A. Lee. Bitcoin: Medium of Exchange or Speculative Assets?. *Journal of International Financial Markets, Institutions and Money* 54 (2017): 177-189.

¹¹ Dinh TTA, Liu R, Zhang M, Chen G, Ooi BC, Wang J., "Untangling Blockchain: A Data Processing View of Blockchain Systems," *IEEE Trans Knowl Data Eng* 30, no. 7 (2018), 1366-1385.

¹² Hald, K. S., & Kinra, A., "How the Blockchain Enables and Constrains Supply Chain Performance," *International Journal of Physical Distribution & Logistics Management* 49, no. 4 (2019), 376-397.

VALUING CRYPTO: BITCOIN CASE

Today, the market of cryptocurrency contains more than 5000 types of cryptos crossed with another types of coins that served more than 117 sectors and industries¹³ is not focused on Bitcoin (BTC) but the dominant crypto still control the biggest market portion. So, the discussion on cryptocurrency always been directed to BTC or vice versa where the topic of BTC represents all cryptocurrencies. In fact, not all crypto has similar features with BTC. Referring to Mufti Faraz (2017), BTC seemed fails to fulfil the role of money that eventually does not have *thamaniyyah*

due to several risks that associated with the coin like security risk, technological risk, money laundering risk, volatility risk, etc.¹⁴ Other than risk, the value also always the subject to be questioned since the volatility is quite high.¹⁵ Suwailim (2018) adds that *gharar* event could occur as early at Initial Coin Offering (ICO).¹⁶

In contrast with abovementioned argues, there are another counter argument summarized by Khoutem Ben Jedidia and Hichem Hamza (2021) the potential that could change the status of this digital coin and closer to be accepted as Shariah compliant asset by ensuring the free interest element of currency, more stability on the value and deployed actively on social interests by offering assistance in microfinance services instead of being controversial asset among public.¹⁷

¹³ Retrieved from <https://coinmarketcap.com/cryptocurrency-category/> on June 2021.

¹⁴ <https://afinanceorg.files.wordpress.com/2017/08/research-paper-on-bitcoin-mufti-faraz-adam.pdf>

¹⁵ Meera, A., "Cryptocurrencies From Islamic Perspectives: The Case Of Bitcoin," *Buletin Ekonomi Moneter dan Perbankan* 20, no. 4 (2018), 475-492.

¹⁶ Suwailim S., "About Crypto-Currencies," (Paper presented, Conference organized at University Muhammad Bin Saud al-Islamiyah on 14 August 2018).

¹⁷ Cointelegraph. (2017). "Is Bitcoin Halal? How Cryptocurrency Confirms with islam and Sharia," retrieved from <https://cointelegraph.com/news/is-bitcoin-halal-how-cryptocurrency-conforms-with-islam-and-sharia>

According to Jake Ryan (2021), the value of BTC is actually derived from the criteria as a digital coin. The idea of ‘antifragile gains from disorder’ that against the appearance of today’s financial market products such as CDO, CLO and CDSs where the complexity makes them more vulnerable to the fragile. Other criteria that keep BTC always in its value are provable scarcity, Unspent Transaction Outputs (UTXOs), multi-signature features, non-sovereign money and seizure resistant.¹⁸

David Lee and Linda Low (2018) supports the arguments why crypto eligible to gain demand with socioeconomic factors as follows:

- a) Asset allocators and fund managers started to allocate funds for cryptocurrencies.
- b) Governments are seeking centralized control to prevent fraud by adapting digital control mechanism via blockchain and cryptocurrencies.
- c) Notion of traditional banks seemed might not be able to achieve financial inclusion.
- d) Economic uncertainty contributed by high debt level and quantitative easing where many investors started to find alternatives.
- e) High operation cost claimed by prevailing financial services.
- f) Financial freedom enjoyed by crypto communities where the control from authorities is almost none.
- g) The idea of cryptocurrencies as hedging asset against fiat currency crisis.
- h) Using crypto tokens in digitise or securitise underlying commodities or real asset.¹⁹

Supporting by network effect and Metcalfe’s Law, crypto gains its value from the acceptance and participation of users in other words more people use and transact with the currency the higher value it could be.²⁰ BTC or crypto in general was proven

¹⁸ Jake Ryan, *Crypto Asset Investing in The Age of Autonomy*, 84-88.

¹⁹ David Lee Kuo Chuen and Lindo Low, *Inclusive Fintech Blockchain Cryptocurrency and ICO* (Singapore: World Scientific Publishing Co. Ltd., 2018).

²⁰ Jake Ryan, *Crypto Asset Investing in The Age of Autonomy*, 98.

negatively correlated with other financial assets like shares, bonds and properties (Baur et al., 2018). By having this, it had shown the real potential of BTC to be utilized for diversification and hedging purposes.²¹ Wu and Pandey (2014) find that BTC enhances return, standard deviation and loss profitability. Then, Dyhrberg (2016) proves BTC might be preferred by risk averse investors to hedge their funds when anticipating any negative circumstances for financial market.²²

The movement of cryptocurrency prices also shows same behavior to another financial asset where it could be influenced by internal and external factors. Supply and demand, crypto market, macro financial and also political decision could affect the price of crypto externally while transaction prices, incentive scheme offered by crypto, mining challenge and amount supply of the coin would be internal factors that determine their prices.²³

Even this coin or digital asset does not achieve fully acceptance to act as fiat money, it however receives remarkable trust in investment market that have approximately USD 1.6 trillion market capitalization till June 2021. After several years, crypto supported by blockchain system (BCS) not only had contributed to financial matters but also being a platform in transferring data, storing information and securitizing asset. This unprecedented innovation really has the potential to disrupt industries that are relied heavily on mediators and need vigorous governance.²⁴

²¹ Harry Markowitz *The Journal of Finance*, 7, no. 1 (1952), 77-91.

²² Dyhrberg, A.H., "Bitcoin, Gold and the Dollar: A Garch Volatility Analysis," *Finance Research Letters* 16 (2016), 85-92.

²³ Trubnikova, N. (2017). Russian Advertising Market: Relevant Indicators And Factors Of Current Development. *The EURASEANS: Journal on Global Socio-Economic Dynamics*, (4(5), 28-35. Retrieved from <https://euraseans.com/index.php/journal/article/view/50>

²⁴ Dudukalov, E. V., Geroeva, Y. A., Shtepa, M. A., & Ushakov, D.. (2021). The crypto currency as money of digital economy. *E3S Web of Conferences*, 244, 10021.

IS THE PRICE VOLATILITY LEADS TO *GHARAR* OR *MAYSIR*?

Gharar as defined by jurists is unknown affect from particular transactions. The analogies from prophetic tradition texts are *bay' mulamasah* or *munabazah* whereby the subject matter of sale could not be determined prior the conclusion of contract. In fact, scholars from various school of thought had defined *gharar* with different terms even the purposes and contents are almost identical. However, general definition for *gharar* seemed very simple and subjective such taking risk and uncertainty which is not so accurate and suitable if the term is used in explaining the nature of crypto investment. Therefore, Dr Yunur Rafiq al-Misri clarifies the term may not easily defined since the topic discussed such crypto and Blockchain could perplex readers and researchers with the complex information, furthermore the definition also might be perceived and understood differently from various layer of readers, whereby some of them may get clearer justifications while others are getting more confused.²⁵

Referring to the *fiqhi* discussion regarding '*gharar*', it is usually refers to something that unknown like selling flying bird or fish in pond,²⁶ whereby the possibility to catch them is very low. Entering the contract with the high probability to loss could be deemed as prohibited *gharar* and the expectation to gain profit only based on weak assumption.²⁷ Meanwhile, *maysir* defined by jurists as any action or game that associated with gambling whether for profit purpose or losing.²⁸ The act is not prohibited because of risk taking act only since taking risk is co-existence in human

²⁵ Rafiq Yūnus al-Misrī, *al-Gharar wa 'Adam al-Ta'akkud. al-'Azmah al-Māliyah al-'Alamiyah, Asbāb wa Hulūl min Manzūr Islāmī* (Jeddah: Markāz al-Nashr al-'Ilmī, 2009), 240.

²⁶ Daiban bin Muḥammad al-Daiban, *al-Mu'āmalāt al-Māliyah Iṣṣālāh wa Mu'āsirah*, vol. 2 (n.p.: n.p., 2011), 274.

²⁷ Husām al-Dīn 'Afanah, *Yas'alūnaka 'an al-Mu'āmalāt al-Māliyah al-Mu'āsirah* (al-Quds: al-Maktabah al-'Ilmiyyah Dār al-Ṭibb, 2009), 308.

²⁸ Ministry of Waqf and Islamic Affair of Kuwait, *al-Mausu'ah al-Fiqhiyyah al-Kuwaitiyyah*, vol. 39 (Kuwait City: Dar al-Salasil, 1428H), 404.

life but relied totally on luck distinguishes between good and bad from Shariah view.²⁹ Hence, crypto trading is an investment with skills and knowledges that allows trader to predict the future trend of particular coin in the market. Recognizes the pattern, judge correctly, skepticism, adaptability, self-evaluation, right crypto categorization and discipline are among common advice given by experts to traders that also indicate dealing with crypto always come together with knowledge of crypto movement analysis and so on.³⁰

There is opinion that says high risk sale that illustrates the high possibility of loss also considered as *gharar*. Apparently, the example of high-risk sale given by scholars is selling animal's womb where the womb's condition is unknown and entails expected uncertainty whether the womb will be delivered in perfect manner or in worst case scenario it may die before delivery and the loss is borne by the buyer.³¹ Contrarily, buying cryptocurrency normally done with purposes after forecasting the future's price or for 'buy and hold' as an investment strategy. Furthermore, buying crypto asset allows buyer to enjoy the ownership of the digital asset without having any uncertainty in possessing it through the mechanics of Blockchain that ensures transparency of transaction through its decentralized system. So, blaming cryptocurrency as *gharar* asset is deemed inappropriate since the analogical deployed in this case also not accurate.

Being more than 10 years in the market, cryptocurrencies had gained popularity not only limited among retail but also attracting big names and companies to invest in these coins. However, popularity does not mean investors are really understand the price's behavior across time.³²Offering investors with high returns

²⁹ <https://aliftaa.jo/Question.aspx?QuestionId=3434#.YL2mHvkzZPY>

³⁰ <https://bitvo.com/crypto-traders-are-made-with-soft-skills/>

³¹ Al-Bajī, Sulayman bin Khalaf, *al-Muntaqa Sharḥ al-Muwaṭṭā'*, vol. 5 (Qāhirah: Al-Sa'adah Printing, n.d.), 42.

³² King, T., Koutmos, D., 2021. Herding and feedback trading in cryptocurrency markets. *Annals of Operations Research* 300, 79–96.. doi:10.1007/s10479-020-03874-4

also comes together with high market volatility and potentially to speculative bubbles.³³

If the critics is more on the speculative nature that surrounds this asset where the volatility had taken place, share market also vulnerable to the such speculative as seen in the any stock market today. In fact, the volatility also contributed by internal and external factors as happened to another financial asset. For instance, BTC's price spike to the new highs amounted to USD 44,200 after the announcement of Tesla's CEO, Elon Musk to buy this digital asset.³⁴ However on 12th May, Elon had announced the suspension of selling Tesla's cars with BTC that witnessed the falls of several crypto's prices whereby the different between before and after announcement was quite significant.³⁵

Despite the bearish market experienced by cryptomarket since April this year, the digital market currently showing to restore its value in September after several months in shaky mood. The total market capitalization went back above USD 2 Trillion for the first time since last May.³⁶

Since price volatility in crypto market is beyond human and authority control, in reality it is generated by the system that relied on supply and demand mechanism. Hence, the method of *tas'ir* or ceiling price determination is not applicable. As explained by al-Qurtubhi, the authority should control the market price particularly the necessities by restricting profit regardless price movement for the benefit of consumers.³⁷ However, this idea may be argued due to exclusiveness of crypto asset where it not considered as necessities concurrently public interest still could be preserved.

³³ Fry, J., & Cheah, E.T. "Negative Bubbles and Shocks in Cryptocurrency Markets," *International Review of Financial Analysis*, 47 (2016), 343-352.

³⁴ <https://www.cnbc.com/2021/02/08/tesla-buys-1point5-billion-in-bitcoin.html>

³⁵ <https://www.cnbc.com/2021/05/13/bitcoin-btc-price-falls-after-tesla-stops-car-purchases-with-crypto.html>

³⁶ <https://www.nasdaq.com/articles/4-altcoins-to-watch-closely-in-september-2021-09-01>

³⁷ Al-Qurtūbī, Muḥammad bin Aḥmad bin Rushd, *al-Bayān wa al-Taḥṣīl wa al-Sharḥ wa al-Tawjīh wa Ta'līl li Masā'il al-Mustakhrajah*, vol. 9 (Bayrūt: Dār al-Ghurb al-Islāmī, 1988), 314.

CRYPTOCURRENCY AS LEGAL PROPERTY FROM SHARIAH VIEW

As we understood from the crypto's definition, even it uses the terms of currency or coin, it does not mimic the physical shape as its name. Crypto could not be held as another coin or fiat money issued by central banks. Nevertheless, the currency receives acceptance and demand globally due to its roles and functions. Hence, it could be perceived as usufruct or *manfaah*. Al-Sarakshi defines usufruct as an advantage derived from physical thing.³⁸ Meanwhile, Kuwait Encyclopedia of Jurisprudence defines usufruct 'advantages or benefit gained by using any particular thing or asset, for instance benefit of accommodation from renting house and car riding from renting a car.'³⁹ From both definitions we understood that usufruct normally associated with physical asset or item that benefitting human and others.

According to al-Juzairi, usufruct that allowed to be traded should have a value, the functions known by buyer also the usufruct is legitimate and accepted.⁴⁰ Based on the infrastructure of cryptocurrency that utilizes Blockchain system, it provides number of advantages through the system like decentralized system, transparency, security and so on. For instance, some of the cryptocurrencies provide utility services in facilitating cross border transaction such as Ripple. There are also several token types that consisted of commodity, or another tangible asset traded in the market. Daniel V. Boom (2021) expresses that most part of cryptocurrency is speculation in nature.⁴¹ Conversely, Michael J. Casey (2021) defines that speculation brought by cryptocurrency does not refer to negative connotation instead it is a feature in capitalist economy.⁴² The study carried out by Baur et al. (2018)

³⁸ Al-Sarakhsī, Abū Bakr Muḥammad Shams al-Dīn, *al-Mabsūṭ*, vol. 11 (Bayrūt: Dār al-Ma'rifah, 1993), 80.

³⁹ Al-Mawṣu'ah al-Fiqhiyyah al-Kuwaitiyah, vol. 39, 101.

⁴⁰ 'Abd al-Raḥmān, al-Juzayrī, *al-Fiqh 'ala Madhāhib al-Arba'ah*, vol. 3 (Lubnan: Dār al-Kutub al-'Ilmiyah, 2003), 102-104.

⁴¹ <https://www.cnet.com/features/beyond-bitcoin-the-wild-world-of-altcoin-cryptocurrency-trading/>

⁴² <https://www.coindesk.com/money-reimagined-crypto-speculation-is-a-feature-not-a-bug>

clearly stated that Bitcoin is most likely act as a speculative asset rather than alternative payment.

Noting to discussion above, trading in crypto market is not identical to involve in speculative activities whereby it may similar to people who uses any currency also vulnerable to act of speculators in financial market without their concern. The existence of speculators is a norm in every market in this world. But to judge the same consequences to traders or arbitragers as speculators is not really accurate.

Another consideration is right or *huquq* since cryptocurrency does not appear as physical fiat money where it defined by Sheikh Ali Khafif in his book, *al-Mulkiyah* (The ownership) as ‘mandate on intangible asset or item that resulted from the idea, opinion and contribution such authorship’s right for its effort in producing book that loaded with idea, artist’s right for his creativity in art or inventor’s right from his invention.⁴³

There was also critics on cryptocurrencies that do not contain any valuable item that allow them to be traded and merely relied on speculation. In this case, we could put this currency same as trading trademark or brand. As qouted from Syeikh Muhammad Taqi Usmani, trademark or company’s brand albeit it is only name without any intrinsic and usufruct is permitted to be traded since the name brings its own values, trusts and acceptance. He elaborates that after being registered as official brands, it is considered same as material item among traders approved by customary practices or ‘urf. Shariah approves this as legitimate thing due to the efforts given in establishing the brand from product’s quality to credibility of management team, without any doubt where ‘urf also plays significant role in accrediting any form of nonmaterial item to be legalized as Shariah compliant product.⁴⁴ This analogy also could be utilized for cryptocurrency trading where the name of any cryptocurrency is the push factor in trading where it shows

⁴³ ‘Alī al-Khafīf. *al-Mulkiyah fī al-Sharī‘ah al-Islāmiyah ma’a Muqāranah bi al-Sharā’i’ al-Waḍ‘iyyah Ma’naha Anwā’uha ‘Anāsiruha Khawāsuha Quyūduha* (Bayrūt: Dār al-Fikr al-‘Arabī, 1996), 12.

⁴⁴ Muhammad Taqī al-Usmani, *Fiqh al-Buyu’ Maktabah Ma’arif al-Quran*, vol. 1 (Karachi: n.p., 2015), 277.

the trust, security and protection that traders might get by buying, also profit or capital gain when selling the coin.

Looking crypto from another view, it could be used to the extent as medium of exchange as long as it receives users' acceptance and issued or approved by authority.⁴⁵ If we see the crypto market in comparison with another asset class such as share, derivatives or even money markets, the former one is still in its infant stage where just almost ten years of establishment while other markets were founded more than fifty years ago and experienced several turmoil and crises since its establishment.

Some of contemporary jurists give remarkable attention on the change of ages, times and places as dependent variable to the change of financial practices and related activities includes cryptocurrency. As world knows we are at the edge of Industrial Revolution 4.0 that witnessing till today robotic advances in replacing human roles especially in automotive industries. As part of that, supported with the growing penetration and accessibility of internet, cryptocurrency started to gain public acceptance either as utility purposes or trading mechanism. Furthermore, smart contract that utilizes Blockchain system also have been deployed in some e-commerce contract and crowdfunding that really incorporated with cryptocurrency. Reviewing particular fatwa due to the change of time, place and customary practice is acceptable as mentioned by al-'Izz ibn Abd al-Salam, al-Qarafi and Ibnu al-Qayyim.⁴⁶ Time and age in 20th century might be different compared to IR 4.0 century that seen computer or robotic power gains high trust compared to human roles in daily human activities. Asset management conducted by human now threatened by the rise of robo-advisor that perceived more accurate and profitable or at least competitive to human's intellect.

Trading cryptocurrencies within the market deemed as permissible at principle⁴⁷ and taking cryptocurrency as an

⁴⁵ Aḥmad Sa'ad 'Alī al-Bar'ī. "al-'Umlah al-Iftirāḍiyah al-Mushaffarah." *Jurnal al-Ifta al-Misriyyah* 39, no. 11 (2019), 12-119.

⁴⁶ Al-Sulamī, 'Iyād bin Namī, *Uṣūl al-Fiqh alladhi la Yasā' al-Faqīh Jahlahu* (Riyād: Dār al-Tadmūriyah, 2005), 473.

⁴⁷ <https://www.proshareng.com/news/-Blockchain---Cryptos/Cryptocurrency--An-Islamic-Law-Perspecti/56661>

investment asset also is acceptable which similar to commodity trading.⁴⁸ Utilizing the method of *maalat* as proposed by *Usul al-Fiqh* whereby calculating negative impact that might happen in the future, cryptocurrency - BTC in particular- is proven to be a good investment asset where it had gained hundred times increment value from the first day launching until today with clearly acknowledged bear and bull market prices. Yes, there is volatility in the prices across the period but in general investors enjoyed good price appreciation by buying this coin or BTC. However, the volatility did not affect all cryptos; rather, it primarily affected only dominant coins..Volatility of cryptocurrency market due to absence of authority control and 'super sensitive' to investor sentiment⁴⁹ could not be a good reason or 'illah to illegitimate the trading.

Considering *maalat* that associated with the principle of *sadd al-zara'i* or blocking the means to the harm consequences. Among the parameters of applying this principle is the harm should be highly expected to be realized to the extent of *zann*. Besides that, the harm also must be confirmed by its attributes and criteria.⁵⁰ In the meanwhile, volatility in crypto market is not considered as real harm otherwise it is only perceived as market movement or response to activities carried out by trader where it will be solved after certain periods.

Having hope, fortunate and unfortunate are normal consequences encounter traders in any business or investment regardless of the compliancy status and market.⁵¹ Taking risk in selling or buying something is a common in any trading and expecting profit without chance to loss is unaccepted in Islamic

⁴⁸ <https://themalaysianreserve.com/2020/10/07/investors-still-wary-on-cryptocurrencys-shariah-compliance/>

⁴⁹ <https://www.coindesk.com/crypto-markets-bitcoin-volatile-freedom>

⁵⁰ Al-Bayyumī, Aḥmad bin Muḥammad. *Sadd al-Dharā'i' 'inda al-Uṣūliyyīn wa Taṭbiqātuha fī Majal al-Qadāyā al-Ṭibbiyyah al-Mu'āsirah* 37, no. 11 Spring (2019), 184-291.

⁵¹ Salamon, Hussin, Mansoureh Ebrahimi, and Kamaruzaman Yusoff. "Speculation: The Islamic Perspective; A Study on Al-maisir (gambling)". *Mediterranean Journal of Social Sciences* 6, no. 1 (2015).

business transaction.⁵² The differentiation between speculation and taking risk is could only be determined by the intention hence trading the currency should not be prohibited due to the expected speculation by minority users only. In addition, cryptocurrency potentially replaces fiat money as medium of exchange, store of value and unit of account provided the amount of supplied crypto is adequate with market's demand.⁵³

Majority jurists agree that the conditions of subject matter in sale must be clean and not physically or dirty in nature, useful benefit, owned legally by the seller, capable to deliver the asset and its specifications known by the seller and buyer.⁵⁴

Another analogy from *fiqhi* discussion regarding buying fluctuated item in value is *bay' al-darāhim al-maghshushah* means buying fake coin of dirham that seemed worse than cryptocurrency trade. The most recommended opinion allows and accepts the trade due to the sale's purpose to utilize the coin in market as medium of change and not to gain from the physical of dirham that minted by silver. However, the high level of fabricated or fake item in coin may nullify the trade otherwise it is allowable.⁵⁵

By comparing *bay' al-darāhim al-maghshushah* with crypto coin, the former definitely been made for deception purpose while the latter created for their usage in the blockchain system or to facilitate other purpose as designed by coin developer. Second, *al-darāhim al-maghshushah* used and spread in the market while cryptocurrency only used in its circle and system by limited

⁵² Tawfik Azrak, and Hani Hazaa. 2021. "The Profit/Gain from Islamic Law of Contract Perspective and The Issue of Ownership Risk (Daman al-Milkiyyah)". *Journal of Islamic Finance* 10 (April):111–116.

⁵³ Ammous, Saifedean. (2016). Can Cryptocurrencies Fulfil the Functions of Money?. Columbia University, Center on Capitalism and Society, Working Paper No. 92, August 2016, Available at SSRN: <https://ssrn.com/abstract=2832769> or <http://dx.doi.org/10.2139/ssrn.2832769>

⁵⁴ Diyā' al-Dīn, Muḥammad bin Muḥammad Ibn al-Ikhwah, *Ma'ālim al-Qurbah fī Ṭalab al-Ḥisbah* (Qāhirah: Maktab al-'Ilām al-Islāmī, 1976), 111-116.

⁵⁵ Al-Nawawī, Abī Zakariyyā Maḥy al-Dīn Ibn Sharf, *al-Majmū' Sharḥ al-Muhadhdhab*, vol. 6 (Bayrūt: Dār al-Fikr, n.d.), 11.

users who knows and understands the behavior of that coin with information symmetry.

As far as the price volatility is concerned, *gharar* issue is not observed clearly in cryptocurrency. As we know, *gharar* means uncertainty on the subject matter or the price as two main pillars in sale contract while the trade in crypto market that equipped with decentralized system really made to avoid this kind of uncertainty where the system allows anyone to trace all transactions occurred through Blockchain system which considered fulfils the disclosure need in the contract.

For instance, if A wants to buy 2 XRP with the price of RM 40, he needs to transfer RM 40 through the exchanger platform in order to obtain 2 XRP together with the additional fee charged by platform provider.

The problem started to emerge when we relate the volatility of 2 XRP to fiat currency. The movement of price after sale contract had been concluded is not a legal reason that could nullify the previous contract. Even, if we may refer to *al-darāhim al-maghshushah* where scholars allow to deal with this kind of coinage albeit the purity of the content is suspicious and questionable provided buyer and seller aware with the conditions.⁵⁶

Khiyar al-ghubn also not relevant to price volatility issue whereby *al-ghubn* means trading with higher or lower price from market price with the ignorance of seller or buyer. However, if the buyer or seller tolerates and agrees with the price's difference there is no *khiyar* given for the situation.⁵⁷ In reality, every transaction in blockchain system is transparent, clear, recorded and traceable. Since every transaction is recorded and traceable the blockchain system must be designed with three main features, distributed, immutable and permissioned.⁵⁸

⁵⁶ Al-Māwardī, 'Alī bin Muḥammad. *al-Hāwī al-Kabīr*, vol. 3 (Bayrūt: Dār al-Kutub al-'Ilmiyyah, 1999), 259.

⁵⁷ Al-Fāsī, Muḥammad bin Aḥmad, *al-Itqān wa al-Iḥkām fī Sharḥ Tuḥfat al-Ḥukkām*, vol. 2 (Bayrūt: Dār al-Ma'rifah, n.d.), 39.

⁵⁸ Ross Mauri (2017), "Three features of blockchain that help prevent fraud, IBM," retrieved on September 2021 at: <https://www.ibm.com/blogs/blockchain/2017/09/three-features-of-blockchain-that-help-prevent-fraud/>

Lastly, the acceptance from Shariah view for this digital asset is relied on underlying business for the issued crypto. If the underlying business is prohibited the coin also will be deemed as non-compliant coin. Since trading in crypto market is one of the investment alternatives, ensuring *Shariah* status for the asset is crucial as applied for securities in share and sukuk markets.

CONCLUSION

Accepting cryptocurrency as Shariah compliant investment asset in today's world is a reasonable idea with scientific evidences. Even though cryptocurrency is categorized as another financial asset class, the benefits could mitigate the risk arise from investment in financial markets which also represents one of the advantages brought by this digital currency. *Gharar* and *maysir* are not main obstacles since its nature and behavior could be understood, predicted and forecasted whereas it similar to shares and funds provided the crypto does not represent *ribawi* commodity otherwise it should adhere to Shariah parameters in trading *ribawi* item. Volatility and speculative manners also seen as problematic attributes that may jeopardize traders' wealth, however the attributes are not built naturally in the coin but from external factors such as market and other variables. Nevertheless, the usage of the crypto asset must be ensured aligned with Shariah requirements and principles by avoiding any forbidden activities and deemed non-compliant with *Shariah*.

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