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Performance Evaluation Of Islamic Mutual Funds In Saudi Arabia: A Case Study

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Abstract:

The purpose of this study is to evaluate the performance of Islamic mutual funds in Saudi Arabia by comparing their risk-return behavior with Tadawul All Share Index during the period from January 2018 to December 2021. we examine their performance by employing several measures such as Sharpe, Treynor, Jensen Alpha and their variants.

Our results show that the performance evaluation is sensitive to the benchmark and the performance measures used for comparison. Furthermore, the selection of performance measurement methods depends on the investor's investment objectives, risk tolerance and personal preferences. Moreover, we found that the average returns and volatility of Islamic mutual funds are consistent with the performance of Tadawul All Share Index. This study is important to contribute positively to the development of the Islamic fund management by exploring and employing econometrics modelling to evaluate the investment portfolios.

Keywords: performance evaluation, Islamic Mutual Funds, Tadawul All Share Index.
JEL Classification: G23 ; P47

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Introduction

Mutual funds are investment entities that pool individual and corporate financial resources and invest in tradable financial instruments. They are an excellent option for small investors looking for liquidity, investment expertise and portfolio diversification. Nevertheless, investment objectives of investors vary in terms of return requirements, liquidity needs, risk tolerance, as well as religious and ethical compliance.

In comparison to conventional investment funds, ethical investment funds, such as socially responsible investment funds (SRI) and faith-based investment funds, such as Islamic funds, have seen substantial global growth (Reddy , Mirzab, Naqvic, & Fud, 2017, p. 233). However, the latter refer to investing in financial products that are consistent with investors religious or moral beliefs. Further, Islamic funds must adhere to Shariah principles, which are to be free of interest (Riba), gambling and other pure games of chance (Maysir), as well as selling something that is not owned or that cannot be accurately described in terms of type, size, and amount (Gharar). Islamic funds must also refrain from engaging in any illegal activities (Yesuf & Aassouli, 2020, p. 3).

Accordingly, the following research problem is formulated :How can the performance of Islamic mutual funds be evaluated?

Thus, this study aims to contribute positively to the development of the Islamic fund management by exploring and employing econometrics modelling whereby to provide a comprehensive analysis of the performance of Islamic funds.

In this paper, we investigate the performance of four Islamic mutual funds in Saudi Arabia during the period from January 2018 to December 2021. Therefore, we examine their risk-return behavior by employing a number of performance measures such as Sharpe, Treynor, Jensen Alpha and their variants. Moreover, we employed the Tadawul All Share Index (TASI) as a market benchmark and the risk-free rate is proxied by the three-month maturity Saudi Arabia Interbank Offering Rate (SAIBOR).

The rest of the paper is organized as the following. The first section reviews the literatures, which is followed by section 2, which shows the data and methods used. Section 3 provides performance analysis based empirical results obtained. Finally, we present the conclusion.

1- Literature review

The market for Islamic mutual funds has been experiencing rapid growth in the Islamic financial system, attracting considerable attention from both practitioners and academicians in recent years. Many of these

funds have demonstrated impressive performance, generating substantial revenue that surpasses standard benchmarks.

A large number of studies are conducted regarding the performance evaluation of Islamic mutual funds. (Rafay, Gilani, & Izhar, 2017) found that the returns and volatility of Islamic mutual funds are comparable to those of conventional mutual funds. The study also revealed that the volatility of Islamic mutual funds has a negligible impact on their performance, which is contrary to conventional mutual funds. To analyze the volatility behavior of KMI-30 index and KSE-30 indexed mutual funds, the researchers employed ARCH/GARCH models for empirical analysis.

Cherait (2017 ،شريط) in her study aimed to investigate the nature and performance of Islamic investment funds and their mechanisms of establishment. The research concluded that Islamic investment funds are crucial in providing investment opportunities for both Muslim and non-Muslim investors and must have a suitable regulatory environment to enhance their performance and returns. The study also found that the performance of a sample of Islamic mutual funds was mixed, with some achieving positive results and others recording fluctuations and losses over the study period.

In addition, The study conducted by (Yuzi, Samsuddin, Shair, & Hazny, 2012) aimed to evaluate the returns performance of Islamic mutual funds in Malaysia based on four types of asset portfolios. Using various indices, the study found that all types of asset portfolios generally performed well from 2001 to 2010, with Money Market Islamic mutual funds performing better during the Global Financial Crisis. Furthermore, all types of Islamic mutual funds outperformed market benchmarks, except for Debt and Money Market funds during 2001-2006. The results can be helpful for investors and market players in selecting asset funds and weighing their investments during bullish or bearish periods.

On the other hand, (MOHD & BIN, 2010) aimed to critically review the characteristics and performance of Islamic funds in Malaysia. The study utilized three methods of analysis, including a literature review, quantitative analysis, and qualitative analysis based on primary data collected through interviews. The study found that the creation of Islamic funds was primarily driven by economic motives rather than religious motives, and that existing Islamic funds were largely created by mimicking conventional funds. Additionally, relative to conventional funds, Islamic funds were found to have lower returns but higher volatility, limited profitable stocks or industries, smaller fund size and low fund subscription rate, and to mainly invest in heavyweight stocks involved in defensive industries.

The studies mentioned above do not provide a clear answer on whether Islamic mutual funds outperform or underperform market benchmarks. The performance of these funds is found to be heavily influenced by the benchmarks used for evaluation (Rafay, Gilani, & Izhar, 2017, p. 236). However, the common approach to assess the performance of Islamic mutual funds is through risk-return measures.

2- Data and methods

2-1- Data and sampling design

The empirical data consist of monthly net asset values (NAVs) of four Islamic mutual funds available in Saudi Arabia and managed by three different managers, during the period from January 2018 to December 2021. Information on these funds was obtained from two main sources: the official site of the Saudi Central Bank and the website of investing.com.

For these NAVs we calculate the monthly returns of the four funds. Our sample belong to :in terms of investment goal classifications (growth), security type (equity), geographical focus (local and Arabian countries), and traded currency (Saudi Riyal). Table 1, lists all information on Islamic mutual funds used in the study.

Therefore, in order to appropriately assess the risk-return characteristics of the Islamic mutual funds, we employed the Tadawul All Share Index (TASI) as a market benchmark. The risk-free rate used in this paper is proxied by the three-month maturity Saudi Arabia Interbank Offering Rate (SAIBOR).

Table number (01): Islamic Mutual Funds Included in this Study

Fund name	Manager	Classification	Asset class	Geographical focus	Currency
Al Raed Gcc Fund	Samba capital	Growth	Equity	The Gulf Cooperation Council	Saudi Riyal
Al Raed Saudi Equity Fund	SNB Capital Company	Growth	Equity	The Gulf Cooperation Council	Saudi Riyal
Bakheet Saudi Trading Equity Fund	Osool and Bakheet Investment Company	Growth	Equity	Saudi Arabia	Saudi Riyal

Al Ataa Saudi Equity Fund	SNB Capital Company	Growth	Equity	Saudi Arabia	Saudi Riyal

Source :Prepared by the researchers based on data collected from Annual Reports and websites of Islamic mutual funds.

2-2- Absolute return measurements :

The model used for absolute return analysis is presented in the equation below: (Yesuf & Aassouli, 2020, p. 8)

$$R_p = \frac{1}{n} \sum_{i=1}^{n} R_{pt}$$

Where: Rp: the absolute rate of return on a portfolio p; Rpt: Return on portfolio p in time t; n: the number of observations.

Further, the periodical (monthly) returns of the portfolios (funds) were calculated by using the following formula: (Rafay, Gilani, & Izhar, 2017, p. 236)

$$R_{p,t} = \frac{NAV_t - NAV_{t-1}}{NAV_{t-1}} \text{ or } R_{p,t} = \ln\left[\frac{NAV_t}{NAV_{t-1}}\right]$$

Where :$R_{p,t}$:return on a portfolio at month (t); NAV_t :Net Asset Value of fund at month (t); NAV_{t-1} : Net Asset Value of fund at month (t-1).

2-3- Risk-Adjusted performance measurements

The risk-adjusted performance is based on the absolute risk-adjusted performance measure (Sharpe Ratio) and the relative risk-adjusted performance measures (Treynor Ratio and Jensen's alpha using CAPM). These models were chosen because their underlying theories have been rigorously tested and have proven to be effective. They are popular among both practitioners and academics due to their simplicity.

a. Sharpe Ratio

The Sharpe ratio represents the portfolio excess return per unit of total risk. A higher Sharpe ratio indicates better performance and vice versa. It is determined as follows: (علية و زواري فرحات، 2019، صفحة 139)

$$S_p = \frac{R_p - R_f}{\delta_p}$$

Where: S_p :Sharpe ratio for portfolio p; R_p :the average rate of return of the portfolio p; R_f :the average risk-free rate measured by SAIBOR three-month maturity; δ_p :the standard deviation of portfolio.

b. Treynor Ratio

The Treynor ratio is equal to the portfolio excess return per unit of systematic risk (beta). It is a commonly used to evaluate a portfolio's performance within a larger, fully diversified investment portfolio. This is

due to the fact that diversification can eliminate total risk. (Merdad, Hassan, & Al-Henawi, 2010, p. 173) It is calculated as follows:

$$T_p = \frac{R_p - R_f}{\beta_p}$$

Where: T_p :Treynor ratio for portfolio p; R_p :The average rate of return of the portfolio p; R_f :The average risk-free rate measured by SAIBOR three-month maturity; B_p :Portfolio's beta.

A higher Treynor ratio indicates that the portfolio has yielded superior risk-adjusted returns and vice versa. (Reddy , Mirzab, Naqvic, & Fud, 2017, p. 237)

c. Jensen's Alpha using CAPM

Jensen's Alpha is a metric that compares the average return on a portfolio to the return that would be expected based on the Capital Asset Pricing Model (CAPM), taking into account the portfolio's beta and the average market return. It is determined using the following model: (Yesuf & Aassouli, 2020, p. 8)

$$\text{Alpha } (\alpha) = R_p - [Rf + \beta p\ (Rm - Rf)]$$

Where: Rp :Expected portfolio return; Rf: Risk free rate measured by SAIBOR three-month maturity; βp: Portfolio's beta; Rm :Expected market return.

Alpha is an indicator of investment performance relative to the market, with a positive value indicating good performance and outperforming the market. Therefore, Jensen's measure can be used to determine whether a portfolio is generating the expected return for its level of risk. (Yesuf & Aassouli, 2020, p. 9)

2-4- Risk measures

The standard deviation is a measure of the portfolio's total risk. However, the coefficient of variation measures the amount of risk assumed per unit of average return. The lower the ratio, the better is the risk-return tradeoff. It is calculated as follows: (Merdad, Hassan, & Al-Henawi, 2010, p. 175)

$$CV_p = \frac{\delta_{Rp}}{R_P}$$

where: CV_p: the coefficient of variation for portfolio p; δ_{Rp} :the standard deviation of the rate of return of portfolio p ; Rp :The average rate of return of the portfolio p.

Both measures are considered absolute risk measures because they do not need a benchmark to calculate them. Further, the study used beta as a relative risk measure to assess an investment's systematic risk that cannot be

diversified away and affects many assets, like market risk. Beta evaluates how an investment's returns respond to market changes and indicates its expected fluctuation relative to the overall market.

3- Empirical Results and Discussion

3-1- Absolute return analysis:

The following table presents the average return, minimum and maximum returns for the Islamic portfolios and the Tadawul All Share Index (TASI).

Table number (02): Average Return, Minimum and Maximum

Portfolio	TASI	Al Raed Gcc Fund	Al Raed Saudi Equity Fund	Bakheet Saudi Trading Equity Fund	Al Ataa Saudi Equity Fund
Average return	0.93%	0.88%	0.92%	1.25%	0.59%
Min	-15,92%	-21,91%	-25,22%	-14,44%	-25,34%
Max	10,09%	8,46%	9,21%	10,44%	9,17%

Source :Prepared by the researchers based on data obtained from investing.com website

As shown from table 1, the average return of Bakheet Saudi Trading Equity Fund is higher than the average return of the market benchmark (TASI). Also, the fund records the maximum return during the overall period of the study. That, it indicates that the fund has outperformed the market and reports a positive outcome for investors. This could be due to a variety of factors, including a favorable investment strategy, effective risk management, and favorable market conditions.

Nevertheless, Al Raed Gcc Fund and Al Raed Saudi Equity Fund have underperformed slightly the market. whilst, Al Ataa Saudi Equity Fund has underperformed significantly TASI by 0.34 percent.

In addition, we signed up the minimum return for all the fund and the market benchmark in march 2020. This is due to the effect of the COVID-19 pandemic which has had a significant impact on the performance of mutual funds globally especially those that aims to achieve capital growth like our research sample funds. The outbreak of the pandemic led to a sudden and rapid decrease in stock prices, causing significant losses for many investors. This was due to widespread uncertainty and fear surrounding the economic consequences of the pandemic, as well as the impact of government lockdowns on businesses and industries.

In general, the overall sample had affected with varying degrees.

However, Al Ataa Saudi Equity Fund and Al Raed Saudi Equity Fund were affected significantly alike, because they belong to the same fund Manager (SNB Capital Company). It is important to note that the effects of the pandemic on mutual funds have been highly dependent on the specific fund and its investment strategy.

3-2- Absolute Risk-Adjusted Performance and Risk Measures:

While the Sharpe ratio is useful for comparing and ranking portfolios, it does not indicate how well a portfolio performed relative to the market. This is because it is an absolute risk-adjusted measure. To address this, absolute risk measures such as standard deviation and coefficient of variation are calculated. The results of these measures are presented in Table 3.

Table number (03): Absolute Risk-Adjusted Performance and Risk Measures

Portfolio	TASI	Al Raed Gcc Fund	Al Raed Saudi Equity Fund	Bakheet Saudi Trading Equity Fund	Al Ataa Saudi Equity Fund
Sharpe	-16.37%	-17.89%	-15.61%	-11.63%	-20.75%
Standard Deviation	5.14%	4.99%	5.47%	4.46%	5.67%
Coefficient of Variation	5.54	5.68	5.96	3.57	9.55

Source :Prepared by the researchers based on data obtained from investing.com website

It is obvious that all the sample's mutual funds recorded a negative Sharpe ratio during the overall period of the study, it indicates that the investment has generated returns that are lower than the returns of the three-month Saudi Arabia Interbank Offering Rate (SAIBOR).

That's to say, A negative Sharpe ratio suggests that the investment has a higher level of risk relative to the returns it has generated, or that the returns have not been sufficient to compensate for the risk taken. It could indicate that the investment is not performing well compared to the benchmark or the risk-free rate.

Furthermore, The Bakheet Saudi Trading Equity fund standard deviation (coefficient of variation) is 4.46% (3.57). Thus, it appears to be less risky fund using the absolute risk measures. Whereas, the standard

deviation (coefficient of variation) of Al Ataa Saudi Equity fund is 5.67% (9.55) in the overall period of the study. Therefore, it becomes the riskier fund in the study's sample.

3-3- Relative Risk-Adjusted Performance and Risk Measures:

The table presented below displays the relative performance and risk measures of portfolios benchmarked against the Tadawul All Share Index.

Table number (04): Relative Risk-Adjusted Performance and Risk Measures

Portfolio	TASI	Al Raed Gcc Fund	Al Raed Saudi Equity Fund	Bakheet Saudi Trading Equity Fund	Al Ataa Saudi Equity Fund
Treynor	-0.84%	-1.44%	-1.17%	-0.66%	-1.58%
Alpha	0	-0.37%	-0.24%	0.14%	-0.55%
Bata	1	0.62	0.73	0.79	0.75

Source :Prepared by the researchers based on data obtained from investing.com website

The results are consistent with the Sharpe ratio results. Thus, the negative Treynor ratio indicates that the returns on the funds are lower than the returns on a risk-free investment (SAIBOR), for the amount of systematic risk taken.

Moreover, the negative Jensen's Alpha indicates that the funds have underperformed the market benchmark and generated lower returns than would be expected based on its beta. On the other hand, the Tadawul All Share Index is performing in line with the level of risk it is taking on.

Nevertheless, the Bakheet Saudi Trading Equity Fund has a positive Jensen's Alpha, it indicates that the investment has outperformed the market benchmark and generated higher returns than would be expected based on its beta. This is considered to be a positive result and may indicate that the investment has a favorable risk-return tradeoff.

All in all, a negative relative performance measures are considered to be a poor result and may indicate that the investment has an unfavorable risk-return tradeoff or that the investment manager has not effectively managed the portfolio. It may also indicate that the portfolio is not well-diversified, or that the market as a whole is experiencing a downturn.

However, beta is less than 1, it indicates that the mutual fund is expected to be less volatile than the market, meaning that it is expected to experience smaller fluctuations in value than the market.

Conclusion

During the past years, performance of Islamic mutual funds is gaining immense attention of academicians and practitioners alike. Thus, the purpose of this study is to examine the performance of four Islamic mutual funds by analyzing their absolute return, risk measures, and risk-adjusted performance using Sharpe ratio, Treynor ratio, and Jensen's Alpha. Additionally, the study calculates the average monthly returns for each fund over a four-year period (2018-2021) and compares them to the Tadawul All Share Index (TASI) as a market benchmark.

Nevertheless, our research encountered various obstacles and limitations. For instance, inadequate infrastructure, such as the absence of an Islamic fund rating agency, as well as limited data on Shariah-compliant instruments or indices.

However, we have reached several important results, the most significant of which are:

- Islamic mutual funds play an essential role in finding and diversifying investment opportunities for Muslim and non-Muslim investors.
- Islamic funds have become an increasingly popular choice among investors seeking financial instruments that align with their religious beliefs, guarantee the achievement of returns, and reduce risks.
- The performance evaluation of the Islamic mutual funds is sensitive to the benchmark and the performance measures used for comparison.
- The selection of performance measurement methods depends on the investor's investment objectives, risk tolerance, and personal preferences.
- The average returns and volatilities of the sample funds in the study are consistent with those of the Tadawul All Share Index. Specifically, the average return and volatility of the funds are 0.91% and 5.15%, respectively, while those of the Tadawul All Share Index are 0.93% and 5.14%.
- The sample's performance varied between positive and negative results when evaluated using several performance measures, during the overall period of the study.

Based on the aforementioned, we propose several recommendations that should be adopted to develop Islamic mutual funds and enhance their competitiveness. The most important of these are:

- Revitalizing the stock market by establishing and developing Islamic mutual funds;

- Enacting legislation and laws to regulate the process of establishing, following up, and monitoring funds to improve their performance and increase returns;
- Supporting financial engineering to develop new products that meet the requirements of investors.

To augment the research in this study, we plan to expand the data coverage over longer period of time and introduce new statistical performance measures. Further, it's important to compare the performance of the fund against another market benchmarks.

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