



## Cryptocurrency: Financial Risk and Shariah-Compliant Alternative Concept

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### Abstract

*Some countries consider cryptocurrencies as an avenue for money laundering and other illegal activities, predominantly Muslim countries, many of which prohibit the use of cryptocurrencies and even prohibit them. This study aims to identify the specific risks of cryptocurrency investment and to understand the sharia-compliant concept to open opportunities for the Islamic economy in the future. The data collection technique used is literature study by collecting data from previous studies in the form of documenting articles, journals, or books and publication data from other parties. The data analysis techniques used were data reduction, data presentation, and drawing conclusions. The results show that although cryptocurrencies promise some strengths, in terms of investment, there is a risk. Some cryptocurrencies have indeed been developed to address the issue of cryptocurrency non-compliance with Sharia law. Like OneGram, one of the cryptocurrencies that can be classified according to sharia. The alternative concept of sharia cryptocurrency has the potential to build Islamic economic products and positively affect the global economy, especially in welcoming a modern Islamic economic order that is conducive to all circles and the realization of a better future for the Islamic economic community.*

**Keywords:** *Cryptocurrency; One gram; Shariah-compliant; and Islamic economy*

### INTRODUCTION

Cryptocurrency is considered by some countries as an avenue for money laundering and other illegal activities (Lawal, 2019). Cryptocurrency is a relatively

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new technology that has the potential to disrupt the long-established and trusted financial transaction structure. Cryptocurrency has the potential to transform the digital trading market by enabling free-flowing transactions without the need for banking fees. Users may share digital values without the involvement of a third party when they use cryptocurrency. Cryptocurrency is founded on the principle of cracking an encryption algorithm to produce a limited number of unique hashes, as well as a computer network that verifies transactions, allowing users to exchange hashes as though they were exchanging physical currency (DeVries, 2016). Cryptocurrency also operates with a peer-to-peer digital exchange mechanism that generates and distributes tokens using cryptography (Farell, 2015).

Furthermore, cryptocurrencies are not issued by a central bank as banknotes but are created by algorithms and decentralized based on blockchain technology that resides on millions of computers worldwide, preventing them from being printed by any central authority (Irfan, 2019). Bitcoin, the first successful decentralized cryptocurrency, was released in 2009 by Satoshi Nakamoto under the pseudonym Satoshi Nakamoto (Nakamoto, 2008).

In terms of financial transactions, Islam has created its own set of rules and regulations. The issue of money transactions is that Islam sees money solely as a medium of trade, so the demand for money is solely for transactional purposes, with no notion of money demand for speculation (Adzimatunur, Manalu, & Rahimi, 2021). Apart from that, there should be no practices in Islam's financial system that include gambling (*maysir*), interest (*riba*), or confusion (*gharar*). Mayer, specific gambling, is described as betting on valuables such as money at an event with unknown or uncertain outcomes. Riba is more accurately described as *al-ziyadah* or an improvement in profit in a transaction without incurring a loss if the transaction fails. Gharar refers to the possibility of fraud and the uncertainty of the risks involved in a transaction (Abu-Bakar, 2018). These three concepts of Islamic rules can be related to the existing cryptocurrency system, either used as a store of value (investment) or as a medium of exchange.

According to some scholars and Muslim nations, cryptocurrency leads to *maysir*, *riba*, and *gharar*. In 2018, Egyptian Grand Mufti Sheikh Shawki Allam declared bitcoin and cryptocurrencies are harams. Among other things, Shaykh



cites these key reasons in his statement: Bitcoin is simple to use for illicit purposes; it is intangible, allowing money laundering and fraud (Al-Araby, 2018). Bitcoin has also been declared illegal in Turkey, owing to unnecessary (gharar and maysir) speculation. The Palestinian Fatwa Center has also released fatwas on bitcoin and cryptocurrencies, claiming that bitcoin's issuer is unknown and that it is gambling. Shaykh Haitham, a Muslim scholar, based in the United Kingdom, publishes Arabic-language articles. According to the text, Bitcoin and other cryptocurrencies are forbidden and incompatible with sharia law (Abu-Bakar, 2018). Sheikh Assim al-Hakeem, a Saudi Arabian cleric, issued a fatwa declaring that bitcoin is illegal under Islamic law. Bitcoin, he said, is an open portal for money laundering, illicit drug purchases and sales, and smuggling (Bitcointalk, 2018). All India Muslim Personal Law Board (AIMPLB) declared bitcoin un-Islamic. Therefore, Muslim Institutions ask the public to avoid using this cryptocurrency (Kidwai, 2018).

As a result, the Islamic world has resisted allowing cryptocurrency because the operation violates Sharia law (Abu-Bakar, 2018). Given the rapid growth of the global halal industry, the Islamic world's demand cannot be overlooked. Furthermore, Islamic finance has surpassed USD 162 trillion in global commercial banking assets (Bayan Token, 2018). However, investment in the cryptocurrency market is growing very slowly in the Islamic community, which is related to vague and dubious cryptocurrency decisions that do not fall within the scope of sharia.

Combining cutting-edge technological innovations like blockchain with Islam's glorious traditions might seem odd and out of place. However, the rapid and creative financial changes taking place in the Islamic world, on the other hand, are far from anachronistic. In recent years, the Islamic financial market has experienced strong annual growth of about 10% to 14% (Mohamed, Goni, Alanzarouti, & Taitoon, 2020). According to Thomson Reuters, the Islamic economy will be worth about \$1 trillion in 2030, and the Islamic financial sector will be worth \$ 3,8 trillion in 2022 (Valeri, Fondacaro, De Angelis, & Barella, 2020). Regardless of the fact that the Islamic finance industry's growth is expected to slow due to the recent Covid-19 outbreak, the industry's assets are still growing. By 2024, it is expected to have risen to the US \$ 3.69 trillion (Mohamed *et al.*, 2020). Blockchain is a technology that can help with financial governance by storing

data, increasing confidence, reducing fraud, and increasing accountability in the digital economy. In Islam, sacredness is expressed by values such as trust, integrity, and openness (Dahdal, Truby, & Ismailov, 2021).

Many studies have examined the issue of sharia from cryptocurrency, one of which is research conducted by Yuneline (2019) which seeks to examine the characteristics of cryptocurrencies from four perspectives, including sharia, which contends that cryptocurrencies can be considered *mal* (property) due to desire and storage, but not *thamaniyyah* (monetary value), because they still require fiat currency values to determine cryptocurrency value.

Amri & Mohammed in Billah (2019) stated in their research that cryptocurrency has both advantages and disadvantages. However, one issue concerning Sharia compliance is still being debated. Based on the Maqasid al-Shari'ah, this study forges a new path in cryptocurrency analysis.

The same research was conducted by Noh & Bakar (2020), which studied cryptocurrency as the primary currency reviewed by the Maqasid al-Sharia approach. Where research results show that the weight of loss or interpretation of cryptocurrency is more evident than *mashlahah*, it mandates cryptocurrency as the primary currency.

Another researcher, Kusuma (2020), examines cryptocurrency in Indonesian commodity futures trading from the perspective of Islamic law, concluding that cryptocurrency in commodity futures trading retains aspects of *maysir* due to its speculative nature. It is more complicated than trading foreign currency (forex). As a result, using cryptocurrency as a sharia derivative contract tool is *haram lighairihi*, or *haram*, due to external considerations (*maysir*, *riba*, and vulnerability to criminal practices).

Some of the studies above mostly examine cryptocurrencies from a sharia perspective. Therefore, this research aims to specifically identify risks and provide an alternative concept of shariah-compliant cryptocurrencies. The concept of sharia cryptocurrency as a sharia-compliant cryptocurrency option can be used as an alternative for sharia adherents and the future of Islamic economics. Cryptocurrency itself will overcome several problems that the existing financial system cannot overcome. The potential for sharia-compliant cryptocurrency technology can be easily used to build Islamic



economic products and positively affect the global economy, especially the future of the Islamic economy.

Based on this background, this article aims to find out the risks of cryptocurrencies and compare existing Islamic cryptocurrencies and analyze the concept of alternative sharia-compliant cryptocurrencies as an opportunity to build a bridge between Islamic and western cultures to create a currency that is trusted, transparent, and sharia-compliant. for the future of Islamic economics.

## LITERATUR REVIEW

### The Concept of Currency in Islam

The concept of money in Islam is very similar to the conventional definition of money, with very few exceptions. In Islamic economics, the concept of money is evident and firm that money is money, not capital. At the same time, money in a conventional economic perspective is interpreted in terms of interchangeability, namely money as money and capital (Ilyas, 2016). There is no money demand for betting in Islamic philosophy because speculation is forbidden. Compared to the traditional scheme, which rewards land owners with interest, Islam makes the property the subject of zakat. Since money belongs to the nation, keeping it under one's pillow (unproductive) is illegal because it limits the amount of money in circulation (Kusuma, 2020).

In Islam, money is seen as a means of trade rather than a commodity. As a result, money demand motivates to satisfy transactional needs (money demand for transactions), not to speculate (Arifin, 2002). Islam also highly encourages the use of currency in trade, as shown by the hadith recounted by Ata bin Yasar, Abu Said, and Abu Hurairah, as well as Abu Said al-Khudri, who clarified that the Prophet Muhammad disapproved of barter deals, so it is preferable to use money. He seems to prohibit such transactions because they contain a component of usury (Kusuma, 2020).

Seven hundred years before Adam Smith wrote the book "The Wealth of Nations" in 1766 in Europe, an Islamic scholar Abu Hamid Al-Ghazali in his book "Ihya Ulumuddin," discussed the function of money in the economy. He explained that money serves as a medium of exchange, but money is not needed



for money itself. The point is that money is created to facilitate the exchange and establish a fair value for the exchange. Furthermore, money is not a commodity. According to al-Ghazali, money is likened to a mirror with no color but can reflect all colors. The meaning is that money has no price but reflects the price of all goods. In classical Islamic economic terms, it is stated that money does not provide direct use, which means that if money is used to buy goods, it will provide uses (Karim, 2001).

In addition, the function of money can be a measure of price; Imam al-Ghazali (d. 505 H) emphasized that Allah created the dinar and dirham as an intermediary judge between all assets so that both can measure all assets. Second, money can be a medium of transaction. Money that is a suitable transaction medium must be accepted by anyone if determined by the State. It is the difference between money and other transactions such as checks. The three pieces of money can be used as a storage medium for value; Ibn Khaldun hinted at money as a means of savings; he stated then Allah SWT Created from two minerals, gold, and silver, as the value for each treasure. These two types are the savings and gains of people in the world at large. From these functions, it can be concluded that it is clear that the most important thing is the stability of money, not the form of money itself (Karim, 2007).

Along with the progress of the times, the form of payment with money today leads to something that is more practical and has no form at all, only in the form of a digital code that is on a server, chip card, or someone's smartphone which is called electronic money or digital currency. According to its type, digital payments consist of two types: electronic or digital money, often used in computer and smartphone-based applications. An entity or corporation controls, regulates and manages this kind of virtual currency. Second, a cryptocurrency is a virtual currency that utilizes cryptographic technologies which encrypt data for each transaction utilizing a unique cryptographic algorithm. (Firdaus, 2018).

Talking about money is closely related to property because money is human property. Hindu Maal is one of the five elements of Maqasidh Sharia related to benefit in a property. Three necessary conditions must be considered namely first; it requires that assets be collected in a Sharia way, meaning that they cannot be obtained by stealing, cheating, and-so-forth.; second, the property is used for



things that are Shariah; and third, from this property, the rights of Allah and the community where he lives must be removed (Febriandika & Hakimi, 2020).

## RESEARCH METHOD

This study uses a qualitative method. Qualitative research on financial risk and shariah-compliant alternative concepts is needed because it is more of a perspective that creates the concept behind this research and does not focus solely on complex mathematical and statistical analysis tools but rather on the foundation of a concept. This study uses a literature study approach; the literature study was carried out by collecting data from various studies that have been published in accredited national and international journals, including Cryptocurrency and Blockchain Technology, Cryptocurrency from a Shari'ah perspective, The Role and Potential of Blockchain Technology in Islamic Finance, and Shari'ah Code of Ethics in Cryptocurrency. Secondary data was also obtained from books related to the Handbook of Cryptocurrency and Blockchain Technology.

The data analysis techniques used in this article are data reduction, data presentation, and conclusion drawing. Based on data collected through literature study with the kinds of data in the form of books, articles, and data processed from other parties or publication data. The researcher performs data reduction by selecting, focusing, abstracting, and transforming the raw data in the field, then entering the data presentation process. The last step that the researcher must do in data analysis is to draw conclusions. It means that researchers must understand and be responsive to research by compiling patterns and causality. This data analysis process will later sharpen the essence of this article and eliminate data that is not related to the problem formulation so that it will become a discussion that answers the problem formulations that underlie this article.

## RESULT AND DISCUSSION

### Financial Risk of Cryptocurrency

Cryptocurrencies have been introduced with several strengths. Among other things, transactions that take place in cryptocurrency are very secure with solid cryptographic functions. The transaction uses a secret signature called



cryptography which serves to protect it so that there will be no forgery and double issuance (Nakamoto, 2008).

While cryptocurrencies have some strengths, they also have some risks, including the fact that they have no intrinsic value. For instance, Bitcoin has no inherent value and no physical structure because it only resides in digital form; additionally, its availability is not determined by any central bank and is not distributed or managed by any corporation (Muhammad, 2017). Some stakeholders have also argued that digital cryptocurrencies are not real money because they are not supported by tangible assets that have intrinsic value (Bank of England, 2014; Adam, 2017).

According to Lee *et al.* (2017), the absence of intrinsic value in cryptocurrencies, in this case, can cause bubbles and price volatility because it has high price volatility. It refers to the term speculation. Speculation is an external factor that does not have the attention to determine something like money and currency is valid. Prices are always based on supply and demand rules (Yuneline, 2019).

Cryptocurrency can be said to be a decentralized currency system that relies solely on the system and has no consumer protection for its users (Lee *et al.*, 2017). According to Zahudi *et al.* (2016), the absence of consumer protection in cryptocurrency is mainly due to its limited regulations. Also, cryptocurrency is not a legal means of payment, and there is no monetary authority to supervise or guarantee it (Lawal, 2019). The Cryptocurrency system operates without any government or monetary authority's support (Trabelsi, 2018).

Meera in Chowdhury & Razak (2019) also stated that cryptocurrencies are not backed by real assets. Cryptocurrency is inseparable from the risks associated with exchange rate volatility, market manipulation, and regulatory risks (Peters, Chapelle, & Panayi, 2016). Therefore, many creditors are reluctant to support cryptocurrency companies because of the risk of money laundering (Seele, 2018). As a result, cryptocurrency is not a legitimate form of payment, the cryptocurrency issuer is anonymous, cryptocurrency has no central authority or government backing, cryptocurrency is extremely speculative, and cryptocurrency is a conduit for money trafficking and illegal practices.

In terms of threats, this currency is risked of being misused for illegal activities, as well as a risk to financial stability because it is not supported by





any assets and lacks consumer protection (Yuneline, 2019). Besides that, the circulation of cryptocurrency in the economy is also untraceable. Thus, the government or regulatory body can lose control of the economy, especially if it becomes the main currency (Noh & Bakar, 2020).

### **Difference between Conventional Cryptocurrency and Shariah-Compliant Cryptocurrency**

Even though cryptocurrencies are rising rapidly in today's socio-economic world, there are few alternatives to Shariah cryptocurrency, although some have implemented the Shariah cryptocurrency model. The Shariah cryptocurrency paradigm must be nurtured following al-Maqasid al-spirit. Shari'ah's (divine purpose). In addition, modern, structured Sharia policies and systems must be used to control and direct the Shariah cryptocurrency model. A Sharia board must closely supervise it. All of its operations must be screened by a Sharia audit to ensure that all activities and functions comply with Sharia principles. Meanwhile, advisory bodies would play a significant role in advising management about aligning their practices with Sharia values and religious and ethical norms (Billah & Amadu, 2019).

Furthermore, Shariah cryptocurrency must be founded on Sharia principles and free of the factor of uncertainty (gharar) in order for the receiver, consumer, technology, and operation to be clear and free of uncertainty in this model (gharar). Shariah-based instruments can promote operations and transactions in the Shariah cryptocurrency model. Users' investments, for example, are based on al-Mudharabah (partnership) or al-Musharakah (partnership) principles, in which users share profits with other beneficiaries or users by trading activities. The recipient is charged a service fee based on al-Jualah (reward), al-Wakalah (agency), or al-Ujrah concepts (charge). Meanwhile, the al-Bay wa al-Shira concept governs transactions on the blockchain network (buying and selling). Zakat would be a mandatory tax for the Shariah cryptocurrency model (alms). Furthermore, based on the concept of al-Tabarruat, voluntary income segregation for humanitarian purposes should be given (amal). The model must follow standard legal standards, ethical norms, and Shariah-compliant operating frameworks to ensure its long-term viability (Billah & Amadu, 2019).



**Table 1.**  
**Conventional Cryptocurrency and Shariah-Compliant Cryptocurrency**

Issues	Conventional Cryptocurrency	Sharia-Compliant Cryptocurrency
Law and policies	Regulatory systems in law, regulation, and directives are unconcerned about the sustainable economic advantage of traditional cryptocurrency activities.	One of the most important requirements for ensuring that all operations are performed in accordance with the spirit of al-Maqasid al-Shari'ah will be a legislative concern with the Shari'ah standard in halal cryptocurrency models.
System	In cryptocurrency practices, the blockchain infrastructure and the whole system are autonomous, with the recipient possessing personal control.	A centralized body must govern the blockchain technology system with no personal agenda, and a Shariah board must vet it.
Receiver	The name of the recipient does not need to be approved for either onshore or offshore authority, although it is normally achieved by a cyber-registered body. In this culture, the receiver's identity is uncertain and ambiguous, posing a serious danger to the recipient.	The recipient must be a legally recognized body, either onshore or offshore. In such a situation, the receiver's identity must be established and free of doubt (Garar). It will instill trust in users that they will be safe from fraud.
Sovereignty	Any central bank or central depository in a foreign jurisdiction has little sovereignty over cryptocurrency management. Only the receiver's authority, which has no legal status, will give it supremacy.	Almighty Allah (SWT) has actual superiority by adhering to the Qur'an and Sunnah's legislative and ethical principles. Furthermore, the central bank of the territorial jurisdiction and the international central depository must be recognized as the operational control to avoid any malpractices.



Privity	There is no visual legal or contractual relationship between the user and the recipient in cryptocurrency management. It can lead to a lack of transparency and responsibility.	The security of the user-receiver contractual arrangement shall be secured and recognized by a cyberspace visual contractual relationship, which would document the parties' responsibility and liability.
Control	The private project of blockchain technology controls traditional cryptocurrency.	Halal cryptocurrency management is governed by al-Maqasid al-Shari'ah principles of law and supremacy.
Growth	Cryptocurrency growth is mostly driven by emotion, with no respect for legal or ethical concerns.	The growth culture must be equitable and sustainable by adhering to Shari'ah concerns and legal sensitivity.
Subject matter	The subject is a digital coin or token that can be traded on any exchange and is treated as a type of digital currency.	A digital coin or token may be interpreted as an alternate digital currency, digital asset, or digital product since it carries digital value, which can also be represented as intrinsic value.
Operational Mechanism	The activity is carried out using some self-designed mechanisms with little regard for existing regulatory structures. It is done by a "coin or token" bid, which is exchanged on a trading network using blockchain technology. It is also known as "cryptocurrency trading" and is carried out on an exchange network, but there are currently no uniform protocols in place to support such mechanisms.	With the concept of "issuer coin or token" or "exchange network" via Shariah screened blockchain technology, the operation of a Halal cryptocurrency model is facilitated and dully run primarily based on Shariah principles.  To carry out operations focused on the "Issuer Coin or Token," trading sites, as well as decentralized direct (one-to-one) buying and selling (Bai' wa al-Shira') schemes, will be used. It can, however, be run on a Shari'ah-compliant trading website, aided by the doctrines of al-Shuftaza (exchange), al-Hewalah (transfer), al-Kafalah (custodianship), al-Amanah (trust), al-Wakalah (agency by commission), and al-Ju'alah (judgment).

Income	There are no proven revenue streams of conventional cryptocurrency management.	The origins are known to both receivers and consumers in halal cryptocurrency management by legal trading.
Tax	In conventional cryptocurrency administration, there is no mention of income taxation, nor is there any tax strategy or legislation.	If the income is Zakatable, it is mandatory to set up a Zakat provision in Islamic cryptocurrency management. In addition, the tax must be paid following the law.
Risk	In conventional cryptocurrency management, there is currently no risk policy in effect to shield either the user or receiver against an accidental catastrophe.	A risk strategy is required in halal cryptocurrency management to protect the receiver, customer, and device from unanticipated risk; hence, a takaful scheme is strongly recommended to handle unanticipated risk. Cryptocurrency administration that is halal.
Formality	The transaction is only nodded and documented in traditional cryptocurrency management since the transaction is only validated by encryption. If the digit is identified to someone else or is hacked, encryption with digits alone will not be sufficient to secure the user.	It is recommended that two requirements be fulfilled for the formalization of a transaction in halal cryptocurrency management: encryption by digit and simultaneous biometric verification of the recipient to nod and register the transaction with legal status.
Backing Asset	If a cryptocurrency is not backed by a valuable commodity (at least equal to the overall ICO value), investors could be exposed to a high risk of unforeseeable catastrophe. In existing cryptocurrency procedures, there is no such prerequisite for a backing commodity to back the entire operation.	For back the total operation in halal cryptocurrency management, a valuable backing asset with legitimate proof of product, proof of asset, proof of land, or proof of commodity (POP) with at least an equivalent value of the ICO is needed. Among other items, this provision seeks to instill genuine interest in the market and among market participants.



Instrument	Except for buying and selling with an illegal conventional mechanism, no particular instrument is used in cryptocurrency management.	There is a range of Shariah-compliant instruments that can help with halal cryptocurrency management. "Al-Mudharabah, al-Wakalah, al-Jualah, al-Bai' wa alShira', and al-Tabarruat" are among them.
Moral hazard	There are no clear rules or laws to fix moral risks or malpractices. As a consequence, the personal obligation remains a possibility.	Adherence to the Maqasid al-Shari'ah at all stages of personality, decision-making, and implementation is one of the most important requirements of halal cryptocurrency management.
objective	Making money and maximizing self-opportunities are the primary goals of cryptocurrency management.	The goal must be achieved in accordance with Shariah's holistic spirit. One aim is to gain a competitive edge within legal systems, while the other is to create entrepreneurial prospects for all by adhering to the halal standard. The al-Tabarruat ideology also aims to promote social causes.
Humanitarian concern	In traditional cryptocurrency management, there is no prerequisite for humanitarian concerns.	Humanitarian consideration is one of the goals of Halal cryptocurrency management in terms of assisting others with their earnings.

Nature	It sells coins or tokens that can be traded on the internet or via an exchange platform.	It is sold as a coin or token and traded on a digital network, similar to traditional practices. It is possible to convert the coin on an exchange platform, although this is not suggested in order to avoid money laundering. To the possibility of money laundering in cyberspace, the digital coin can be used as a substitute or supplementary currency when buying commodities or paying bills, rather than being treated as an actual currency to be exchanged on a foreign exchange market.
ICO	It offers an initial coin offering (ICO) with a value set at the discretion of the recipient.	It may be offered as an initial coin offering (ICO), an initial token offering (ITO), an initial product offering (IPO), or an initial commodity offering (ICO) with a justifiable benefit that is available to all levels of society, in order to maximize the opportunity for entrepreneurship in cyberspace for everyone.
Currency	It is a non-intrinsic currency in the form of a coin or token.	Even though it is a digital network coin or token, it is suggested to be viewed as an alternate currency for trading or paying dues.

Source : (Billah & Amadu, 2019)

### Comparative Discussions of Existing Sharia-Compliant Cryptocurrencies

This section contains a review and comparison of the existing cryptocurrencies, focusing on whether they are shariah-compliant or not, based on two metrics: regulatory authority and asset backing.



## OneGram-Cryptocurrency

OneGramCoin claims to be the first cryptocurrency that complies with Islamic law. The OneGram cryptocurrency is a gold-backed digital currency, with each coin representing one gram of gold. It is based in Dubai and started production in May 2017. About 1.8 billion individuals have suggested using the gold coin's industry platform because of the stability of the OneGram product and commodities. As a result, it has spread to many countries, including Malaysia. The real gold market price influences the spot price of the digital currency. As a result, the OneGram currency's value is enhanced by use and consumer demand. As a result, OneGram's overall market price is determined by three valuation components. The first component is the Gold Value (GV), which is determined using the current gold spot price. The current value of the Transaction Fee (TF), which is used to purchase more gold and is determined by the number of times the OneGram coin is used, is the second factor. The third variable is the Economic Value (EV), which is determined by consumer demand. (OneGram, 2018). OneGram preferred proof of stake (PoS) blockchain technology over proof of work (PoW) protocols because it consumes ten times fewer resources. Furthermore, it is extremely quick; a transaction can be completed in a matter of seconds. The group of OneGram stakeholders elects delegates and validators through a democratic process (Valeri *et al.*, 2020).

OneGramCoin's sharia enforcement is a unique selling point in the cryptocurrency industry. Cryptocurrency is classified as currency by the corporation and is assessed as such. To be compliant with sharia, they rely on currencies having intrinsic value. The One gram cryptocurrency is entirely backed by gold, which is traded in accordance with the Sharia Gold Standard published by the Accounting and Auditing Organization for Islamic Financial Institutions in 2016. (AAOIFI) (Kirchner, 2020).

Regarding the OneGram's transaction element, each transaction incurs a 1% transaction charge, up to a limit of OneGram tokens. The OneGram is unique among cryptocurrencies in that 70% of its coins are re-invested to buy more gold, increasing the amount of gold backing each token. As a result, more gold is stored in the vault as trade volumes increase. All OneGram investors profit because of the increase in the value of each unit. As a result, the value of each OneGram



token steadily increases over time. As a result, OneGram stands out as a unique cryptocurrency and a trustworthy store of value whose value grows over time. Furthermore, 25% of the fees generated are used to finance the production and operation of the OneGram investment. Meanwhile, 2.5% of the funds will go to charity, and another 2.5% will go to miners' rewards. Some techniques, such as the Gold Guard platform for redeeming gold in relation to the issued OneGram coins, are given for OneGram to have liquidity and rapid real-world adoption. ii) YalaPay, a new payment portal for OneGram coins, is unveiled. iii) For OneGram liquidity, a Gold guard MasterCard debit card (Liquid Gold) is developed (OneGram, 2018). Furthermore, OneGramCoins can be traded for gold on the GoldGuard website, which is a partner business specializing in gold trading (Kirchner, 2020).

Moreover, as previously said, cryptocurrencies are backed by gold. Thus, the problem of non-Islamic cryptocurrencies' confusion, speculation, and instability has been discussed. In terms of ambiguity and volatility, OneGram may thus be considered a sharia-compliant cryptocurrency. One gram was named the best Islamic cryptocurrency by the Islamic Retail Banking Awards and the best Islamic Fintech product by Global Islamic Finance Awards (Lucero, 2021).

It should be noted that OneGram's popularity compared to other digital currencies can be attributed to its adherence to Islamic finance values. The fact that Islamic financing is asset-backed is its most distinguishing feature. Money has no inherent use in Islam and is only used as a means of exchange and a store of value, unlike in traditional finance, where money is regarded as a topic of trade. Gold, on the other hand, has intrinsic value and is regarded as a significant sharia commodity. As a result, sharia rules mandate that all funding be dependent on properties with intrinsic value, such as real estate and inventories (Dahdal *et al.*, 2021).

### **Bayan Token-Cryptocurrency**

The Bayan token is an ERC20 token based on Ethereum. It's a utility-based cryptocurrency token with a physical asset in the shape of a private cloud server as a backer. Its growth is fueled by economic ventures that have societal implications. Each Bayan token contract grants 16 hours of access to the advantages of the





private cloud server. Each cloud server has 1GB of memory, a 5GB SSD drive, a 2GHz CPU, and 10GB of monthly bandwidth. As a consequence, token holders will reclaim cloud server use using a smart contract.

Because of the following attributes, the Bayan token is a shariah-compliant token: a) tokens and ventures are the subjects of technologies. b) The token has real-world utility and intrinsic value. c) Token with information about the type of offering and the opportunities for profit d) Token has Social Responsible Investment (SRI) standard and fantastic usefulness functionality, guaranteeing the token's long-term viability and growth. e) Tokens are associated with Environmental, Social, and Governance (ESG). However, since the data is stored on a cloud server, it can only be used by people in countries that use cloud computing. Furthermore, trading is restricted to tokens of the same backed value. To solve the issue of money laundering and terrorism financing as a consequence of cryptocurrency abuse, a KYC policy is applied to each token holder. The KYC link is accessible on the platform's dashboard in the Bayan token. In order for the Bayan token to have the liquidity to be exchanged in the market, it must be made available for purchase at any licensed retailer, such as Elzar Mart and other online and offline marts. Each investor is considered the owner of an exclusive virtual membership card with potential rewards and privileges. For example, you will be able to get a discount by buying goods from a certain store or restaurant. The proceeds from the Bayan token ICO will be used to finance programs that will ensure the token's continued rise in value (Bayan Token, 2018).

### **Stellar-Cryptocurrency**

The stellar cryptocurrency, based in California, has secured Islamic scholars' approval for its blockchain ecosystem and coin, with the aim of translating the platform into shariah-compliant financial products. The Shariyah Review Bureau (SRB), an Islamic advice body approved by Bahrain's central bank, certifies and guides the kinds of commodities that can be traded on the Stellar platform according to Shariah law (Mazieres, 2016). With a market value of \$4.3 billion, stellar's native currency, Lumen, is almost the seventh most expensive cryptocurrency.



The Lumen, on the other side, is not supported by any physical properties, which is a prerequisite for shariah-compliant cryptocurrencies. However, the lumen cryptocurrency mentioned in the white paper is not governed by any regulatory body. There is no particular regulatory authority or real asset backing, so there is no specific regulatory authority, and problems such as confusion, volatility, and speculation may arise. As a result, in terms of instability, speculation, and confusion, stellar cryptocurrency cannot be considered a shariah-compliant cryptocurrency.

**Table 2.**  
Summarizes comparison of existing shariah-compliant cryptocurrencies

Shariah Requirement	Existing Shariah-Compliant Cryptocurrencies		
	OneGram	Bayan Token	Stellar
Regulatory Authority	Regulatory authority by AAOIFI (Accounting and Auditing Organization for Islamic Financial Institutions)	There is no mention of a regulatory agency.	There is no mention of a regulatory agency.
KYC Unlawful Industries	Many of the participants have been properly enrolled and are thus well-known. Non-halal industries, however, are not explicitly stated.	The guideline for a licensed shop is not specified, nor is it stated if it contains alcohol.	The unlawful industries are not taken into account.



Uncertainty (Gharar)	Since gold is regarded as a safe haven, it has lower price volatility. 1) There is a physical/tangible item; 2) There is less speculation in gold than in cryptocurrency dependent on Petrol and Dollar.	1) It has tangible assets backing it up. 2) Having intrinsic value 3) Reliability is not guaranteed since data can be lost, resulting in the loss of the entire token.	Since these cryptocurrencies/tokens are not backed by any asset, there could be a high level of uncertainty.
Asset-Backed	Yes, it is gold-backed.	Yes, it is backed by a cloud server provider that is limited to a particular geographical region.	There is no mention of a tangible asset.

**Table 2.** Summarizes comparative discussions of existing shariah-compliant cryptocurrencies, taking into account shariah conditions such as unlawful industries, confusion (gharar), and asset-backed cryptocurrencies (Aliyu *et al.*, 2020). Based on the comparison table, OneGram may thus be classified as shariah-compliant. OneGram may thus be classified as shariah-compliant. Since it is backed by a physical asset, the Bayan token may be deemed shariah-compliant. Stellar, on the other hand, is a non-shariah compliant cryptocurrency since some assets do not support it.

### Analysis of Shariah-Compliant Cryptocurrency Alternative Concept for Prospects of Islamic Economy in The Future

The concept of sharia cryptocurrency as a sharia-compliant option of cryptocurrency can be used as an alternative for sharia adherents and the future of Islamic economics. Things that need to be considered in building sharia-based cryptocurrencies include aspects of sharia law, especially Maqashid Al-Syariah on cryptocurrency (Adzimatunur *et al.*, 2021). Furthermore, the use of digital currency must have the principle of preserving wealth. Therefore, cryptocurrencies need to be controlled by authorities such as governments and supported by assets

such as oil, gold, and silver to protect people’s money. The following is a table regarding the sharia-compliant cryptocurrency alternative concept.

**Table 3.**  
**Shariah-Compliant Cryptocurrency Alternative Concept**

Shariah Requirement	Shariah Cryptocurrency Alternative Concept
Technology	Even if it runs on a blockchain platform, every component of the technology, as well as its operations and activities, must adhere to Shari’ah’s divine spirit. The operator must form a Shari’ah advisory board to ensure Shari’ah compliance.
Law and Policies	In the sharia alternative cryptocurrency model, each and every aspect of one’s business, operations, and management must adhere to Shari’ah principles, ethical standards, and local laws and policies, in addition to cyberspace regulations.
Regulatory Authorities	Even though no explicit regulation has been implemented yet, the establishment, system, technology, operation, and all actions in a Sharia cryptocurrency management are all subject to strict Shari’ah compliance. Adhering to the divine ethical standards, the Shari’ah advisory body, Shari’ah compliance rules and procedures, managerial duties, and corporate governance would assure conformity.
Backing Asset	Holding a valuable asset as a backing asset for the entire operation is required in Sharia cryptocurrency management. The underlying asset must be worth more than the initial coin offering (ICo). Such a backing asset will support the entire operation in order to instill confidence in the market among investors and serve as a safety net for the operation in the event of an unforeseen catastrophe.
Risk Plan	Risk management is one of the most important aspects of Sharia cryptocurrency management since it protects the user and the recipient from unforeseeable disasters such as system crashes, hacking, unethical conduct, or natural disasters. Under any situation, it is advised that two types of risk plans be created: a user’s Takaful plan and a receiver’s Takaful plan.



The potential of sharia-compliant cryptocurrency technology can easily be used to build Islamic economic products and positively affect the global economy, especially the Islamic economy's future. The creation of Sukuk products based on blockchain technology is one of them. Sukuk blockchain is a relatively new concept in today's world, and Smart Sukuk is one of the platforms that offer Sukuk issuance through blockchain technology. Blossom Finance's Smart Sukuk is a blockchain-based Sukuk issuance network (Blossom Finance, 2019). This platform is widely regarded as one of the best blockchain applications for Islamic finance (Blossom Finance, 2019). This platform is widely regarded as one of the best blockchain applications for Islamic finance.

The use of blockchain technology to issue Sukuk highlights two developments in the Islamic capital market: digital innovation and a greater emphasis on socially responsible financing. It is the first blockchain-based Sukuk to finance socially beneficial ventures. The SmartSukuk on this platform is based on an Ethereum "Smart Contract," which is essentially a blockchain-based computer program. Intelligent contracts handle all documents, tasks, estimates, and payments related to Sukuk, leaving an indelible audit trail at every stage (Blossom Finance, 2019).

In addition to Sukuk issuance, the philanthropic sector will benefit from blockchain technology. There are numerous advantages that can be shared and created, and it is even possible to argue that blockchain technology can increase the philanthropic sector's efficiency. As some current charity crowdfunding has opened options for cryptocurrency, among them are new crowdfunding platforms such as bitgive, bithope, and helperbit, which allow donors to make bitcoin donations to selected charities for their fundraising campaigns (Lamb, 2018), some people refer to this activity as crypto-philanthropy. New revenue stream data for charities is one of the true benefits of increasing crypto-philanthropy. This system is beneficial since making direct cryptocurrency donations to charities is reasonably simple. According to studies, crypto-asset providers want more control over their distribution and more transparency about their impact (Lamb, 2018).

This technology has the potential to enable the recording of waqf events in addition to charity activities. There are many key reasons why blockchain



would be extremely useful for tracking waqf activities. First, waqf is a fixed philanthropic asset, while blockchain allows for a more versatile and permanent recording of waqf. Second, since the use of properties or waqf funds can be complicated when recording waqf, a decentralized recording would be able to provide more protection due to its possible resistance to data alteration (Umam, Putra, & Hany, 2020).

One company utilizing blockchain technology on waqf, Fonterra, Fonterra Endowment (Waqf) Chain, is the world's first philanthropic blockchain. Since it is based on the Waqf instrument, it must adhere to Shariah compliance. They used a crowdfunding platform that uses Blockchain technology to build smart contracts. These smart contracts would be tied to specific Waqf initiatives. Mr. Hamid Rashid, Fonterra's Chief Executive Officer, claims that "We're trying to change the financial terrain in its approach to crowdfunding and Waqf development." The Waqf Blockchain's operation is defined as a structured transaction in which (i) the tokens are backed by real assets, (ii) the tokens receive dividends, and (iii) the tokens are transferable. It is supposed to be the first successful Waqf on a Blockchain project (Finterra, 2018).

In the longer term, cryptocurrency technology has the potential to broaden financial inclusion by providing safe and affordable payment alternatives, and the implications could have an impact on financial market infrastructure for a secure, accurate, and fast transaction settlement method (Yuneline, 2019). Increased data collection and transparent distribution would aid the Islamic economic sector's growth, with the aim of having a positive effect on the Islamic economy's future.

## CONCLUSION

Cryptocurrencies offer several advantages, but they also have risks. For example, cryptocurrencies have no intrinsic value, which can lead to price volatility and bubbles. As a result of its high price volatility, This is where the term "speculation" comes into play.

Some cryptocurrencies have indeed been developed to address the issue of cryptocurrency non-compliance with Sharia law. Like OneGram, one of the cryptocurrencies that can be classified according to sharia because it



is supported by physical assets, namely gold, so it has intrinsic value and reduces high price volatility. The most pressing issue in the Islamic financial structure of Muslim societies is the compatibility of cryptocurrencies with Islamic sharia law. One of the things that need to be considered is related to every aspect of business, operations, and management that must comply with Sharia principles, ethical standards, and local laws and policies, in addition to regulations that exist in cyberspace.

When cryptocurrency complies with sharia law, it will be more widely accepted, particularly in Muslim populations and countries. The potential of cryptocurrency technology can be easily used to create Islamic economic products and have a positive impact on the global economy, particularly in the context of welcoming a modern Islamic economic order that is beneficial to all parties involved and realizing a better future for the Islamic economic community.



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