

The Application of Islamic Legal Maxim of Blocking Evils is Precedenced than Taking Benefits in Cryptocurrency Market: Evidence from Treynor and Jensen Method

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ABSTRACT

This practical analysis and investigated research of the performing cryptocurrency investment during the January 2019-September 2021 period. This study is evaluating five cryptocurrencies within global Cryptocurrencies market. Treynor and Jensen Index are utilized to measure each cryptocurrencies operation in the crypto currencies market. Moreover, the analysis of Islamic Legal maxim of blocking evils is precededenced than taking benefits in Cryptocurrency Market is applied. The Treynor and Jensen Index analysis approach is used to evaluate performance among the five cryptocurrencies, namely; Bitcoin (BTC), Ethereum (ETH), Binance Coin (BNB), Tether (USDT) and Cardano (ADA). The results of Treynor index indicate cryptocurrencies, namely; Tether (USDT), Ethereum (ETH), Cardano (ADA) assets carried the has a positive value means the performance of cryptocurrency is good as compare other Cryptocurrencies. However, the results of Jensen index show the four crypto assets, namely; Bitcoin (BTC), Ethereum (ETH), Tether (USDT), Cardano (ADA) have a negative Jensen value, these indicates the cryptocurrencies have low returns. The finding of the result from the analysis of the of Islamic Legal maxim of preventing evils is better than attracting benefits suggest to avoid cryptocurrency investment is priority rather than taking benefit from cryptocurrency investment

Keywords: Cryptocurrencies Investment Performance; Treynor Index, Jensen Index; The Islamic Legal Maxim

INTRODUCTION

In this digitalization era, there are various investment platform and option for investors to distribute their funds and own resources for future saving and income. These modes of investments can be made only by using financial technology. Technology is increasingly advanced and developed brings to the latest innovation in the form of the emergence of crypto currencies. According to (Valdeolmillos, Mezquita, González-Briones, Prieto, & Corchado, 2020) crypto currency is a series of cryptographic mechanisms in which the transaction based on ledger data and balance sheet. The form of crypto currency as an electronic data and it does not a physical form, such as money. The similar to the hard

currency, crypto currency is a function of payment tool among group members of the social internet. However, Cryptocurrencies have several advantages over fiat money. Among these are decentralized type of currency, in which the underlying system is based on a complex network of interconnected users. The cryptocurrency cannot be manipulated, especially in terms of overprinting paper money (Corelli, 2018).

Cryptocurrencies have becoming a global phenomenon today. Based on the results of the Global Web Index Survey, around 10% of Indonesian internet users have digital currency. The Indonesian Commodity Futures Trading Regulatory Agency (Bappebti) had announced crypto as legal

trading through regulation number 5, in 2019. The legal recognizes bitcoin, Wrapped Bitcoin, Ethereum, Litecoin, Tether, and others as commodities. It leads to the huge number of transactions of cryptocurrency is almost IDR 470 trillion as of July 2021. The majority investors of crypto currencies in Indonesia are millennial, equal to 90% of Investors of Cryptocurrency. Even though, currently the COVID-19 pandemic situation, as reported by central bank of Indonesia the outbreak of the Corona Virus (COVID-19) had a tremendous influence on all aspects of life, including the global economy in 2020 (Bank Indonesia, 2020). On the other hand, the COVID-19 situation can be an element that strengthens cryptocurrencies' investment extra significant level in the financial industry and economic system. Investors are not merely focused on the bitcoin crypto asset, however, there are several popular assets, such as Ethereum, Binance Coin, XRP, Dogecoin, Tether, Cardano, Polkadot, Bitcoincash and Litecoin. The price of the crypto currency, such Bitcoin and others are rapidly changed by goes up and goes down, depend on the events and moments (Carrick, 2016).

This situation is observed by finance theories, in which the Market efficiency has been the major debate in traditional finance for a long time. It emphasizes that the prices are rationally connected to many logical and psychological investors in decision making. These are always incorporate all available information's in the market. The investment portfolio or securities are efficient due to sufficient enough of information of individual investors during selecting stocks or portfolio in stock market. The Market efficiency is primary condition that bring the market towards competitiveness and market equilibrium condition. The profitability of stocks or portfolio is not generated from the certainty group and there is no speculative and uncertainty condition in the market. The issue of efficiency is very important in emerging market for the several reasons; investment accelerate and to remove the

barriers of international equity investment (Maiti, 2020).

To measure the performance of cryptocurrencies cannot merely understood from the cryptocurrency return, however the investors should be considered the investment risks. There are several instruments to evaluate the portfolio and it is used by fund manager to assess the financial portfolio performance of financial managers, namely; Treynor and Jensen. These two performance measures are used to evaluate financial risk and return of financial models for the future returns and risks based on the past data (French, 2003).

Another factor to evaluate the portfolio is Islamic legal rules, since these legal rules are mainly enacted to organize people's lives in normal conditions and bring them to the eternal happiness. The spirit of Islamic legal axiom is justice and preventive the mafsadah (harm) exist, include investment decision. However, Investment is permissible or prohibited depend on the logical reasoning of the investment form. Whenever an investment form change happens, the law has taken account of such a change whether by enacting a new rule or by modifying an existing one. The debate on the legal maxim is focused on situations of conflicting harms of cryptocurrency investment. Nevertheless, the fiqh legal's rules deals with the contemporaneous cryptocurrencies debate both *maslahah* (benefit) and *mafsadah* (harm). According to the fiqh's rules, first choice is given to remove off evil rather than taking benefit. it can be taken from the prohibition of gambling; The Qur'an mentions the reason for banned the gambling as narrated in the holy Quran Surah Al Baqarah as follows:

"If they ask you (O Muhammad SAW) concerning alcoholic drink and gambling, say: "In them is a great sin, and (some) benefits for men, but the sin of them is greater than their benefit".... (QS. Al Baqarah: 219)

This qur'anic verse views as a proof that if there is evil which is refer to the word

harm (mafsadah), the evil should be removed, since the harmful elimination is gaining the benefit (maslahah). As explained by Imam Al Ghazali in his work "al-Mustashfa min 'Ilm al-Ushul", a benefit (maslahah) is the preservation of the maqsud (objective) of the law (sharia) which consists of five things: preservation of religion, of life, of reason, of descendants and of property. What assures the preservation of these five usul (principles) is maslahah and whatever fails to preserve them is mafsadah and its removal is maslahah". The permissibility of legal rules or halal, mubah or other permissibility forms in fiqh or forbidden are preventing injuries. The factors for choosing the useful investment instrument or harmful investment instrument should be based on the Shariah.

In fact and reality cryptocurrency, particularly Bitcoin returns have higher average volatility than gold and currency such as USD (Shaikh, 2020). The harmful investment of cryptocurrency remains exist, even though the price and market cap of cryptocurrency assets are getting higher and higher (Rouhani & Abedin, 2020). Among these harmful for cryptocurrency transaction is the cryptocurrencies as a tool for money laundering (Dupuis & Gleason, 2021). In order, the previous study found cryptocurrencies, especially Bitcoin is explicitly used for speculative investment (Shaikh, 2020). For that reason, in this study, the selection of cryptocurrencies is grounded on the top 5 (five) cryptocurrencies in accordance to finance.yahoo.com and these cryptocurrencies have been listed on Indodax. The Indodax exchange was used, for the reason that Indodax is the largest crypto asset marketplace in Indonesia. In addition, the research is applicability for Islamic Legal maxim of preventing evils is better than attracting benefits in Cryptocurrency Market.

LITERATURE REVIEW

Investment is focus on the opportunity for gaining asset in future. Investment

involves making investment decision of the money, funds and asset. furthermore, investment is about spent and the potential gain from that expenditure. The investment view examines a project or business, taking into justification the factors which make the investment attractive (Handa, Pagani, & Bedford, 2019). In the digital age, many investors are very gorgeous to cryptocurrency investment for several reasons. The cryptocurrency, such as Bitcoin have legitimate purposes in mind of investor for investment or payment for goods and services (Dupuis & Gleason, 2021). Cryptocurrency as an asset that unbound to regulation, decentralized, peer-to-peer cryptocurrency enabling users to process transactions without commercial banking transaction, but the transaction through digital units of exchange (Gerritsen, Lugtigheid, & Walther, 2021). The cryptocurrency take advantage of market growing because more investors are investing their money in cryptocurrency market (Valdeolmillos et al., 2020). Investors are investing in cryptocurrency for diversification asset allocation and financial developments and speculative investment (Shaikh, 2020). The preference of investors for cryptocurrency, for example Bitcoin, Ethereum and others crypto can be explained by the fact that, unlike conventional currencies, Bitcoin, Ethereum and others crypto are fully decentralized and independent of any central authorities; Bitcoin, Ethereum and others crypto also have an investment attractiveness that are reflected in its increasing acceptance and trust; furthermore, the decreasing transaction costs and uncertainty for investors increase investment (Bouri, Molnár, Azzi, Roubaud, & Hagfors, 2017). Meanwhile, the relationship between risk and expected return on a crypto investment is linear relationship. This means that the greater the expected return, the greater the level of risk that investor must be considered.

The existing of an dynamic and flourishing capital market is always

important for the country to be acclaimed as a factor for economic development and a signal for international development in the countries. In many developed countries, a financial market as a platform for most investments conducted. The active participation of people in the stock market ensures the life of the capital market and sustainable development of the country. The most important issue faced by investors in these markets is the decision to choose the appropriate securities for investment to make optimal portfolio decision. Therefore, optimal portfolio selection is one of the most significant issues in finance. According to the efficient market hypothesis (Fama, 1965); The price of asset reflects all available information. Consequently, there is no investor can misuse any information to make abnormal returns of portfolio investment. The form of market efficiency depends on the particular series of available information reflected in prices. The stock returns are independent and no investor cannot predict future return based on past information. Therefore, profitable trading strategies using historical information do not exist. Therefore, the stock market reacts immediately and fairly to any type of information (Hkiri, Bejaoui, Gharib, & Al Nemer, 2021). The hypothesis is that asset prices reach equilibrium when all market participants have complete information (Kang, Lee, & Park, 2021).

The theory of portfolio selection was created by Markowitz in 1952. Markowitz established on the basis of optimizing the risk and return of a portfolio of several financial assets. The main task of the portfolio selection model was to allocate cash between different portfolios in such a way that risk and return on the portfolio would be optimized (Alinezhad, 2018). The Markowitz has proposed the idea on the optimal portfolio selection. In the complex and crisis financial markets, there usually exist more specific requirements, such as (1) multi-period portfolio selection should be considered to tackle the constantly dynamic financial

markets; (2) the practical constraints should be considered, including transaction costs, trading rules constraints, securities types constraints, market securities constraints and some others; (3) the optimal portfolios are often sensitive to the estimation errors of sample parameters' mean value and deviation; (4) the future return and risk of a security cannot be forecasted with high performance in case of there is not enough sample data. (Zhang, Li, & Guo, 2018)

In fact, and reality of Modern Portfolio Theory (MPT) and the Efficient Markets Hypothesis (EMH) have had considerable influence over portfolio management strategies. The model portfolio was compared to other popular investment alternatives. Using generally-accepted rules-of-thumb in financial planning, the model portfolio was found to have provided an adequate retirement income for the subject couple (Fischer, 2019). Some of the other strategies moderately exceeded the returns of the model portfolio. The significance of diversifying analysis among asset classes, and of rebalancing portfolios through dynamic asset allocation, included cryptocurrency assets.

Treynor ratio is to measure volatility model, it is also a measurement of the returns earned in excess of that which could have been earned on an investment that has no diversifiable risk (e.g. Treasury bills or a completely diversified portfolio) per each unit of the market risk assumed. It can be applicability in cryptocurrency investment, since the Treynor ratio is related to the excess return over the risk-free rate to the additional risk taken; however, systematic risk is used instead of total risk. The higher the Treynor ratio, the better the performance of the portfolio under analysis (Tajdini, Mehrara, & Tehrani, 2021). Treynor (1962) defines the expected portfolio risk premium μ as the present value of the portfolio risk premium, and he derives the linear relation between risk and expected return (French, 2003). The Treynor ratio is the ratio of the excess return to the systematic risk of that return. The

Treynor ratios can be based on either ex ante or ex post excess returns and standard deviations (Pilotte & Sterbenz, 2006). In the reality of the financial market of cryptocurrency trading has attracted a large number of investors. A majority of the cryptocurrency investment cases, the primary goal of investing in the cryptocurrency market(s) is to gain maximum profits. It offers a wide scope to the constantly changing cryptocurrency market frictions and therefore, to the individuals associated with it. As compared to conventional financial approaches such as savings or fixed deposits, cryptocurrency investment in the crypto market may raise opportunities for increasing the expected returns. While careful investment and trading can be beneficial, such markets may worsen and bring loss of valuables as well. This induces that cryptocurrency valuation should be carried out before the investment; it can be considered as the process of identifying intrinsic cryptocurrency price value.

A popular performing mutual funds is Jensen's measure. The fund manager may be able to identify stocks that are overvalued or undervalued relative to the security market line (Chen & Jang, 1994). The Jensen ratio is its assumption that investors have a well-differentiated portfolio and that choice of market index is critical in measuring a portfolio's investment performance (Kim, Mattila, & Gu, 2002). According to Jensen (1968), The problem of finance has been evaluating the performance of portfolios of risky investments. The portfolio concept of performance has two distinct dimensions:

- 1) The ability of the portfolio manager or security analyst to increase returns on the portfolio through successful prediction of future security prices, and
- 2) The ability of the portfolio manager to minimize (through "efficient" diversification) the amount of "insurable risk" born by the holders of the portfolio. The

theoretical market portfolio should contain the entire spectrum of risky securities.

Preventing evils is better than attracting benefits In Islamic law this absoluteness is provided by the stipulation that benefit (maslahah) must aim at the subsistence of life in this world in such a way as not to harm life in this world and the next world. Imam al-Tufi states that the Sharia forbids any harm to be caused to people except as a result of legal measures which require special proofs. Activities that are intended to make evils (mafsada) are considered as 'bad actions (Hattach, Ezziti, & Hmidi, 2020). The Benefit (Maslahah) aims at preserving maqasid al Shari'ah and failure to do so may lead to harm. In Islamic economics and finance, particularly in Investment, the possible harm and potential maslahah that need to be looked into by all investors. As a simple explanation, Investors are more concerned on the return of their investments, included cryptocurrency investments. Therefore, investor should be attention to more prevention of harm rather than benefit (maslahah). They is relevant legal maxims, which are originally taken from the majallah al Ahkam Al Adliyah (The Mejelle, 1876) as Repelling harm is preferable to attaining benefit (Hasan & Asutay, 2009).

Therefore, this study is attempt to illustrate how harm can be repelled in the Investment decision by applying the legal maxims as blocking evils is better than attracting benefits.

RESEARCH METHOD

Research method is completely required in this study. While the research method relies on the collection and analysis of numerical data to describe a phenomena of the study. In order, to explain and predict of control variables. In this study is use quantitative research to descriptive research that attempts to collect quantifiable information for statistical analysis of the population sample. The purpose of descriptive studies is to describe, and

interpret, the current conditions of cryptocurrency market. Since, in descriptive study to investigate the phenomenon of cryptocurrency as it exists naturally; no attempt is made to manipulate conditions (Creswell, 2013).

In this field of study is used secondary data. For the reason that secondary data analysis is an ideal focus on crypto currency market using existing data sets. The data collection process is informed by real condition of cryptocurrency market. The data is obtained from the weekly historical data of cryptocurrencies registered with Indodax in the period January 2019 – September 2021 in Coinmarketcap. This research is utilized purposive sampling, since the primary objective in purposive sampling is the source of the information can provide the best information to realize the target. The purposive sampling is extremely useful to construct a historical reality, describe a phenomenon or develop something about which only a little is known. This sampling is selected based on a predetermined;

1. The crypto assets have been registered on Indodax.com in the period January 2019-September 2021

2. Cryptocurrencies are selected in the top five according to financeyahoo.com

Therefore, Based on the considerations and purposive sampling criteria above, of the 133 types of cryptocurrencies listed in Indodax. This study is merely used 5 types of cryptocurrencies, which are as follows:

No	Type of Cryptocurrencies	Website
1.	Bitcoin (BTC)	https://indodax.com/market
2.	Ethereum (ETH)	https://indodax.com/market
3.	Binance Coin (BNB)	https://indodax.com/market
4.	Tether (USDT)	https://indodax.com/market

5.	Cardano (ADA)	https://indodax.com/market
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This paper is measurement performance of cryptocurrency asset, which is utilized the Jensen and the Treynor ratio. To be a proper generalized measure, it has to conserve the same key economic and mathematical properties as the original single index measure, and also to ease comparison of portfolios across asset pricing models (Hubner, 2005).

Treynor analysis

The Treynor ratio uses to measure portfolio performance, that relates the expected total return of every traded security or portfolio i to the one of the market portfolio m , the mathematical equation presented by Treynor method (Hubner, 2005) as follow :

$$E(R_i) = R_f + \beta_i [E(R_m) - R_f] \quad (1)$$

where $E(R_i)$ denotes the unconditional continuous expected return, R_f denotes the continuous return on the risk-free security and $\beta_i = \frac{\text{cov}(R_i, R_m)}{\sigma^2(R_m)}$ is the beta of security i .

This equilibrium relationship corresponds to the market model:

$$r_{it} = \alpha_i + \beta_i r_{mt} + \varepsilon_{it} \quad (2)$$

where $r_i = R_i - R_f$ denotes the excess return on security i . if the CAPM holds and if markets are efficient, α_i should not be statistically different from 0.

When considered in the context of portfolio management, the econometric specification of equation (2) translates into an ex-post measure of excess return:

$$\bar{r}_i = \alpha_i + \beta_i \bar{r}_m \quad (3)$$

where $\bar{r}_i = \frac{1}{n} \sum_{t=1}^T r_{it}$ is the average return of the security over the sample

period $(0, T)$ and the econometric methodology leading from (2) to (3) ensures that $E[\varepsilon_i] = 0$.

Jensen analysis

Mathematically, the Jensen ratio is described as:

$$(R_{(i,t)} - R_{(f,t)}) = \alpha_{(i)} + \beta_{(i)}(R_{(m,i)} - R_{(f,i)}) + \varepsilon_{(i,t)}$$

Where $R_{(i,t)}$, the return on the i th portfolio at time t ; $R_{(f,t)}$, the risk-free rate of return at time t ; $\alpha_{(i)}$, the Jensen Index (or alpha) measure of performance; $\beta_{(i)}$, the beta or systematic risk of the i th portfolio; $R_{(m,t)}$, the return of market portfolio at time t ; and $\varepsilon_{i,t}$, the random error terms with $E(\varepsilon_{i,t}) = 0$. (Kim et al., 2002)

RESULT & DISCUSSION

Average investment Return of cryptocurrencies at table 1 provides descriptive statistics of the weekly return of each cryptocurrency asset of the Indodax market, as follow:

Table 1 : The average Return of cryptocurrencies

Cryptocurrency	Average investment return
Bitcoin (BTC)	-0,02004
Ethereum (ETH)	-0,01166
Binance Coin (BNB)	0,00159
Tether (USDT)	-0,04180
Cardano (ADA)	-0,00132

Source: Data Analysis 2021

The average market return of cryptocurrency (R_m) is the change in the cryptocurrency market index as calculated in the a percentage, in which calculated by the recent market index compared to the market index of the last year. The result as follow;

Table 2 : The average Market Return of cryptocurrencies

Average of Return Market (CRIX)
0,24243

Source: Data Analysis 2021

The beta is a tool to measure of systematic risk, should be measured with reference to the true market portfolio (Kim et al., 2002). Moreover, the Beta (β) measures the deviation of the yield of cryptocurrencies' performance against market yields. The result of Beta (β) of this study is presented:

Table 3 : The Beta (β) Result

Cryptocurrency	Beta Result
Bitcoin (BTC)	0,00268
Ethereum (ETH)	-0,00044
Binance Coin (BNB)	-0,00148
Tether (USDT)	-0,00172
Cardano (ADA)	-0,00110

Source: Data Analysis 2021

In choosing the Treynor method for analysing dan calculating towards a portfolio's risk-adjusted implementation, it is assumed that cryptocurrencies are priced based on the CAPM. The Treynor method uses the past average return as basis for the expected return and Beta (β) as a measure of risk. The Beta (β) shows the dimension of the change in return of a cryptocurrency investment towards changes in market returns. As investment risk measurement, the Beta (β) is used in general context, as cryptocurrency price fluctuations are influenced by market fluctuations. When a crypto asset has a Beta (β) < 1 is mean less peril than market risk. In the other side, a crypto currency has a Beta (β) > 1 is meaning that possess a grater systematic risk then market risk. Investment return of cryptocurrency is considered as a good method for investment forecasting, as long as the market efficiency market hypothesis assumption is working properly.

Based on the table below, the value of three cryptocurrencies; namely ; Ethereum (ETH), Tether (USDT), Cardano (ADA) assets, based on the Treynor index have the return above the average return of cryptocurrencies market, this indicates that the performance of the cryptocurrencies is above the market average. The result of the Treynor Ratio has a positive value means the performance of cryptocurrency is good, and the higher the value of the Treynor Ratio the better the crypto performance. However, the two cryptocurrencies namely ; Bitcoin (BTC) and Binance Coin (BNB) are showing values below the market average. As the performance of cryptocurrency is not good. The result of Treynor ratio as presented;

Table 4 : Treynor Index Output

Cryptocurrency	Teynor Ratio
Bitcoin (BTC)	-7,46507
Ethereum (ETH)	26,77525
Binance Coin (BNB)	-1,07417
Tether (USDT)	24,32314
Cardano (ADA)	1,20023

Source: Data Analysis 2021

Unlike the Jensen method for evaluating cryptocurrency performance, the result shows that of the four crypto assets, namely; Bitcoin (BTC), Ethereum (ETH), Tether (USDT), Cardano (ADA) have a negative Jensen value, these indicates the cryptocurrencies have low returns. The result is expressed merely Binance Coin (BNB) has positive value, which is described the value of investment return of cryptocurrency is greater than the expected return of the market

Table 5 : Jensen Index Output

Cryptocurrency	Jensen Ratio
Bitcoin (BTC)	-0,02058
Ethereum (ETH)	-0,01157
Binance Coin (BNB)	0,00189

Tether (USDT)	-0,04145
Cardano (ADA)	-0,00110

Source: Data Analysis 2021

Nowadays, most investors are selected cryptocurrency as an instrument of investment, however the performance of crypto has been evaluating from multi-index asset pricing models use Treynor and Jensen's have benefits for investment. There exist some benefits of these investment return of cryptocurrency performance measures to multi-index model. In the context of Islamic law (fiqh) cryptocurrency assets provides harmful conditions under which greater uncertainty. since, the uncertainty (Gharar) risk in Islamic investment is measured on the basis of zero-sum game with uncertain payoff.

CONCLUSION

In Conclusion, referred to the study and the data analysis of the previous chapter, the following conclusions can be established:

The results of the performance of the five cryptocurrency assets using the Treynor method can be concluded that of the five cryptocurrency assets there are three cryptocurrencies that perform well, namely Ethereum (ETH), Tether (USDT), and Cardano (ADA). Meanwhile, cryptocurrencies that have a value (performance) below the market average are Bitcoin (BTC) and Binance Coin (BNB). The performance of the five cryptocurrency assets using the Jensen method is only a crypto asset that has a positive value, namely Binance Coin (BNB). While the other four cryptocurrencies have negative values, namely Bitcoin (BTC), Ethereum (ETH), Tether (USDT), and Cardano (ADA), which shows that these cryptocurrencies have relatively low returns. The Bitcoin is merely a speculation asset not for investment, has speculative a profit and not a profitable business. Bitcoin as an investment closer to gharar or speculation bring to damage . Therefore, To avoid cryptocurrency investment is priority over

taking benefit from crypto currency investment. This is in line with the axiom of fiqh, which is the preference is given priority to remove a harmful. since cryptocurrencies asset as providing income through face demand, and moreover cryptocurrencies promise high income to investors with close to illegal activities, such money laundering (Dupuis & Gleason, 2021) .

SUGGESTIONS

As a matter of fact, according to the axiom of fiqh, which is the importance is given to remove evil over the acquisition of benefit. To avoid cryptocurrency investment is priority over taking benefit from crypto currency investment. For the government should be provide strong rule and regulation to cryptocurrency investment to prevent the loses and fake investment, as the end of reality Islamic society will responsibility to loss and damage. the study on crypto currency from other perspective of Islamic law should be improved to contribute Islamization of knowledge and to harmonize the fiqh with the modern financial instrument. The end of the time, Islamic financial transaction could be solution to Islamic ummah. The number of samples in the study by using other cryptocurrency assets can be further contribution to contemporary Islamic financial transaction.

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