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A COMPARATIVE ANALYSIS OF RETURNS AND RISK CHARACTERISTICS OF SHARIA-COMPLIANT TRADITIONAL AND DIGITAL ASSETS: EVIDENCE FROM THE BAHRAIN ISLAMIC INDEX (BIX) AND ISLAMIC COIN

This study compares the Bahrain Islamic Index and Islamic Coin from November 2023 to July 2025. Islamic Coin outperformed the BIX, achieving higher returns (0.1011% vs. -1.4239%) with lower volatility (0.35145% vs. 7.12193%). Statistical tests confirm significant differences in returns and risk. Overall, Islamic Coin exhibits a superior risk–return profile.

Keywords: *Islamic equities; Islamic cryptocurrencies; return; risk; BIX index; Islamic Coin.*

The relationship between return and risk is one of the main determinants of investment decisions. Investors always seek to make investment decisions that ensure a trade-off between these two variables. Financial literature has confirmed that this relationship is proportional, whereby high-risk investments yield high returns and

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vice versa. In this regard, the risk–return trade-off has attracted growing scholarly attention from an Islamic finance perspective, particularly with the emergence of investment instruments that comply with Islamic Sharia principles, such as Sharia-compliant cryptocurrencies and Islamic equities.

Islamic equities have contributed significantly to the expansion of global financial markets. These equities have successfully penetrated developed markets and are no longer confined to emerging or developing economies. Their widespread adoption is largely attributed to their strong performance, particularly during periods of financial crisis, their resilience in adverse market conditions, and their capacity to generate returns that are competitive relative to conventional equities (Hassan et al., 2021). Moreover, Islamic equities have emerged as a valuable instrument for portfolio diversification. Nevertheless, they remain subject to systematic risks and may encounter certain legal and regulatory constraints that can pose challenges to the diversification process (Aloui et al., 2015).

Conversely, the rapid growth of financial markets over the past decade has been largely driven by technological innovation, which has facilitated the emergence of a new class of investment instruments known as cryptocurrencies. These digital assets are fundamentally characterized by decentralization and the absence of centralized authority. However, their rapid diffusion has generated substantial jurisprudential debate within Islamic finance regarding their compliance with Sharia principles. This debate primarily centers on whether cryptocurrencies satisfy key Islamic investment criteria, particularly the prohibition of *riba*, *gharar*, and involvement in unlawful or unethical economic activities (Bakar et al., 2017).

In response to the jurisprudential debate surrounding the permissibility of cryptocurrencies, various initiatives have emerged to develop Sharia-compliant digital currencies. These cryptocurrencies are typically designed to be backed by tangible assets or commodities possessing intrinsic value, in line with Islamic Sharia principles, which require currencies to be supported by real economic value (Oseni, Nazim, 2019).

The analysis of asset returns and risks represents a fundamental step undertaken by investors and portfolio managers prior to making investment decisions, with the objective of identifying asset combinations that are consistent with their risk preferences, investment objectives, and available financial resources. As Islamic equity indices and Sharia-compliant cryptocurrencies have increasingly become part of the investable asset universe and serve as instruments for portfolio diversification, it has become essential to rigorously assess their return and risk characteristics.

This study adopts a descriptive approach within the theoretical framework to present the fundamental concepts underlying Islamic equities and Sharia-compliant cryptocurrencies. The same approach is also employed to describe and interpret the empirical results obtained subsequently. In addition, the study relies on a quantitative approach for the empirical analysis.

This study is organized into two main sections. The first section presents the theoretical foundations of Islamic equity indices and Sharia-compliant cryptocur-

rencies, along with a review of the relevant literature. The second section provides an in-depth empirical analysis of the return and risk characteristics of the BIX index in comparison with the Islamic Coin cryptocurrency.

The Islamic stock index can be simply defined as an index that includes companies that comply with Islamic Sharia regulations. Companies listed on the Islamic stock index must comply with what are known as purification standards, which ensure that their activities and financial structures comply with Islamic Sharia principles (Suhendar, Suriani, 2025). Islamic equities represent ownership claims in the issuing companies that comply with Islamic Sharia principles. Such equities are certified as Sharia-compliant and exclude securities that confer special rights, such as preferred stocks (Boudt et al., 2019). Islamic cryptocurrencies refer to currencies that comply with Islamic Sharia principles, are based on blockchain technology, and may be backed by gold (Aloui et al., 2021). Islamic cryptocurrencies are gaining intrinsic value, which has made them attractive to Muslim investors, especially since they are considered stablecoins. Examples of these currencies include One Gram Coin (Ali et al., 2022), Token X8X, and Islamic Coin.

There are a number of studies that have attempted to analyze the risk-return trade-off of cryptocurrencies as well as traditional assets, most notably stocks. However, most studies have either focused on examining each traditional asset separately or comparing them (comparing traditional assets and cryptocurrencies), while some studies have attempted to analyze the return and risk of Sharia-compliant cryptocurrencies and Sharia-compliant stocks separately, without comparing them. M. Albaity & R. Ahmad (2008) attempted to study the returns and risks of the Islamic KLSI index compared to the traditional KLCI index of the Malaysian Stock Exchange. The results showed that there were no differences between them, especially in terms of risk-adjusted returns, and that both indices moved together in the short and long term, as indicated by causality tests and Johansen's cointegration test. Meanwhile, B. Abbes (2012) sought to analyze the returns and risks of 35 indices, ranging from conventional to Islamic indices, covering developed countries, emerging countries, and the Gulf Cooperation Council countries. The findings showed that there was no difference in average returns between conventional and Islamic indices, with the exception of Italy and Australia, while there was a risk of leverage for both indices. Furthermore, there were no differences in risk-adjusted returns, either during normal periods or during periods of crisis. A.-A. Ahmad et al. (2020) concluded that Islamic indices are less risky than conventional indices, with similar returns, while the results of the Treynor, Sharpe, Omega, and M2 performance measures showed that conventional indices outperform Islamic indices. The results of Jensen's Alpha and Sortino measures proved the opposite in a study conducted on 64 indices across multiple countries worldwide. S. Suryadi et al. (2021) examined the returns and risks of conventional and Islamic indices by comparing the JII and IDX30 indices of the Indonesia Stock Exchange. The study concluded that the returns of both indices fluctuated during the study period, while the risks were low, not exceeding 5% for both indices. However, the Sharpe ratio results revealed a significant difference between the two indices, with the IDX30 portfolio

outperforming the JII index. Meanwhile, L. Yukun & T. Aleh (2021) investigated the factors influencing the returns and risks of leading cryptocurrencies. Their findings indicate that cryptocurrency returns respond significantly to network-related factors, while their sensitivity to traditional asset prices and macroeconomic variables is only marginal. P. Yoyok & A. Ahmad (2021) stated that there is no difference between the returns of Sharia-compliant stocks and conventional stocks, while there is a difference in terms of risk, which is considered high for Sharia-compliant stocks compared to their conventional counterparts. In addition, Sharia-compliant stocks outperform conventional stocks, as indicated by the Sharpe ratio for measuring risk-adjusted performance. I. Barkai et al (2021) concluded that Bitcoin exhibits the highest risk–return ratio among the cryptocurrencies analyzed, outperforming both Litecoin and Ripple in this regard. N. Nomran & R. Haron (2021) demonstrate that the returns of Islamic stock indices initially declined but subsequently turned positive during the COVID-19 pandemic, whereas conventional indices remained negative both before and throughout the pandemic. Their analysis indicates that the pandemic exerted a significant negative impact on both types of indices, although the effect was less pronounced for Islamic stock indices compared to conventional indices, which underperformed across a sample that included indices from 15 countries. P. Wuthisatian (2022) confirmed, through a comparison between some leading cryptocurrencies such as Bitcoin and Ethereum and the S&P 500 index, the FTSE 100 index, the S&P TSX Composite index, and the Nikkei 225 index, that these currencies and indices move in the same direction, which has led to low returns. Furthermore, adding cryptocurrencies to a portfolio contributes to increasing both returns and risks. H. Grew (2023) explained in a study comparing 12 leading cryptocurrencies with the US dollar index, the S&P 500 index, and gold, that cryptocurrency returns are high compared to traditional assets, but they come with high risk, especially compared to the S&P 500 index, where the risk of the cryptocurrencies studied exceeded that of the latter by seven times. H. Neelam & K. Prasad (2023) concluded that there are substantial differences between the returns of cryptocurrencies, including Bitcoin, Ripple, and Cardano, and the SENSEX and NIFTY indices in India. Their analysis further indicates that cryptocurrencies are associated with high levels of risk, which may lead investors to prefer traditional stock market investments over digital assets, given the extreme volatility commonly observed in the cryptocurrency market. H. Ahmadi (2023) proved that the returns on cryptocurrencies represented by Bitcoin are higher than the returns on the Islamic stock index represented by the Indonesia Islamic Stock Exchange Index, as well as in terms of risk, as the risk of Bitcoin is higher than that of the Indonesia Islamic Stock Exchange Index. J. Zhou (2025) explained that Bitcoin returns are higher compared to the US dollar index, gold, the S&P 500 index, and the NASDAQ 100 index as traditional assets, but this is offset by higher risks. Furthermore, Sharpe ratio analysis has shown that a higher proportion of Bitcoin in a portfolio contributes to higher returns, but the risk-adjusted return will decrease if the proportion of investment in Bitcoin exceeds 20%. K. Sridevi & P. Adankar (2025) showed that cryptocurrency returns were high but accompanied by sub-

stantial volatility, indicating elevated risk, whereas returns on Indian stocks, which were compared with the ten most prominent cryptocurrencies, were moderate and stable, reflecting lower risk. Consequently, the choice between investing in these two asset classes depends on the investor's risk tolerance.

The purpose of this article is to analyze the returns and risks of a single Sharia-compliant cryptocurrency and compare them with those of a Sharia-compliant equity index. To the best of our knowledge, no previous study has undertaken such a comparative analysis.

Research methods. This study employs a quantitative comparative approach to analyze the return and risk characteristics of the Bahrain Islamic Index (BIX) and Islamic Coin using weekly data. Descriptive statistics were used to examine the main features of the return series. The Jarque—Bera and Kolmogorov—Smirnov tests were applied to assess data normality. Since the data were not normally distributed, the Mann—Whitney U test was employed to compare mean returns between the two assets. In addition, the Brown—Forsythe test was utilized to examine differences in return variances and risk characteristics.

EMPIRICAL ANALYSIS

This section presents an analysis of the returns and risks of the Bahrain Islamic Index (BIX) in comparison with a Sharia-compliant cryptocurrency, Islamic Coin, representing a comparison between a traditional financial asset and a digital one. Bahrain was selected due to its leading position in Islamic finance, particularly in the Islamic capital markets. Islamic Coin was chosen over other Sharia-compliant cryptocurrencies because of the limited availability of reliable data.

The study covers the period from November 3, 2023, to July 27, 2025, employing weekly frequency data to ensure consistency and comparability across all assets under investigation.

The starting date is determined by the launch of Islamic Coin on September 1, 2023. To mitigate potential biases associated with its early-stage market behavior, such as low liquidity, price instability, and initial speculative dynamics, the analysis begins approximately two months after its introduction.

This adjustment allows the study to capture a more representative and stabilized trading period, thereby enhancing the reliability of the empirical results

Returns analysis of the BIX Index and Islamic Coin. The following figure illustrates the return patterns of both the Bahrain Islamic Index and Islamic Coin.

As illustrated in Fig. 1, the returns of the BIX index exhibit considerable fluctuations over the study period. The series alternates between periods of relative stability and sharp increases and declines, indicating high variability in return behavior. This pattern may suggest the possible presence of volatility clustering, where periods of high volatility tend to be followed by further turbulent movements, while calmer periods are followed by relative stability. On average, BIX returns are negative, reflecting weaker performance over the sample period.

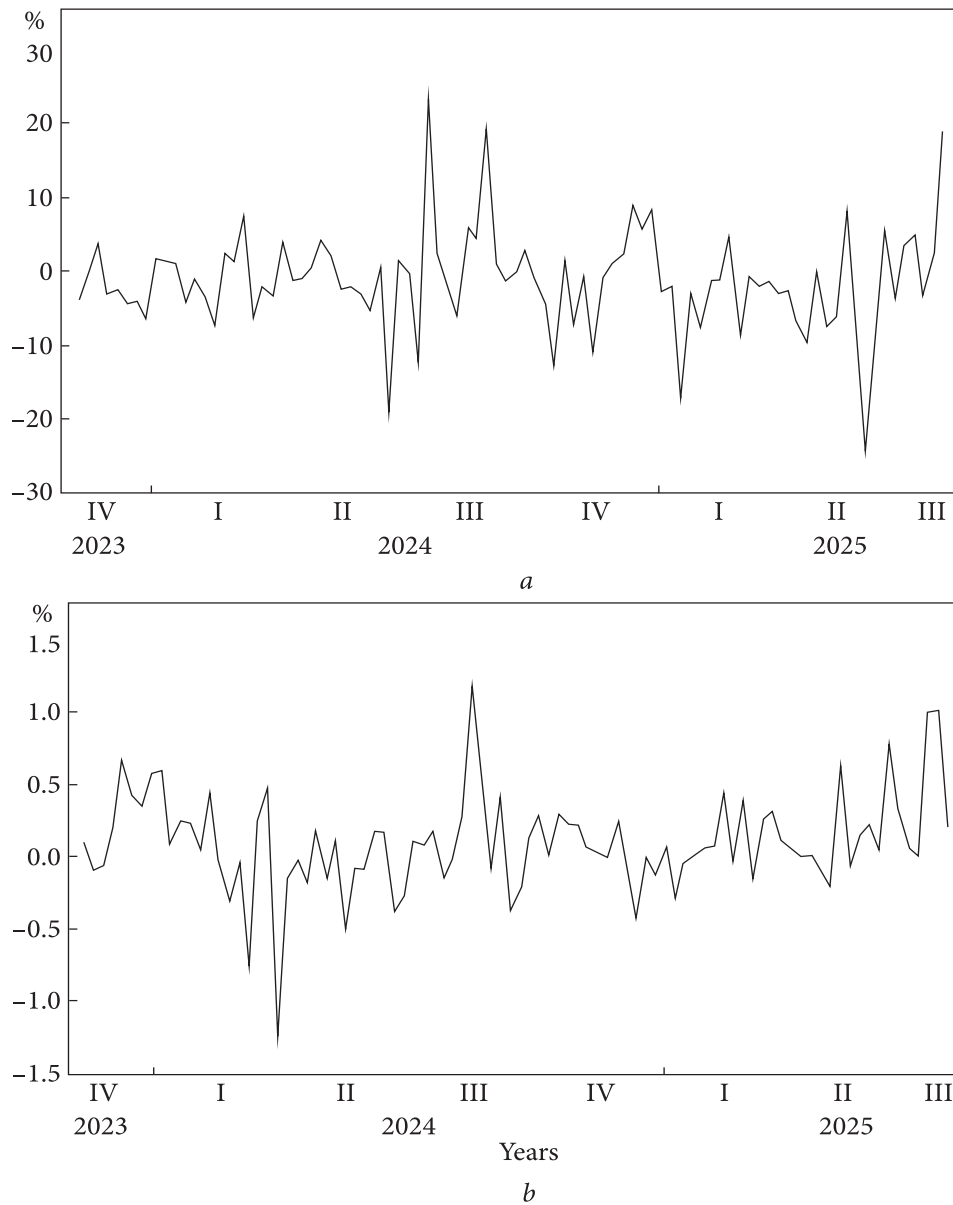


Fig. 1. The weekly returns patterns of the BIX index (a) and Islamic Coin (b), %
Source: completed by the authors based on EVIEWS.

In contrast, Islamic Coin also demonstrates noticeable return volatility; however, its movements appear comparatively smoother. The series shows a generally upward pattern over several periods, interrupted by occasional sharp declines. Unlike the BIX index, volatility in Islamic Coin does not appear to persist for extended periods, although this observation remains purely visual and should be interpreted with caution in the absence of formal volatility testing.

In aggregate, the figure suggests that both assets exhibit time-varying volatility, with BIX displaying more pronounced fluctuations, while Islamic Coin shows rela-

tively more stable dynamics and a more favorable average performance over the study period.

Descriptive Statistics of BIX Index and Islamic Coin Returns. Table 1 presents the descriptive statistics for the returns of the BIX index and Islamic Coin. Returns are computed using continuously compounded (logarithmic) returns, defined as

$$R_t = \ln \left(\frac{P_t}{P_{t-1}} \right),$$

where R_t denotes the return at time t ; P_t represents the closing price at time t ; P_{t-1} is the closing price at time $t - 1$. The logarithmic transformation is employed due to its desirable statistical properties, including time additivity and improved approximation of normality for financial time series.

Table 1 reports the descriptive statistics of weekly returns for Islamic Coin and the Bahrain Islamic Index (BIX) over the sample period. The results indicate a clear divergence in the return dynamics of the two assets. Specifically, Islamic Coin records a positive mean return (0.1011), whereas BIX exhibits a negative average return (−1.4239), suggesting that the Sharia-compliant digital asset outperformed its traditional counterpart in terms of raw returns over the period under investigation.

Despite this apparent outperformance, the risk profiles of the two assets differ substantially. BIX demonstrates a considerably higher standard deviation (7.1219) relative to Islamic Coin (0.3515). However, this disparity likely reflects differences in scale and underlying return-generating processes, rather than providing direct evidence of lower intrinsic risk in Islamic Coin.

The range of returns further underscores these differences. Islamic Coin exhibits relatively bounded fluctuations, with returns ranging from −1.27 to 1.20. In contrast, BIX displays a markedly wider range (−24.71 to 23.34), indicative of greater exposure to extreme market movements during the sample period.

From a distributional standpoint, both return series appear approximately symmetric, as evidenced by skewness coefficients close to zero (−0.034 for Islamic Coin and 0.253 for BIX), suggesting the absence of significant asymmetry. Regarding higher-order moments, Islamic Coin exhibits a kurtosis value of 3.63, exceeding the Gaussian benchmark of 3, thereby indicating leptokurtic behavior and the presence of fat tails. This finding implies a higher likelihood of extreme returns, a well-documented stylized fact in cryptocurrency markets. Conversely, BIX reports

Table 1. Descriptive statistics of BIX index and Islamic Coin returns

Descriptive statistics	Islamic Coin	BIX Index	Descriptive statistics	Islamic Coin	BIX Index
Mean	0.1011	−1.4239	Maximum	1.2	23.34
Variance	0.124	50.722	Skewness	−0.034	0.253
Standard Deviation	0.35145	7.12193	Kurtosis	3.63	3.049
Minimum	−1.27	−24.71			

Source: completed by the authors based on EViews.

a kurtosis value (3.049) close to that of a normal distribution, suggesting relatively moderate tail risk.

Taken together, these findings indicate that although Islamic Coin delivers higher average returns, it is characterized by non-normality and elevated tail risk. Alternatively, BIX reflects more conventional market behavior, albeit with larger absolute fluctuations. This contrast underscores the fundamentally distinct nature of Sharia-compliant digital assets relative to traditional Islamic equity indices.

Normality test of returns on the BIX index and Islamic Coin. The normality of return distributions for the Bahrain Islamic Index (BIX) and Islamic Coin was examined using the Jarque—Bera and Kolmogorov—Smirnov tests. The empirical results of these tests are presented in Tables 2 and 3.

The findings indicate that both Islamic Coin and the Bahrain Islamic Index (BIX) strongly deviate from normality. Specifically, the Jarque—Bera statistics are 32.0778 for Islamic Coin and 36.6704 for BIX, with corresponding p-values equal to 0.0000 in both cases. These results lead to a rejection of the null hypothesis of normal distribution at conventional significance levels.

This departure from normality is consistent with the descriptive statistics, particularly the presence of excess kurtosis in Islamic Coin and slight deviations from mesokurtosis in BIX. The results suggest that both return series exhibit non-Gaussian behavior, characterized by fat tails and potential extreme observations.

From an econometric perspective, these findings carry important implications. The violation of the normality assumption indicates that parametric tests relying on normal distribution assumptions may produce biased or misleading inferences. Consequently, the use of non-parametric methods, such as the Mann—Whitney U test for return comparison and the Brown—Forsythe test for variance equality, is both justified and methodologically appropriate.

Moreover, the observed non-normality is consistent with the well-established stylized facts of financial return series, particularly in emerging and digital asset

Table 2. Jarque-Bera test

Assets	Islamic Coin	BIX Index	Assets	Islamic Coin	BIX Index
Test Statistics	32.07782	36.67039	Probability value (<i>p</i> -value)	0.0000	0.0000

Source: completed by the authors based on EViews.

Table 3. Kolmogorov—Smirnov test

Assets	Islamic Coin	BIX Index	Assets	Islamic Coin	BIX Index
Test Statistics	0.103	0.108	Probability Value (<i>p</i> -value)	0.021	0.012

Source: completed by the authors based on SPSS.

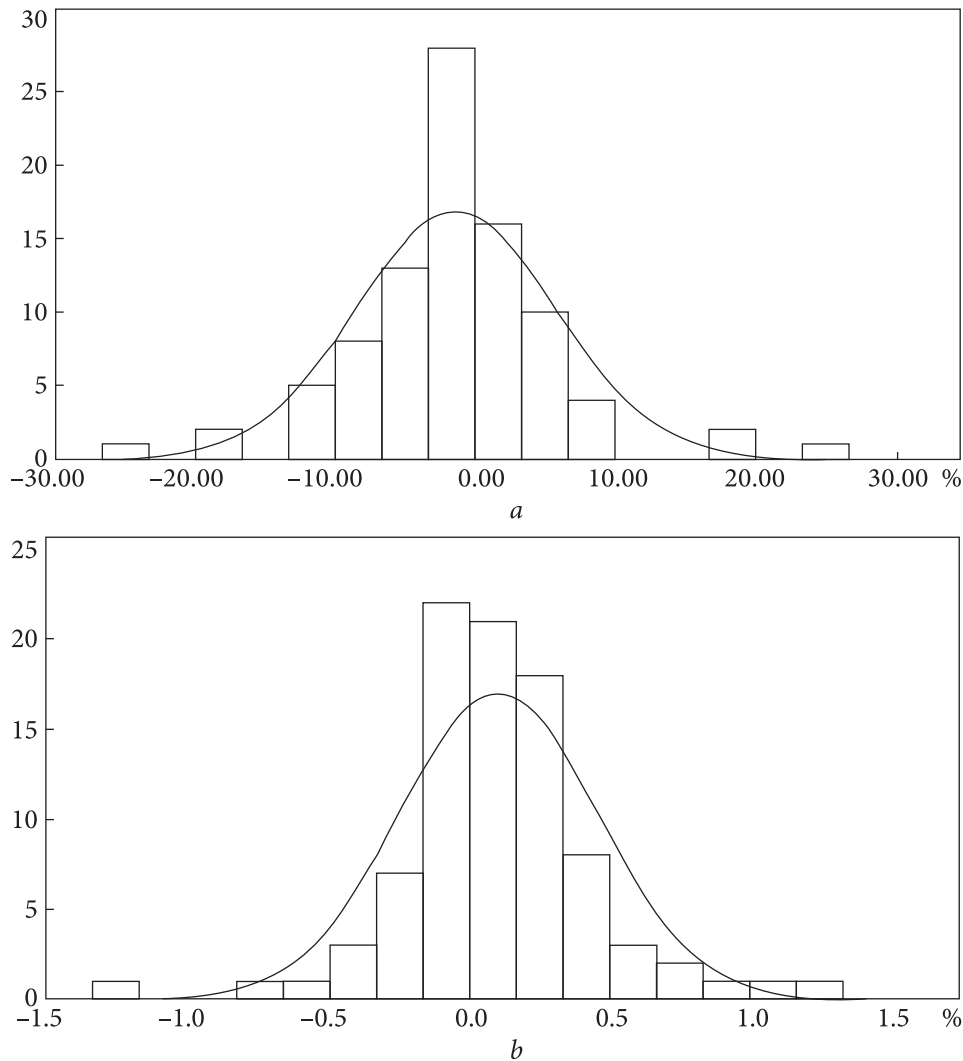


Fig. 2. Normal distribution of the weekly returns for the BIX Index (a) and Islamic Coin (b), %

Source: completed by the authors based on SPSS.

markets, where distributions are typically characterized by leptokurtosis and pronounced tail risk.

The findings from the Jarque—Bera test indicate that both Islamic Coin and the Bahrain Islamic Index (BIX) significantly deviate from normality, with test statistics of 32.0778 and 36.6704, respectively, and corresponding p -values below 0.01. This leads to a clear rejection of the null hypothesis of normally distributed returns for both assets.

These results are further corroborated by the Kolmogorov—Smirnov test. The KS statistics are 0.103 for Islamic Coin and 0.108 for BIX, with p -values of 0.021 and 0.012, respectively. As these p -values are below conventional significance levels, the null hypothesis of normality is again rejected.

In totality, the evidence from both tests provides robust corroboration that the return distributions of Islamic Coin and BIX are non-normal. This finding is consistent with the descriptive statistics, particularly the observed kurtosis values, which suggest the presence of fat tails and potential extreme observations.

Overall, the consistency between the Jarque—Bera and Kolmogorov—Smirnov results strengthens the validity of the empirical approach and is consistent with the broader literature documenting non-Gaussian behavior in financial and digital asset returns.

The following two figures further illustrate that the returns of both the BIX index and Islamic Coin do not follow a normal distribution.

Fig. 2 corroborates the findings of the Jarque—Bera and Kolmogorov—Smirnov tests. The return distribution of the Bahrain Islamic Index exhibits significant tail heaviness, indicating a clear deviation from normality and the presence of heightened tail risk.

In contrast, the distribution of Islamic Coin returns appears closer to normality, with only limited evidence of skewness. This indicates a comparatively more stable distributional structure, although it does not preclude the existence of higher-order risks not captured by second-moment measures alone.

Comparison between the returns and risks of the BIX index and Islamic Coin. This section presents a series of statistical tests conducted to compare the returns and risks of the BIX index and Islamic Coin.

Comparison between the returns of the BIX index and the Islamic Coin currency. This section presents a comparison of the returns of the BIX index and Islamic Coin, corresponding to a statistical comparison of means. Given that the Jarque-Bera test findings in Table 2 and the Kolmogorov—Smirnov test findings in Table 3 indicate that the returns of both assets do not follow a normal distribution, the use of a *t*-test is not appropriate. Instead, a non-parametric approach is employed, specifically the Mann—Whitney *U* test, which compares the distributions of ranks. The results of this test are presented in the following Table 4.

The results presented in Table 4 indicate that the null hypothesis of equality in return distributions between Islamic Coin and the Bahrain Islamic Index is rejected at the 5% significance level, as evidenced by a *p*-value below 0.05. This suggests the presence of a statistically significant difference in returns between the two assets over the study period.

Further evidence is provided in Table 5, which reports the mean rank values for both groups. Islamic Coin (Group 2) exhibits a higher mean rank of 102.51, compared to 78.49 for the BIX index (Group 1). This indicates that Islamic Coin generally occupies higher positions in the pooled return distribution, suggesting comparatively stronger performance in terms of return magnitude.

Importantly, this rank-based evidence is consistent with the previously reported Mann—Whitney *U* test results, which indicated a statistically significant difference in return distributions between the two assets. It also accords with the descriptive statistics, where Islamic Coin showed a higher average return over the study period.

Overall, the rank structure provides additional robustness to the conclusion that Islamic Coin and the BIX index exhibit distinct return behavior, with Islamic Coin demonstrating relatively stronger performance in terms of return distribution positioning.

These findings are consistent with the descriptive statistics reported in Table 1, where Islamic Coin displays a higher average return relative to the BIX index.

Overall, the results confirm that the return distributions of the two assets differ significantly, highlighting distinct performance dynamics between Sharia-compliant digital assets and traditional Islamic equity indices.

Comparison between the risks of the BIX index and Islamic Coin. This section presents a comparison of the risk associated with the BIX index and Islamic Coin, which corresponds statistically to a comparison of variances. Given that the Jarque—Bera test results reported in Table 2 and the Kolmogorov—Smirnov

Table 4. Mann—Whitney U Test

Statistics	Value	Statistics	Value
Mann—Whitney U statistic	2969.000	Z-value	–3.093
W-value for Wilcoxon	7064.000	Significance (two-tailed)	0.002

Source: completed by the authors based on SPSS.

Table 5. Mann—Whitney U Test Rank

Variable	Ranks			
	Groups	Number of Observations	Mean Rank	Total Ranks
Returns	01	90	78.49	7064.00
	02	90	102.51	9226.00
T o t a l		180		

Source: completed by the authors based on SPSS.

Table 6. Brown—Forsythe test

Test Statistic	Statistics	Degrees of freedom 1	Degrees of freedom 2	Probability value (p-value)
Based on the mean (W0)	71.679271	1	178	0.000
Based on the median (W50)	71.701151	1	178	0.000
Based on the trimmed mean W10	71.752759	1	178	0.000

Source: completed by the authors based on SPSS.

test results reported in Table 3 confirm that the returns of both assets do not follow a normal distribution, a non-parametric test is also employed for this analysis. Specifically, the Brown—Forsythe test is utilized to assess differences in variance between the two assets. The findings of this test are presented in the following Table 6.

Based on the results reported in Table 6, the Brown—Forsythe test indicates that the p -values associated with all three test statistics (based on the mean, median, and 10% trimmed mean) are below the 5% significance level. Accordingly, the null hypothesis of equality in return variances between Islamic Coin and the Bahrain Islamic Index is rejected.

This finding provides strong evidence of a statistically significant difference in return variability between the two assets. The consistency of the results across multiple measures of central tendency enhances the robustness of the inference and reduces the likelihood that the results are driven by outliers or non-standard distributional features.

In economic terms, the results suggest that the BIX index exhibits greater return dispersion compared to Islamic Coin, implying a comparatively greater level of risk over the study period. This conclusion is consistent with the descriptive statistics reported in Table 1, where BIX shows both a higher variance and standard deviation relative to Islamic Coin.

As a whole, these findings confirm the presence of heterogeneous risk structures between Sharia-compliant digital and traditional financial assets, highlighting important implications for risk assessment and portfolio allocation within Islamic finance markets.

These results are consistent with P. Yoyok & A. Ahmad (2021) regarding the higher risk associated with Islamic stock indices. The findings of the other previous studies differed completely from those of the current study. Most studies indicated higher returns on Islamic stock indices as well as higher risks associated with cryptocurrencies, even though they are conventional. Our study, on the other hand, found that the risks associated with Islamic stock indices are high and their returns are low. In contrast, the returns associated with the Islamic cryptocurrency selected as a case study during the study period were somewhat positive and the risks were low. This may be due to the Islamic characteristics of this currency, as it is concerned with both religious and economic aspects.

CONCLUSION

Investors today face a wide range of investment opportunities, ranging from traditional financial instruments such as equities to emerging digital assets such as cryptocurrencies. In response to financial innovation on the one hand and jurisprudential developments in Islamic finance on the other, Sharia-compliant investment instruments have emerged, enabling Muslim investors to allocate capital in accordance with Islamic ethical and financial principles. These instruments have increasingly demonstrated their ability to compete with conventional financial assets and have

gained relevance in global financial markets, particularly in light of advancements in financial technology.

A substantial body of financial literature suggests that the returns generated by Islamic investment instruments are not negligible and are often comparable to, or in some cases exceed, those of conventional instruments. A similar pattern is observed in terms of risk, where Islamic assets frequently exhibit relatively lower volatility.

Consistent with this literature, the empirical findings of this study indicate that Islamic Coin displays relatively low volatility and more stable return dynamics, suggesting its potential attractiveness for risk-averse investors.

The study yields several key findings, summarized as follows:

- Islamic Coin achieved a small positive average return of 0.1011%;
- Islamic Coin exhibited relatively low volatility, with a standard deviation of 0.35145;
- The BIX index recorded a negative average return of -1.4239%;
- The BIX index exhibited substantially higher volatility, with a standard deviation of 7.12193;
- Overall, Islamic Coin outperformed the BIX index in terms of both return and risk.

Despite these findings, the results should be considered in light of the relatively short sample period, which may constrain the robustness and generalizability of the conclusions. The study covers the period from November 3, 2023 to July 27, 2025, during which Islamic Coin remained in an early stage of market development. Consequently, the observed performance may reflect short-term market dynamics rather than long-term equilibrium behavior. Future market conditions and extended sample horizons may yield different outcomes.

In addition to the limited time horizon, the study is subject to further limitations, including the restricted number of assets analyzed and the relatively narrow set of empirical techniques employed. Accordingly, future research is encouraged to extend the analysis by:

- Expanding the study period to include longer and more stable market cycles, and incorporating a broader set of comparable Islamic and conventional assets;
- Employing more advanced risk measurement techniques, such as Value at Risk (VaR) and Conditional Value at Risk (CVaR), to provide a more comprehensive assessment of downside risk.

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ПОРІВНЯЛЬНИЙ АНАЛІЗ ХАРАКТЕРИСТИК
ДОХІДНОСТІ Й РИЗИКОВОСТІ ТРАДИЦІЙНИХ АКТИВІВ,
ЩО ВІДПОВІДАЮТЬ ШАРІАТУ, І ЦИФРОВИХ АКТИВІВ
(НА ПРИКЛАДІ БАХРЕЙНСЬКОГО ІСЛАМСЬКОГО
ІНДЕКСУ (BIX) ТА ISLAMIC COIN)

Здійснено порівняльний аналіз характеристик дохідності й ризиковості традиційних активів, що відповідають шаріату, і цифрових активів, спрямований на дослідження Бахрейнського ісламського індексу (BIX) та Islamic Coin за період з 3 листопада 2023 р. до 27 липня 2025 р. Для забезпечення узгодженості між активами використано тижневі дані. Зважаючи на ненормальний розподіл дохідності, застосовано непараметричну модель, що включає тест Харке—Бера і критерій Колмогорова—Смирнова для перевірки на нормальність, U-критерій Манна—Вітні для порівняння дохідності й критерій Брауна—Форсайта для дисперсійного аналізу.

Емпіричні результати показують, що Islamic Coin досягає позитивної середньої дохідності, тоді як індекс BIX у розглянутому періоді демонструє негативну середню продуктивність. До того ж Islamic Coin має меншу варіабельність дохідності порівняно з BIX. U-критерій Манна—Вітні підтверджує статистично значущу відмінність у розподілі дохідності, причому Islamic Coin демонструє вищі ранги розподілу. Крім того, критерій Брауна—Форсайта виявляє значні відмінності в ризиковості, що вказує на те, що BIX характеризується більшою дисперсією дохідності.

Ці результати свідчать про те, що Islamic Coin демонструє чіткішу динаміку дохідності та ризиковості порівняно з традиційними ісламськими фондовими індексами, що підтверджує правильність його класифікації як нового класу активів у рамках ісламських фінансів. Дослідження робить внесок у зростаючий масив літератури про ісламські цифрові фінанси, надаючи емпіричні дані щодо порівняльної продуктивності активів, які відповідають шаріату.

Ключові слова: ісламські акції; ісламські криптовалюти; дохідність; ризиковість; індекс BIX; Islamic Coin.

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