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IMPLEMENTATION OF ZAKAT PAYMENT PLATFORM FOR CRYPTOCURRENCIES

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ABSTRACT

Bitcoin spearheaded the rise of cryptocurrencies since it was first launched in 2009. The concept of bitcoin as digital currency was first published publicly in the 2008 well-known whitepaper by pseudonymous Satoshi Nakamoto. The whitepaper outlined a self-serving peer-to-peer transaction network concept based on cryptographic proof instead of trust, allowing any two willing parties to transact directly with each other without the need for a trusted third party such as financial institutions. Since then, thousands of cryptocurrencies have been launched mostly through token offerings as an alternative approach of raising funds for blockchain, technology projects, and start-ups. People are holding cryptocurrencies mostly as digital asset investments. Some individuals made huge profits from buying cryptocurrencies at their initial offerings and sold later when the prices increased. Some crypto millionaires were born from such trades. However, many people lost their investment as well due to many factors. Some were due to bad investment decisions, and some fall into scams and investment programs run by dishonest people

with promises of highly lucrative returns. As trading and owning cryptocurrencies are becoming common, governments and policymakers around the world are coming up with proper and comprehensive regulations for cryptocurrencies. In the context of Malaysia, in which zakat collections and distributions are of state matters, this paper discusses the implementation of zakat payment platform for cryptocurrencies at zakat institutions. This paper seeks to contribute to the academic development, blockchain technology, and zakat management.

Keywords: Cryptocurrency; blockchain; zakat payment platform; zakat management

INTRODUCTION

Currencies have been invented to facilitate trades between societies and among their members since ancient times. It is natural with the invention of the Internet, digital communications, and the rise of virtual communities, some form of digital currencies were invented to facilitate transactions in the virtual spaces. Cryptocurrencies or simply cryptos supported with blockchain technologies fall under this category. In other words, cryptocurrencies are a natural progression of currencies adapting to the rise of the Internet and online commerce. As discussed in the original bitcoin whitepaper, cryptocurrency made it possible for peer-to-peer transactions without the need for trusted third parties such as financial institutions to process the transaction.

Cryptocurrency has been popularised by the progress of Bitcoin (BTC) since its inception in 2008. With an amazing price increase from less than US\$0.10 per bitcoin to close to US\$20,000 per unit at its peak in 2017. Since then, the price has declined but fluctuating steadily between US\$5,000 to US\$12000 per unit. The use of blockchain technology by Bitcoin has spurred the invention of other cryptocurrencies with their unique features such as Ethereum (ETH) and Litecoin (LTC). Often, the introduction of new cryptocurrencies is made through token offerings as part of fund-raising exercises for the start-ups. Many of these crypto start-ups

offer crypto token sales in the form of Initial Coins Offering (ICO) and Security Token Offerings (STO).

Just like the case of Bitcoin, some individuals made huge profits from buying cryptocurrencies at their initial offerings and sold later when the prices increased. Some crypto millionaires were born from such trades. Nevertheless, many people lost their investment as well due to many factors. Some were due to bad investment decisions, and some fall into scams and investment programs run by dishonest people with promises of lucrative returns.

With the recent announcement by the Chinese government of the Digital Yuan pilot program involving some of the big corporate names, the tide has changed toward supporting cryptocurrencies as generally acceptable and becoming a mainstream technology. Although the government issues the Yuan crypto, the underlying technology being used is the same as other cryptocurrencies. Governments and policymakers must be ready with proper and comprehensive policies to steer cryptocurrencies from underground activities toward the formal economy. In the context of Malaysia, one such aspect is the readiness of accepting and processing zakat payments in the form of cryptocurrencies. Such an effort will be beneficial to the nation where the collection and distribution of zakat can be optimized.

SAMPLE PROJECTS

The sample projects for the cryptocurrency zakat payment platform found are all from private initiatives outside Malaysia. None of the states in Malaysia are ready to accept payment in cryptocurrencies though payment in fiat currency can be accepted for crypto zakat payment. In May 2018, Shacklewell Lane mosque in Hackney, London, started to accept cryptocurrencies (Bitcoin and Ethereum) for *sadaqah* and *zakat*. A new blockchain-based online platform was developed in collaboration with a start-up company called Combo Innovation. The company specializes in providing blockchain financial solutions. In the case of the London mosque, the company provides Islamic compliant financial solutions allowing the mosque to receive *sadaqah* and *zakat* in cryptocurrencies. According to its website, donations can be made through a QR code, and donors will

then be electronically transferred to its crypto-currency hard wallets. Each transaction will be transparent to counter and minimize money laundering activities. The received *sadaqah* or *zakat* will be exchanged to fiat currency through a crypto exchange like LocalBitcoin UK.

Another reference site is Blossom finance - a US-based company with an office in Jakarta, Indonesia. It is offering free service as a private company to help channel crypto zakat payments from crypto-rich individuals to zakat-eligible organizations in Indonesia. According to its website, individuals should contact the company by e-mail if he/she wants to pay zakat of his/her cryptocurrencies. Zakat payments in cryptocurrencies can be done by sending the payments to Blossom controlled cryptocurrency wallets held at a cryptocurrency exchange in Indonesia. The crypto received will then be converted to Indonesian Rupiah by Blossom before distributing them to qualified cooperative and non-profit-organization partners. The company claims to distribute mostly to the poor and needy, especially widows and orphans in Central Java and Sumatra. The service seems to be involving rather distinct steps requiring zakat self-calculation and e-mail communications. It does not seem to provide user experience of a complete software solution for donors and zakat payers.

Islamichain is a Dubai-based start-up with a focus on leveraging blockchain technology to bring transparency to *zakat*, *sadaqah*, and *waqaf*. According to its corporate website, the company claims that Islamic philanthropy generates up to US\$1 trillion annually. However, due to various complex factors such as logistics, legal, and jurisdiction, its beneficial impact is often a lack of transparency and accountable delivery mechanisms. The problem is easy to understand in a scenario where we want to send cross-border alms direct to recipients located abroad. Sending cryptocurrencies is so much simpler and transparent in comparison to conventional methods. Cryptocurrencies and blockchain could improve speed and transparency for the delivery of digital assets cross-border *zakat*, *sadaqah*, and *waqaf* payments.

SURGE OF CRYPTO TRADING DURING MCO

Redman (2019) reported that cryptocurrencies use increased at the time of crises, as seen during the Hong Kong 2019 violent protest. Statements have been made recently that crypto trading among Malaysians has increased during Covid-19 Movement Control Order (MCO). Luno Malaysia, one of the approved digital exchange operators, declared that local trading volume increased by 33% in April 2020. The number of its active users also hit an all-time high during that period. Some investors are using cryptocurrencies to diversify their portfolios, believing that cryptocurrencies are a good alternative to store value in difficult economic times (Afiq Aziz, 2019).

Malaysian second approved digital asset exchange (DAX), Tokenize Exchange, also experienced a similar pattern of increased user sign-up. The Malaysian Reserve (TMR) quoted Tokenize Exchange as expecting a significant increase in its daily trading of up to 40% daily increase. Tokenize Exchange also claimed that 2% of the total Malaysian population has adequate knowledge about cryptocurrencies.

The surge of trading in cryptocurrencies is also supported by figures from the coinmarketcap portal based on prices and market capitalization patterns of Bitcoin and other cryptocurrencies. Bitcoin price was below US\$5000 briefly in mid-March 2020 and has been increasing steadily to about US\$9600 as of 7th June 2020. Its market capitalization was US\$91 billion in mid-March 2020 and hit US\$178 billion as of 7th June 2020.

ISLAMIC VIEWS ON CRYPTOCURRENCIES

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

Table 1: Islamic views on cryptocurrencies

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

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

The view that prohibits the use of bitcoin (as representative of most cryptocurrencies) is based on macro vision factors. The cryptocurrencies are seen as a potential cause of instability of a national currency and possess high risks due to a lack of monitoring and regulation by central authorities. The use of cryptocurrencies is assumed to encourage the creation of dubious investment schemes using cryptocurrencies as the medium for providing returns to investors.

The view that permits the use of bitcoin is based on micro vision factors. These scholars argued that Bitcoin fulfills the requirements of currency, and there are no *gharar* and *jabalah* elements that can undermine the cryptocurrency transactions. A small number of scholars tend to be *tawaqquf* on this matter in which they decided not to give any official opinions. Such decisions can be presumed as requiring a further understanding of the matter before making any judgments (Mohd Faiz, Alif & Raja Rizal Iskandar, 2019).

On the other hand, the Mufti of Perlis state has issued a *fatwa* that bitcoin is considered a valuable asset, and the owner must pay zakat accordingly, provided that no government directive banning the use of bitcoin (Jabatan Mufti Negeri Perlis, 2019).

ZAKAT CALCULATIONS FOR CRYPTOCURRENCIES

There are two common methods for calculating zakat on cryptocurrencies depending on whether the cryptocurrencies are

being traded or simply stash in crypto wallets. For the cryptocurrencies stash in crypto wallets, the method treats cryptocurrencies similar to the savings of fiat currency. Once the amount fulfilled the minimum required amount of 85gm gold (*nisab*) of and full possession of one year (haul), then it is obligatory for the owner to pay zakat of 2.5 percent from the total amount of cryptocurrencies owned at the end of the year.

This is where the confusion might occur since the price of cryptocurrencies fluctuates volatility throughout the year; we suggest that the proper practice is to declare an amount of cryptocurrencies ownership based on the native units of the cryptocurrencies. Conversion for payment of zakat into other more common cryptocurrencies should be done at the point of transaction based on the exchange rate at the time of the zakat payment transaction. For example, a person owns a considerable amount of Augur and Enjin Coin (refer coinmarketcap for prices). These are less popular cryptocurrencies in comparison to Bitcoin and Ethereum. Since the zakat crypto platform could not be accepting all cryptocurrencies due to liquidity issues, the zakat crypto platform will calculate zakat matters by converting the Augur and Enjin Coin to zakat crypto platform acceptable cryptocurrencies such as Ethereum. The conversion rate from Augur and Enjin Coin to Ethereum can be based on the conversion rate at the point of transaction. In contrast, based on the fatwa of Perlis state mufti, the conversion to fiat currency is by using the lowest crypto price of the year. If we follow the *fatwa* on a crypto-fiat currency conversion, the conversion from Augur and Enjin Coin to Ethereum should be based on the lowest conversion rate throughout the haul year.

Method I: (amount of cryptocurrencies in possession at the end of the haul year) \times 2.5%

Another method is applicable for cryptocurrencies that are traded. The method is to treat cryptocurrencies as investments similar to investments made in stock markets. The typical zakat calculation practice for investments is to take 2.5 percent out of the combined

amount of realized profits from investments during the year and the amount of the crypto units owned at the end of the haul.

Method II: Zakat = (amount of cryptocurrencies at the end of the haul year + realized profits) × 2.5% (Jabatan Mufti Negeri Perlis, 2020)

IMPLEMENTATION PLAN FOR ZAKAT INSTITUTIONS

The decision to implement the zakat payment platform for cryptocurrencies must correspond to an applicable fatwa issued by qualified mufti. In the context of Malaysia, zakat institutions must uphold the fatwa issued by the state muftis. In the event that the relevant fatwa stated that zakat payment is applicable for cryptocurrencies, then zakat institutions must work with religious scholars and technology experts to finalize whether it is feasible to implement such payment platform. If the decision has been made to commence so, then the team may proceed to detail out the implementation plan.

The plan to implement the zakat payment platform for cryptocurrencies can be classified into four stages. The stages are as follows:

1. Prepare the overall project plan. Project planning is crucial for successful implementation. Some key personnel needs to be assigned to perform project management, product development, and testing as well as marketing activities. Internal resources with knowledge in cryptocurrency would be a great advantage to the project. Otherwise, subject matter expert(s) from outside of the organization can be engaged as a consultant(s). Awareness and marketing plans can be prepared as part of overall project planning.
2. Develop a cryptocurrency payment platform. The development of the platform can be assigned to an internal team or outsource to a third party. The team identified should have familiarity and experience working with cryptocurrencies. Working with a team with no prior experience in cryptocurrencies may create an unnecessary risk of losing paid cryptocurrencies due to a security breach or negligence.

3. Test and stabilize the platform. Testing is crucial to ensure the platform is functioning as intended. Special attention should be paid on the security aspect of the system to ensure transfers made involving cryptocurrencies are secured.
4. Execute awareness and marketing plans. Awareness and marketing plans may be executed at any point in time, even before the completion of the platform. It is important to use the right medium to get maximum coverage where potential cryptocurrencies owners might be reached.

CRYPTO ZAKAT PAYMENT PLATFORM

The crypto payment platform shall consist of the following components:

- The web component
- The mobile app component
- The backend system

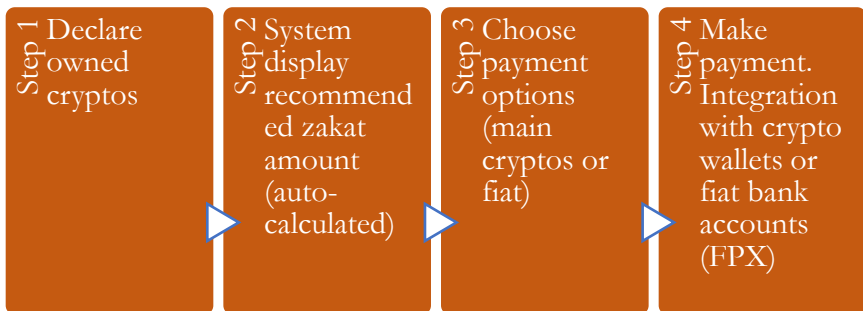


Figure 1: Steps to make payment

The web component shall allow end-users to participate with or without the registration page. Registered end-users will have access to historical records, while unregistered users will receive transaction details through e-mails. Submission of zakat payment in cryptocurrencies can be done in a few simple steps through web application user interfaces. The first step is a simple user interface for users to declare cryptocurrencies owned by them. These cryptocurrencies must be above the nisab and fulfill the haul requirements. The screen should be flexible enough to support all

cryptocurrencies with positive prices, as listed on the coinmarketcap portal.

The next screen is for the system to auto-calculate the exact amount of zakat for the users to pay. The system shall also indicate the payment options available for users to choose for zakat payments. The zakat payment options will consist of any or combination of the mainstream cryptocurrencies or local fiat currency. These mainstream cryptocurrencies are some of the top currencies listed on coinmarketcap. We recommend the use of Bitcoin, Ethereum, Tether, and Litecoin as acceptable cryptocurrencies for zakat payment options. Apart from their popularity and high market capitalization on the coinmarketcap portal, they are selected due to their convertibility and liquidity status. They can be converted to Ringgit fiat currency through peer-to-peer exchange web portal such as remitano. For a big amount, the transactions can be done through commercial crypto exchange companies.

The mobile app component shall support end-users who prefer to use mobile phones to transact rather than web browsers. The app will have similar features to the ones on the web version. The first step is for end-users to declare all their cryptocurrencies holdings that have real values as listed on the coinmarketcap portal. The next screen will provide easy info on the amount of zakat to be paid as well as the recommended single or multiple cryptocurrencies payment options. For both the web and mobile app version, the steps to pay will end with the system providing users with selected crypto addresses controlled by zakat institutions for users to send their cryptocurrencies. Users will transfer the right amount to the given addresses, and a receipt will be generated afterward. Due to the nature of crypto technologies, the addresses controlled by zakat institutions can be changed easily and unique for each transaction for easy identification and prevention of hacking.

The backend system is intended for zakat institutions to manage the collection of zakat in cryptocurrencies and integration with the rest of the zakat system. The point of integration shall be at the conversion of zakat from cryptocurrencies to fiat currency. Zakat institutions have the option to retain and hold the cryptocurrencies in

their original form and risk having price volatility. Alternatively, they could convert the cryptocurrencies immediately to fiat currency and integrate with the rest of the conventional zakat system.

It is worth highlighting that Tether is a stable cryptocurrency with a value pegged at one Tether equals to one US dollar. Holding Tether could be used as stable digital assets since the value is pegged to the US dollar. Nonetheless, the potential risks exist due to the nature of cryptocurrencies, e.g., irreversible transactions, as described by one of the key features of cryptocurrencies by original bitcoin designer Satoshi Nakamoto. Any rogue employees could transfer intentionally or accidentally to the wrong accounts. Even that is irreversible. The risks need to be mitigated with proper risk, legal, and insurance as part of a risk mitigation plan. The system can also be extended to include more advanced features such as issuing its cryptocurrencies as part of zakat distribution system. Distribution of zakat based on institution-issued cryptocurrencies would be great for cross border and international zakat distributions.

A good example is using Ethereum based ERC20 crypto tokens. Issuing own cryptocurrencies allow further control over how the cryptos behave on predefined conditions. In such conditions, a cryptocurrency transaction can also be made reversible or burnable.

Note: Crypto token is a term used for non-mineable cryptocurrencies, while crypto coins are mineable currencies. However, in some contexts, the terms are used interchangeably.

CONCLUSION

The use of cryptocurrencies is increasing in particular during the world crisis, as seen from events during the COVID-19 pandemic. However, such patterns provide us no conclusive way to predict the future outcome of cryptocurrencies accurately. Nevertheless, with the introduction of Digital Yuan based on blockchain technology, the idea of transacting using cryptocurrencies may become acceptable and mainstream sooner than we expected. Therefore, zakat institutions must be ready to cater to these new types of potential contributors holding cryptocurrencies as valuable digital assets. The act of preparing the crypto zakat payment platform will be a small

part out of the greater beneficial effort to steer cryptocurrencies from underground activities toward a more formal economy. Thus, in the context of the Malaysian economy, helping the national economy as a whole and improve the overall well-being of the people.

The Zakat payment platform for cryptocurrencies is quite straightforward to implement. With a good implementation plan and the right project team, the implementation of zakat payment platform for cryptocurrencies can be completed successfully in a short period of time. Zakat institutions can work with internal teams or outsource to external teams. Working with external parties, there are several project investment models such as one-time payment or software as a service (SaaS) model to choose from. With the right partner, zakat institutions will be able to acquire such a system with minimal or zero costs in which the investments will be recouped from transaction fees later.

REFERENCES

- Abu Bakar, N. & Rosbi, S. & Uzaki. K. (2017). Cryptocurrency framework diagnostics from Islamic finance perspective: A new insight of bitcoin system transaction. *International Journal of Management Science and Business Administration*, Vol. 4, No. 1, pp. 19-28.
- Afiq Aziz (2020, April 28). Digital currencies gaining interest with Malaysian investors. The Malaysian Reserve. Retrieve from <https://themalaysianreserve.com/2020/04/28/digital-currencies-gaining-interest-with-malaysian-investors/>
- Aishath, M & Shahbaz, N. (2019). The potential of application of technology-based innovations for zakat administration in India. *International Journal of Zakat*, 4(2), 87-100. <https://doi.org/https://doi.org/10.37706/ijaz.v4i2.191>
- Blossom Labs, Inc. (2020, May 18). Muslim can now pay zakat in cryptocurrency. Retrieved from <https://blossomfinance.com/press/muslims-can-now-pay-zakat-in-cryptocurrency>
- Cuthbertson, A. (2020, May 15). London mosque becomes first to accept cryptocurrency after bitcoin declared halal. Retrieved from <https://www.independent.co.uk/life-style/gadgets-and->

tech/news/bitcoin-halal-london-mosque-donations-cryptocurrency-islam-sharia-law-muslim-ramadan-zakat-a8364846.html

- Diffie, W. & Hellman. M. E. (1976). New directions in cryptography. *IEEE Transaction on Information Theory*, Vol IT-22, No 6, pp. 644- 654.
- Emem, M. (2020, May 15). UK's crypto-accepting mosque raises more cryptocurrency donations than cash. Retrieved from <https://www.ccn.com/uks-crypto-accepting-mosque-raises-more-cryptocurrency-donations-than-cash/>
- Evans, C. W. (2015). Bitcoin in Islamic banking and finance. *Journal of Islamic Banking and Finance*, Vol 3, June 2015, pp1-11.
- Goleman, T. (2018). Cryptocurrency: mining, investing and trading in blockchain for beginners. How to buy cryptocurrencies (Bitcoin, Ethereum, Ripple, Litecoin or Dash) and what wallet to use. Crypto currency investment strategies. *Zen Mastery*.
- Helms, K. (2020, May 20). Malaysia starts regulating cryptocurrencies today. Retrieved from <https://news.bitcoin.com/malaysia-regulating-cryptocurrencies/>
- Helms, K. (2020, May 20). Malaysia becomes the next country to approve cryptocurrency exchange amid covid-19 crisis. Retrieved from <https://news.bitcoin.com/malaysia-cryptocurrency-covid-19/>
- IslamiChain. (2020, May 19). Leveraging blockchain technology to bring transparency to zakat, sadaqah & waqf. Retrieved from <https://www.islamichain.com/>
- Islamic Finance Knowledge Repository. (2020, May 21). Bridging the gap: Malaysian Islamic fintech opens the doors for crypto donations. Retrieved from <https://ifkr.isra.my/news/post/bridging-the-gap-malaysian-islamic-fintech-opens-the-doors-for-crypto-donations>
- Jabatan Mufti Negeri Perlis (2019). Fatwa bitcoin. Retrieved from <https://mufti.perlis.gov.my/index.php/himpunan-fatwa-negeri/95-fatwa-bitcoin>
- Kahf, M. (2017). How does Islam view bitcoin and other cryptocurrencies? Retrieved from

- <https://aboutislam.net/counseling/ask-the-scholar/financial-issues/islam-view-bitcoin-cryptocurrencies/>
- Khan, F. (2020, May 19). Smart Dubai – world’s first blockchain-powered government initiative. Retrieved From <https://medium.com/technicity/smart-dubai-worlds-first-blockchain-powered-government-initiative-a5ed91544b30>
- Lim, J. L. (2020, May 21). Is it safe (or legal) to buy bitcoin in Malaysia? Retrieved from <https://www.imoney.my/articles/buy-cryptocurrencies>
- Muhammad Amir Husairi Che Rani & Ahmad Dahlan Salleh (2019). Bitcoin: An analysis on virtual currency from siyashah shar’iyyah perspective. *Journal of Contemporary Islamic Law*, Vol. 4, Issue. 1, pp. 29-40.
- Mohd Faiz Mohd Yaakob, Alif Nawi, & Raja Rizal Iskandar Raja Hisham (2019). Persediaan institusi zakat menggunakan mata wang kripto (bitcoin). *International Journal of Zakat and Islamic Philanthropy*. Vol. 1 Issue. 2 (September, 2019) pp.138-150.
- Momin, S. (2020, May 15). British mosque became the first to accept Zakat in Cryptocurrency this Ramadan. Retrieved from <https://english.alarabiya.net/en/features/2018/05/28/British-mosque-becomes-first-to-accept-Zakat-in-crypto-currency-this-Ramadan>
- Nakamoto, S. (2008). Bitcoin: A peer-to-peer electronic cash system.
- Ngo, D. (2020, May 21). Infographic: The rise of cryptocurrencies in Malaysia. Retrieved from <https://bitcoinmagazine.com/articles/infographic-rise-cryptocurrencies-malaysia>
- Khairani Afifi Noordin (2020, May 27). Islamic Finance: Is cryptocurrency halal? Retrieved from <https://www.theedgemarkets.com/article/islamic-finance-cryptocurrency-halal>
- Ramaiya, R. (2020, May 21). Luno launches in Malaysia. Retrieved from <https://www.luno.com/blog/en/post/luno-launches-in-malaysia>.
- Reid, F. and Harrigan, M. (2013). An analysis of anonymity in the bitcoin system. In: Altshuler Y., Elovici Y., Cremers A.,

- Aharony N., Pentland A. (eds) Security and Privacy in Social Networks. *Springer, New York, NY.*
- Redman, J. (2019, Aug 29). Cryptocurrencies such as bitcoin cash shine during Hong Kong protests. Retrieved from <https://news.bitcoin.com/cryptocurrencies-such-as-bitcoin-cash-shine-during-hong-kong-protests/>
- Salaam Gateway. (2020, May 21). Islamic social finance crowdfunder Global Sadaqah aims to double funds raised this year from \$ 250,000 in 2018. Retrieved from <https://salaamgateway.com/story/islamic-social-finance-crowdfunder-global-sadaqah-aims-to-double-funds-raised-this-year-from-250000-#>
- Singh, H. (2020, May 28). Bitcoin not shariah-compliant ‘at this time,’ says Turkish religious authority. Retrieved from <https://themalaysianreserve.com/2017/12/04/bitcoin-not-shariah-compliant-time-says-turkish-religious-authority/>
- Sudrajat, A. (2020, May 28). World Zakat Forum 2019 agrees on several resolutions. Retrieved from <https://en.antaranews.com/news/136116/world-zakat-forum-2019-agrees-on-several-resolutions>
- Whitehead, R. (2020, May 21). In time for Ramadan: crypto zakat picks up speed with new service in Malaysia. Retrieved from <https://salaamgateway.com/story/in-time-for-ramadan-crypto-zakat-picks-up-speed-with-new-service-in-malaysia>
- Wonglimpiyarat, J. (2017). FinTech banking Industry: A systemic approach, *Foresight*, Vol. 19, No.6, pp.590-603.
- Zalan, T. (2018). Born global on blockchain. *Review of International Business and Strategy*, Vol. 28 Issue: 1, pp. 19-34.