

Determinants of Islamic Equity Funds Performance in Indonesia

Alif Khuwarazmi Maulana Julendra^a, Dwi Marlina Wijayanti ^{a*} and Slamet Haryono^a

^aUIN Sunan Kalijaga, Yogyakarta, Indonesia

Keywords:

Islamic Equity Funds, Stock Selection Skills, Market Timing Ability, Fund Size, Fund Age, Expense Ratio, Portfolio Turnover

JEL Classification: D63, H5, P44 and G11.

Article History:

Received: 03 November 2022 Revised: 09 January 2023 Accepted: 04 July 2023 Published: 30 September 2023



Citation:

Julendra, A.K.M., Wijayanti, D.M., & Haryono, S. (2023). Determinants of Islamic Equity Funds Performance in Indonesia. Global Review of Islamic Economics and Business, 11(1), 64-83. https://doi.org/10.14421/grieb.2023.111-04

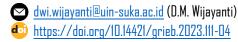
Abstract: Financial risk tolerance is a crucial factor affecting the growth of Islamic Equity Funds and is directly linked to the performance of Islamic Equity Fund managers. Enhanced performance by investment managers in cultivating Islamic Equity Funds is likely to increase the intention to invest in such funds. This study aimed to assess and provide comprehensive information on the performance of Islamic Equity Funds in Indonesia. Quantitative statistical analysis was used to examine the impact of stock selection skills, market timing ability, fund size, fund age, expense ratio, and portfolio turnover on the performance of Islamic Equity Funds. This study utilized annual data from 2015-2020, obtained from the prospectus of each Islamic Equity Fund, Central Bank Indonesia (BI), and the Statistics of Indonesia (BPS). The findings indicated that stock selection skill and expense ratio had a positive and significant effect on the performance of Islamic Equity Funds. However, market timing ability, fund age, and fund size had no significant effect, although the results showed positive values. On the other hand, portfolio turnover had a negative and significant effect on the performance of Islamic Equity Funds. Therefore, it can be inferred that higher stock selection abilities of investment managers lead to better returns, and the expense ratio of an equity fund reflects the costs associated with portfolio management, administration, marketing, and distribution.

Originality/Value: This paper addresses the significant issues that arise in Islamic equity funds, which are crucial as investment portfolios, and contributes to a limited body of research in this area. Therefore, gaining insight into the key factors affecting the performance of equity funds can optimize their functionality and attract investors.

Introduction

Islamic Equity Funds have experienced significant growth in Indonesia over the last few years. Between 2015 and 2020, The Net Asset Value has increased by 5,7%, aligning with the growing number of Islamic Equity Funds listed on the Indonesian stock exchange (Financial Services Authority, 2021). According to Pew Research Center (Pew Research Center, 2020), Indonesia is home to the world's largest Muslim population, comprising 219,960,000 individuals, or 82% of the total population. This statistic underscores the importance of Islamic Equity Funds as a necessity for Indonesian citizens and a preferred investment choice for the public.

^{*}Corresponding author.





Islamic Equity Funds should be considered as a viable option for investors who previously invested in conventional ones. Many investors invest in Islamic Equity Funds for spiritual reasons, while others consider them as socially responsible investments. Additionally, some investors opt for Islamic Equity Funds to diversify their portfolios (Zouaoui, 2019). However, as of the end of the 2020 fiscal year, the number of investors in Islamic Equity Funds stood at only 376 thousand investors, accounting for a mere 0.1% of the total population. In contrast, other countries such as Malaysia have witnessed a higher adoption rate, with Islamic Equity Funds being the preferred choice for approximately 40% of the total population (Bareksa, 2019).

Financial risk tolerance is a crucial factor affecting the growth of Islamic Equity Funds (Widyastuti et al., 2019). It is a fundamental issue directly linked to the performance of Islamic Equity Fund managers (Aljaed et al., 2019). When investment managers excel in cultivating Islamic Equity Funds, it leads to an increase in the intention to invest in Islamic Equity Funds (Ali et al., 2015). The study on the performance of Islamic Equity Funds plays a critical role in guiding investment managers in selecting and developing effective investment strategies (Zouaoui, 2019). Therefore, this study aimed to determine and provide insights into the performance of Islamic Equity Funds in Indonesia.

Tan (2015), Papadamou et al., (2017), Rao et al., (2017), and Zouaoui (2019) determined that the performance of investment managers is affected by two key abilities: stock selection skill and market timing ability. The success of Islamic equity funds hinges on managers developing proficiency in both selectivity and market timing strategies (Zouaoui, 2019). Stock selection skill refers to the capacity of investment managers to select the appropriate portfolio and accurately predict price fluctuations of specific stocks within the portfolio (Kabir, 2017; Low, 2012; Omri et al., 2019). On the other hand, market timing ability refers to an investment manager's capability to allocate stocks effectively at the opportune moment (Rao et al., 2017). Market timing involves the allocation of assets across various forms, typically limited to stocks and short-term government debt. An effective market timing ability increases the proportion of equities in the portfolio before the market rises and reduces it before the market declines (Pilbeam & Preston, 2019).

To conduct this empirical study, a measure developed by Treynor-Mazuy was utilized, with additional variables incorporated. Therefore, in order to assess the performance of Islamic Equity Funds, several variables can be taken into consideration, including fund age, fund size, expense ratio, and portfolio turnover. Fund age refers to the number of years since the fund's inception (Amman et al., 2018). The longer investment managers have been established, the greater their efficiency (Bai et al., 2019). Moreover, the period of an equity fund provides investors with a clear understanding of its success, a longer lifespan, a proven track record, and a better overview of results (Kiymaz, 2018). Fund size is determined by the total net assets value and a larger asset size offers versatility, enhanced bargaining leverage, and leads to the creation of an economic ladder, which has a significant effect on performance (Nguyen et al., 2018). Expense ratio is a comparison of one year's operating expenses to one year's average net asset value (Deb, 2019; Nguyen et al., 2018; Rao et al., 2017). Deb (2019) categorized equity funds' expense ratios as high, medium, and low, with lower expense ratios associated with better performance. Hence, the expense ratio plays a crucial role in the performance of equity funds. Portfolio turnover reflects investment managers' strategy of buying and selling portfolios with high frequency. A higher portfolio turnover rate indicates greater trading activity within the equity fund, which in turn increases the potential return (Rehan, 2020). High trading activity signifies an investment manager's efforts to maximize profits by executing deals at the proper time (Cai & Lu, 2019). Investment managers with an active investment style define the performance of an equity fund better compared to those with a passive investment style (Kaur, 2018).

Mohamad and Ashraf (2015) examined the performance of Islamic Equity Funds using the Treynor ratio and compared them to their conventional counterparts in various countries. Omri et al., (2019) demonstrated that Islamic Equity Funds consistently outperform conventional equity funds over time due to lower global market risk, fewer capital withdrawals, lower volatility, and stronger investor commitment. As a result, a significant portion of the existing studies focuses on comparing Islamic Equity Funds with their conventional counterparts. In contrast to prior studies, this study aims to bridge the gap by examining the effect of stock selection skills (Kabir, 2017), market timing ability (Pilbeam & Preston, 2019), fund size (Basso & Funari, 2017), fund age (Kaur, 2018), expense ratio (Hoepner et al., 2011) and portfolio turnover (Rusmita et al., 2019) on the performance of Islamic Equity Funds.

These variables have been selected based on the prevailing market conditions, aligning with the expectations of both Islamic Equity Funds investors and investment managers.

Literature Review

The Portfolio Theory

Investment can be defined as the act of postponing current consumption by individuals or institutions in order to facilitate efficient production for a specified duration (Hartono, 2017). Similarly, Sunariyah (2011) defines an investment as a financial transaction involving the purchase of one or more assets with the anticipation of future returns. Based on these definitions, it can be inferred that investment entails the allocation of capital into diverse assets over a period of time to yield future benefits.

Given a specific income level, consumers are typically confronted with two significant financial decisions. First, they must determine how to allocate their current consumption among various goods and services. Second, they must choose between different assets for investment purposes. These two decisions, namely the consumption-saving decision and the portfolio selection decision, are interrelated and complement each other (Constantinides & Malliaris, 1995). The modern portfolio theory was developed by Markowitz (1952). A portfolio is a collection of assets in which an investor chooses to invest (Petters & Dong, 2016). Selecting the portfolio optimally is a difficult problem that necessitates accurate forecasts on the current state of the assets under consideration (Seetharaman et al., 2017). According to portfolio theory, rational investors strive to construct portfolios that offer the best possible expected return for a given level of risk.

Capital Asset Pricing Model (CAPM) Theory

The Capital Asset Pricing Model (CAPM) serves as a mathematical model that describes the relationship between systematic risk and expected return for assets, particularly equities (Pilbeam & Preston, 2019). This model is commonly used in finance to determine the pricing of volatile securities and generate projected returns for assets based on risk and cost of capital (Constantinides & Malliaris, 1995). The Capital Asset Pricing Model (CAPM), introduced by Sharpe (1964), was employed to examine the relationship between a portfolio return (R_p) and the return of the market portfolio (R_m). By formulating a simple regression equation with the return of an asset as the dependent variable and the return of the market portfolio as the independent variable, it becomes possible to determine the effect or relationship between the return of the market portfolio and the return of a specific asset.

Islamic Equity Funds

According to Widjaja & Ramaniya (2009), equity funds serve as an investment vehicle designed to assist investors who wish to participate in the capital market without actively involving themselves in market procedures, administration, and analysis. This is because equity funds, whether in the form of collective investment contracts or corporations, are managed by investment managers who represent the equity fund investors. As defined by the Capital Market Law No. 8 of 1995, Article 1, Paragraph 27, "equity funds are a vehicle through which investment managers gather funds from the public to invest in a securities portfolio. Similar to other investment vehicles, equity funds not only aim to generate a certain rate of return but also carry inherent risks that should be taken into consideration (Sunariyah, 2011). Terminologically, Islamic Equity Funds is one of the various types in Islamic Equity Funds. It is administered according to Islamic law's terms and principles (Alam et al., 2017). Islamic Equity Funds strictly adhere to a set of principles that prohibit their engagement in portfolio stocks issued by companies whose management practices or products are deemed inconsistent with Islamic standards (Widyastuti et al., 2020).

The Sharpe Ratio

William Sharpe (1966) introduced a risk-adjusted performance measure that has become widely used for evaluating portfolio and investment manager performance. Sharpe demonstrated that the performance of investment managers can be assessed using a simple and theoretically relevant metric that takes into account both average return and risk. This measure excludes the detection of performance disparities solely caused by differences in objectives. Even when performance is evaluated using this approach, disparities among funds persist, suggesting that these differences are not entirely temporary (Sharpe, 1994). The Sharpe ratio is similar to the Treynor technique that calculates the risk premium per unit of total risk, but it employs portfolio total risk instead of systematic risk (Tan, 2015).

The Treynor-Mazuy Ratio

The skill of investment managers in selecting the appropriate portfolio is commonly known as stock selection skill, which encompasses their ability to accurately forecast the price movements of stock investments (Kabir, 2017; Low, 2012; Omri et al., 2019). The Treynor Mazuy ratio is considered as the standard model for evaluating fund managers' skills to select stocks and time the market (Rao et al., 2017). This ratio was introduced by Treynor and Mazuy (1966). They developed a market timing model, which includes a quadratic element in the Jensen equation, the square of the market risk premium, and quantifies the effects of market timing strategies (Oliveira et al., 2018). Taking into account the potential for investors to profit in both market upswings and downturns, an investment manager who emphasizes market timing ability strategically adjusts the portfolio to have a relatively high beta during periods of market upswings and a generally low beta during market downturns (Kabir, 2017). A significant positive assessment of the coefficient associated with the quadratic term indicates that the fund manager added value to the portfolio by implementing a profitable market timing strategy (Rao et al., 2017). Investment managers possess the flexibility to modify the composition of their portfolios in response to fluctuations in the overall stock market. If investment managers anticipate a market decline, they will adjust their portfolio allocation by shifting from riskier equities to less volatile ones. Conversely, if an investment manager believes the market is on the verge of a crash, they will make the opposite adjustment to their portfolio (Tan, 2015).

Fund Age

The factor affecting the performance of equity funds, fund age, was initially examined by Golec (1996). This study elucidated that fund age serves as an indicator of an investment manager's experience, prestige, and investor loyalty. Deb (2019) further contended that funds that have outlasted their competitors in the industry are likely to perform well, as they tend to attract highly skilled managers and demand higher fees.

Fund Size

Fund size refers to the magnitude of assets assessed by the net asset value of Islamic Equity Funds. This parameter offers flexibility, enhances bargaining power, and facilitates the achievement of economies of scale, thereby reducing costs in the performance of equity funds (Nguyen et al., 2018). Firms with a larger board size are able to carry out monitoring and supervisory functions more effectively due to the increased availability of shared information (Naveed et al., 2020). Basso & Funari (2017) emphasized the significance of incorporating fund size in evaluations of equity fund performance, especially when considering the perspective of financial investors. Multiple studies have consistently demonstrated a negative correlation between fund size and performance (Phillips et al., 2018). Hassan et al., (2020) provided evidence indicating that Islamic investments outperform conventional equity funds when fund size is limited. Conversely, Rokhim & Octaviani (2019) found a negative impact of fund size on all types of Islamic Equity Funds in Indonesia.

Expense Ratio

The expense ratio is widely recognized as a crucial factor in the equity fund industry (Rao et al., 2017). Livingston et.al (2019) asserted that the expense ratio has a significant impact on the performance of equity funds. Equity funds managed by a single manager typically exhibit more concentrated portfolios, perform significantly better, and have higher cost ratios compared to funds managed by multiple managers (Goldman et al., 2016). Consequently, the expense ratio is consistently linked to the performance of equity funds. Moreover, the publication of the cost ratio paid by equity funds ensures transparency regarding the charges imposed by these funds, enabling investors to make informed decisions. This ratio serves as a measure of the value of investment issued by investment managers in managing equity funds (Kaur, 2018).

Portfolio Turnover

Othman et al., (2018) defined portfolio turnover as the frequency of assets purchased and sold divided by the average Net Asset Value (NAV) over a year. Rehan (2020) defined portfolio turnover as a financial ratio that measures an organization's efficiency in generating income or revenue using its assets. The concept of portfolio turnover was initially introduced by Grinblatt & Titman (1989) and Droms & Walker (1996) to assess the performance of equity funds. These pioneering studies examined the multivariate connection between investment performance and portfolio turnover on a large scale. High portfolio turnover indicates that investment managers possess the ability to accurately anticipate market developments, including various current concerns. As a result, equity funds with high turnover tend to exhibit improved performance. However, equity funds with low turnover tend to underperform (Grinblatt & Titman, 1989).

Muamalat Contracts Regarding Islamic Equity Funds

According to DSN MUI Fatwa No. 20/DSN-MUI/IV/2001, regarding guidelines for the implementation of Islamic Mutual Funds, Article 2, Paragraph 1 outlines the mechanism for the activities of Islamic Mutual Funds. The operational mechanism is as follows: (1) The relationship between investors and investment managers is established through the implementation of a wakalah system. Under this system, investors entrust the investment manager with the responsibility of carrying out investments on their behalf, with the aim of benefiting the investor, in accordance with the provisions outlined in the prospectus. (2) The relationship between investment managers and investors is based on the *mudharabah* system. The characteristics of the *mudharabah* system in Islamic Mutual Fund transactions are described in DSN MUI Fatwa No. 20/DSN-MUI/IV/2001 concerning guidelines for the Implementation of Islamic Mutual Fund, Article 2, Paragraph 2: First, the distribution of profits between investors (sahib al-mal) represented by investment managers and investors is based on the agreed proportions set by both parties through the investment manager as a representative. There is no guarantee of specific investment results for investors. Second, investors are only liable for the funds they have provided. Lastly, the investment manager acts as a representative and does not bear the risk of loss on their investments, except in cases of negligence (gross negligence/tafrith).

Previous Studies and Hypothesis Development

Tan (2015) defined selectivity ability as the ability of investment managers to capitalize on undervalued assets while also developing market timing skills to forecast future market fluctuations. Zouaoui (2019) argued that the performance of Islamic Equity Funds is affected by stock selection skills. Mohammad & Ashraf (2015) suggested that the stock selection is used to comply with the performance of Islamic Equity Fund. Ashraf (2013) found that overall, stock selection skill has a positive impact on the performance of Saudi Arabian equities. In contrast, conventional equity funds tend to exhibit negative stock selection skills. Chen & Lai (2014) suggested a substantial connection between stock selection and equity fund performance. Proficient investment ability results in positive stock selection and as a result, higher returns. Oliveira et al., (2018) stated that investment managers demonstrate greater effectiveness in selecting undervalued assets during crisis periods compared to precrisis periods, with statistically significant and positive parameters observed in both instances. As a result, the greater an investment manager's skill in selecting portfolio stocks, the higher the level of return achieved. This indicates a positive effect of the stock selection skill variable on the performance of Islamic equity funds. According to the evidence above, the researcher proposes the first hypothesis.

H1: Stock selection skill has a positive and significant effect on the performance of Islamic Equity Funds.

Merti et al., (2017) demonstrated that market timing ability has a positive and significant effect on the performance of Islamic Equity Funds. The ability to time the market directly affects the performance of equity funds as it reveals the portfolio management strategies employed by investment managers. Conversely, Gusni et al., (2018) found no significant effect of market timing skill on the performance of equity funds. However, Sari et al., (2019) indicated that market timing ability has a significant effect on the performance of Islamic Equity Funds in Indonesia during the period 2011-2014. The rationale behind this hypothesis is that if investment managers can provide higher market returns, they will adjust portfolio risk in anticipation of market movements, thereby generating a positive impact on the performance of Islamic Equity Funds. Therefore, the second hypothesis regarding market timing ability is as follows:

H2: Market timing ability has a positive and significant effect on the performance of Islamic Equity Funds.

Sukmaningrum & Mahfud (2016) conducted a study in Indonesia, using fund age as an independent variable to assess its impact on the performance of equity funds. The result indicated that fund age has a positive and significant effect on the performance of equity funds. Rao et al., (2017) investigated the research on equity fund performance and attributed fund age as an independent variable, the findings revealed a significant effect between equity fund performance and fund size. Kiymaz (2018) examined the performance of Chinese equity funds from 2000 to 2013, using the Sharpe ratio and fund age. The study revealed that fund age was a significant factor in explaining the cross-sectional variance in fund performance. The lifespan of an equity fund provides investors with a comprehensive understanding of its success, as it encompasses a longer period, a proven track record, and offers a more comprehensive overview of results (Kiymaz, 2018). If the investment manager has more experience compared to younger managers, the performance of older equity funds is likely to be better. This suggests that the fund age has a significant effect on the performance of Islamic Equity Funds. Based on the evidence and rationale above, the third hypothesis for fund age is as follows.

H3: Fund age has a positive and significant effect on the performance of Islamic Equity Funds.

Kaur (2018) conducted a study in India to examine the correlation between fund size and equity fund performance. The findings revealed that fund size had a negative effect on equity fund performance. Chen & Lai (2014) indicated that fund size had a significant effect on Islamic Equity Funds in the three regressions, with consistently negative coefficients, aligning with existing literature. Devi & Sudirman (2021) also emphasized the negative effect of fund size on equity funds, stating that as fund size increases, it becomes more challenging for fund managers to effectively manage operational activities of funds. Additionally, Rokhim & Octaviani (2019) found that the form of fund sizes had a detrimental effect on the performance of Islamic Equity Funds in Indonesia. According to Hoepner et al., (2011), examining the impact of fund size on the performance of Islamic Equity Fund can offer further understanding of the attractiveness of active Islamic Equity Fund performance. Based on the aforementioned evidence, the fourth hypothesis on fund size is as follows.

H4: Fund size has a negative and significant effect on the performance of Islamic Equity Funds.

According to Rehan (2020), Islamic Equity Funds tend to have higher investment returns compared to conventional funds, while conventional funds have higher expenses than Islamic Equity Funds.Marzuki & Worthington (2015) conducted a study comparing the performance of Conventional Equity Funds and Islamic Equity Funds in Malaysia. The findings indicated a positive and significant relationship between expense ratio and equity funds' performance for both conventional and Islamic funds. Similarly, Nguyen et al., (2018) confirmed that the expense ratio had a statistically significant positive effect on the performance of equity funds. On the other hand, Goldman et al., (2016) suggested that a higher expense ratio had a negative effect on the performance of equity funds, which aligns with intuition. Regardless of the magnitude of expenses, they can affect the investment returns provided to investors. This suggests that the expense ratio has a positive effect on the performance of Islamic Equity Funds. Based on the evidence presented above, the fifth hypothesis for the expense ratio is as follows.

H5: Expense ratio has a positive and significant effect on the performance of Islamic Equity Funds.

Equity funds with a high portfolio turnover indicate that their investment managers regularly buy and sell entire portfolios (Marzuki & Worthington, 2015). Investment managers may view high portfolio turnover as a reflection of their efforts to enhance the fund's portfolio by identifying undervalued or overvalued assets and making timing purchase and sell decisions (El-Masry et. Al, 2016). Galagedera et al., (2018) investigated the impact of resource management, including expense

ratio and portfolio turnover, on the performance of equity funds in the United States. The results revealed that resource management has a significant positive effect on the performance of equity funds. Kiymaz (2018) also found that portfolio turnover has a significant effect on the performance of equity funds. Additionally, Sari et al., (2019) demonstrated a positive and significant effect between portfolio turnover and Islamic Equity Funds. However, Amman et al., (2018) examined the effect of portfolio turnover on equity fund performance in Finland, the result indicates that portfolio turnover has no significant effect on the performance of equity funds. Investment managers with active investing techniques tend to outperform those with passive investing styles in terms of Islamic Equity Funds performance. This suggests that the portfolio turnover has a positive effect on the performance of equity funds, indicating that Islamic Equity Funds with high portfolio turnover outperform those with a low portfolio turnover. Based on the evidence and rationale above, the sixth hypothesis for the portfolio turnover is as follows.

H6: Portfolio turnover has a positive and significant effect on the performance of Islamic Equity Funds.

Based on the previously established concept, we can construct the theoretical framework for this study, as depicted in Figure 1.

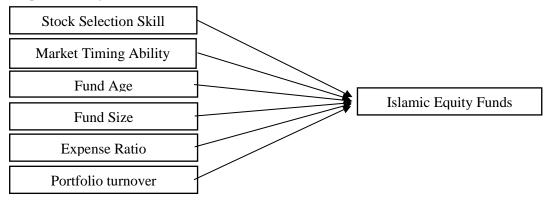


Figure 1. Conceptual Framework of The Study

Methods

Data

This study employed quantitative statistical analysis. According to Punch III et.al (1993) cited by Syahrum & Salim (2012), quantitative research is a systemic analysis of phenomena using quantifiable data and employing statistical, mathematical, or computational tools. This study utilized empirical data and employed panel data regression analysis to examine the effect of various instruments on the performance of Islamic Equity Funds. The data for this study was obtained from various sources, including the prospectus of Islamic Equity Funds and official websites such as BPS (Statistics Indonesia), BI (Central Bank of Indonesia), Pasar Dana, and the Financial Service Authority. Overall, this study utilized panel data analysis, with the E-Views 9 software package being employed for data analysis. The study focused on the population of Islamic Equity Funds registered on the Indonesian Stock Exchange (IDX). Equity funds are an attractive option for investors who possess an understanding of the associated risks and recognize the potential for significant increases in investment value (Zouaoui, 2019). The secondary data for this study was obtained from the annual reports of Islamic Equity Funds published by the Financial Service Authority (OJK). The research sample was selected using the purposive sampling method. According to Suharyadi (2016), purposive sampling is defined as a method of selecting a sample based on particular considerations and focusing on a specific purpose.

Variable Measurement

Islamic Equity Funds performance is measured using the Sharpe ratio. Sharpe ratio, as opposed to the systematic risk represented by a beta factor, quantifies the overall risk of a portfolio using standard deviation. Sharpe proposed the reward-to-variability ratio (Kabir, 2017). This ratio effectively shows the risk premium return on total risk per unit of risk.

The formula is as follows:

Sharpe
$$Ratio = \frac{Rp - Rf}{\sigma p}$$

Where:

Rp= return of the portfolio

Rf= risk-free rate

 σp = standard deviation of the portfolio's excess return

Stock Selection Skill and Market Timing Ability

Alexandri (2015) argued that stock selection skill refers to an investment manager's ability to select and construct a portfolio of assets projected to generate future returns. Ramayanti & Purnamasari (2018) stated that market timing ability refers to the ability of investment managers to make adjustments for asset portfolios to anticipate changes or movements in general market prices.

The formula is as follows:

$$Rp - Rf = \alpha + \beta 1(Rm - Rf) + \beta 2(Rm - Rf)^2 + \varepsilon p$$

Where:

 $R_p = Return on portfolio$

 $R_m = Return from the stock market.$

 R_f = Return for risk-free assets.

 α = Intercept, indicating stock selection skill

 β_1 = Excess market return or slope regression coefficient when the market is down (bearish);

 β_2 = Regression coefficient, indicating the market timing

ability

 ε = random error

Fund Age

To account for the effect of fund age on performance, all models containing a fund age variable are calculated by subtracting the inception date from the research period (in years) (Ringov, 2017). The performance of newer funds may be influenced by higher costs incurred during their inception period. Fund age can play a significant role in determining performance due to factors such as marketing costs and the initial cash flows, which can impose greater transaction costs on the funds (Asad & Siddiqui, 2019).

The formula is as follows:

Fund age =
$$Re_p - I_d$$

Where:

 $Re_p = Research Period$ I_d = Inception Date

Fund Size

The wealth of an Equity Fund can be assessed through its Net Asset Value (NAV). The larger the company's economies of scale, the greater the size of the company (Boo et al., 2017). Fund size is obtained from the financial statements provided in the annual prospectus of Islamic Equity Funds.

Fund size= Ln(NAV)

Where:

NAV= Net Asset Value Ln=Log Natural

According to Rao et al., (2017), Livingston et al., (2019), and Maftukhah (2020), equity funds are classified into three types of fees to be paid: The first is the management fee paid to investment advisors. The second is costs other than administrative costs originating from record-keeping provisions and transaction services to shareholders. The third is the cost known as the 12-b fee which is a regulation issued by the Securities Exchange Commission (SEC), regulating the costs allocated to advertising, marketing, and distribution services. The expense ratio compares equity funds' operational costs to the total expense managed. This ratio compares the annual expenses incurred by investors. (Nguyen et al., 2018).

Expense ratio = $\frac{Te_t/NAV}{N}$

Where:

TE= Total Expense t = PeriodsNAV= Net Asset Value *N*= Number of periods

Portfolio turnover

Portfolio turnover measures the level of activity undertaken by investment managers in buying and selling assets, reflecting changes in the composition of the portfolio as an effort to anticipate market fluctuations (Devi & Sudirman, 2021). Portfolio turnover is measured by the smallest assets purchased and sold in comparison to average net asset values (Marzuki & Worthington, 2015).

Portfolio turnover =
$$\frac{min(Ag_{buys} \text{ or } Ag_{sells})}{NAV}$$
 (Borochin & Yang, 2017)

Where:

Min= minimum *Ag_buys*= Average of buying portfolio Ag_sells= Average of selling portfolio NAV= Net Asset Value

Model Development

The model developed in this study is as follows

$$\gamma(SR)_{it} = \beta_0 + \beta_1 X_1(SS)_{it} + \beta_2 X_2(MT)_{it} + \beta_3 X_3(Age)_{it} + \beta_4 X_4(Size)_{it} + \beta_5 X_5(ER)_{it} + \beta_6 X_6(TR)_{it} + \varepsilon_{it}$$

Where:

SR= Sharpe Ratio (Islamic Equity Funds performance)

SS= Stock Selection Skill MT= Market Timing Ability

AGE= Fund Age

SIZE= Fund Size

ER= Expense Ratio

TR= Portfolio turnover

ε= random error

Data Analysis Method

Basuki & Prawoto (2016) explained that panel data regression is a regression technique that utilizes a combination of time series and cross-sectional data in a panel or data pool. The process of panel regression involves several phases to obtain the best model estimate. The estimation of the panel data model can be carried out through three approaches: the common effect model, the fixed effect model, and the random effect model. These models are assessed using tests such as the Chow test, Hausman test, and Lagrange Multiplier Test to determine the optimal model for panel data regression.

Additionally, according to Winarno (2015), the coefficient of determination (\mathbb{R}^2) is a metric used to assess the appropriateness or correctness of the relationship between the independent and dependent variables in a regression equation. The value of the coefficient of determination ranges from 0 to close to 1. The T statistic test is used to determine whether or not an independent variable affects the dependent variable, with a significance level of $\alpha = 0.05$. If the significance level (t) is greater than 0.05, the null hypothesis (H0) is accepted; if the significance level (t) is less than 0.05, the null hypothesis (H0) is rejected (H1 is accepted) (Winarno, 2015).

Result

Descriptive Statistics

Descriptive statistics is the analysis to describe the data phenomena comprising mean, maximum, minimum, and standard deviation (Basuki & Prawoto, 2016). In other words, descriptive statistics are used to understand the data distribution characteristics. The following table shows panel data statistics from the entire sample of this study with a total of 90 observations consisting of 15 investment managers within 6 years.

Table 1 displays the various variable descriptions utilized in this investigation. Islamic Equity Funds performance as measured by Sharpe Ratio obtain a mean value of -0.188078, a median of -0.131706, a maximum value of 0.923174, a minimum value of -4.049849, and the standard deviation of 0.513036. Based on the findings, it is evident that the highest performance of Islamic Equity Funds in the research period was achieved at 0.923174. The measurement of stock selection skill using the Treynor-Mazuy ratio indicates that the ability of investment managers in Islamic Equity Funds to select assets and construct portfolios with expected future returns varied throughout the 2015-2020 timeframe. Market timing ability, as measured using the Treynor-Mazuy ratio, reveals significant variations among Islamic Equity Funds in Indonesia in terms of their ability to identify the optimal timing for buying or selling stocks within their portfolios. Additionally, the expense ratio, obtained from the prospectus of each Islamic Equity Fund, highlights the diverse range of expense percentages observed among Islamic Equity Funds in Indonesia. In general, a higher expense ratio has a greater effect on the performance of Islamic Equity Funds, as it signifies higher costs incurred. Additionally, portfolio turnover serves as a suitable indicator for measuring the level of aggressiveness in equity fund management by the Investment Manager. A higher portfolio turnover indicates more aggressive portfolio management by the Investment Manager and vice versa.

Table 1. Descriptive Statistics

	Sharpe	Stock	Market	Fund Age	Fund Size	Expense	Portfolio
	Ratio	Selection	Timing			Ratio	Turnover
		Skill	Ability				
Mean	-0.188078	-0.009825	-18.84962	7.700000	1.91E+11	0.040807	1.535389
Median	-0.131706	-0.009000	-2.23650	8.000000	8.65E+10	0.039500	1.025000
Max.	0.923174	0.726000	343.455	14.00000	1.59E+12	0.114000	10.04000
Min.	-4.049849	-0.530000	-144.900	1.000000	1.18E+09	0.017400	0.080000
Std. Dev.	0.513036	0.111278	171.2685	3.326604	2.74E+11	0.015162	1.497454
Skewness	-4.772739	1.923183	-6.819726	-0.061434	2.499400	1.799062	2.889375
Kurtosis	37.15275	27.71749	56.68854	1.976624	10.27543	8.642649	14.55021
Observe	90	90	90	90	90	90	90

Panel Data Regression Estimation Model

Before conducting the Hausman test, the Chow test was employed to select an appropriate model between the Fixed Effect Model (FEM) and the Common Effect Model (CEM). The subsequent hypotheses were tested:

H0: Common Effect H1: Fixed Effect

If H1 is accepted and the probability value is less than 0.05, the Fixed Effect Model (FEM) is the appropriate model to use. If the probability value is greater than 0.05, H1 is rejected, and the Common Effect Model (CEM) is the preferable alternative. The results of the likelihood ratio test to determine whether to employ a fixed effect model or a common effect model are shown in the table 2.

Table 2. Results of Likelihood Ratio Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	0.974950	(14,69)	0.4874
Cross-section Chi-square	16.244985	14	0.2986

Based on the findings of the likelihood ratio test, the probability value of cross-section F is greater than 0.05, indicating that the Common Effects Model (CEM) is the appropriate model to use for this study. As the Common Effect Model is the appropriate model for this study, there is no need to conduct the Hausman test (Basuki & Prawoto, 2016).

The correlation coefficient between the independent variables can be used to detect multicollinearity. If the correlation coefficient value is < 0.8, it can be concluded that there is no multicollinearity (Gujarati, 2009). According to table 3, the result of the correlation coefficient value indicates that none of the variables have a correlation value greater than 0.8. Therefore, it can be concluded that multicollinearity problems are not detected.

Table 3. Results of Multicollinearity Test

	Stock Selection Skill	Market Timing Ability	Fund Age	Fund Size	Expense Ratio	Portfolio Turnover
Stock Selection Skill	1.000000	-0.109105	0.070723	0.021539	-0.087235	-0.073749
Market Timing	-0.109105	1.000000	0.140152	0.066497	0.099898	0.090836
Ability						
Fund Age	0.070723	0.140152	1.000000	0.262925	0.035998	0.262504
Fund Size	0.021539	0.066497	0.262925	1.000000	-0.252884	-0.208272
Expense Ratio	-0.087235	0.099898	0.035998	-0.252884	1.000000	0.633840
Portfolio Turnover	-0.073749	0.090836	0.262504	-0.208272	0.633840	1.000000

The Heteroscedasticity test is used to determine whether there is a variance inequality between the residuals of one observation and the residuals of another observation in the regression model. White heteroscedasticity-consistent standard errors and covariance can be used to calculate the Heteroscedasticity test. White (1980) proposed a test for heteroscedasticity of unknown form using a matrix approximation as a starting point. The following table shows the result of heteroscedasticityconsistent standard errors & covariance:

Table 4. Results of White Heteroscedasticity-Consistent Standard Error & Covariance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.139586	0.099254	1.406360	0.1634
Stock Selection Skill	-0.238550	0.675288	-0.353257	0.7248
Market Timing Ability	-1.69E-05	7.60E-05	-0.221678	0.8251
Fund Age	-0.012397	0.012197	-1.016398	0.3124
Fund Size	2.91E-14	8.91E-14	0.327088	0.7444
Expense Ratio	0.693813	2.644994	0.262312	0.7937
Portfolio Turnover	0.120442	0.081148	1.484222	0.1415

According to table 4, the result of heteroscedasticity-consistent standard errors & covariance indicates that none of the variables have a probability value less than the level of significance (0.05). Therefore, it can be concluded that heteroscedasticity problems are not detected.

Adjusted (R²) Square

According to Winarno (2015), the coefficient of determination (R2) is a metric used to assess the appropriateness or correctness of the relationship between the independent and dependent variables in a regression equation. The coefficient of determination can take values ranging from 0 to close to 1.

Table 5. Coefficient of Determination Test Results

R-squared	0.165329	
Adjusted R-squared	0.104991	

The obtained coefficient of determination is 0.165329. This indicates that the sum of all independent variables' contributions in explaining the dependent variable is 16.5 percent. It can be inferred that the remaining 83.5% is attributed by factors outside of the model. This result is due to the limited data used, resulting in several variables to be insignificant so that the Adjusted Square (R2) value is low.

T-Statistic Test

The T-test statistic was used to determine whether the independent factors could explain and affect the dependent variable (Winarno, 2015). Independent variables are considered to be significant if the probability value is less than the significance threshold, which is less than or equal to 0.05.

Table 6. T-Statistic Test Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.	
C	-0.349873	0.210682	-1.660668	0.1006	
Stock Selection Skill	1.216197	0.469124	2.592485	0.0113	
Market Timing Ability	-1.86E-05	0.000307	-0.060596	0.9518	
Fund Age	-0.002430	0.017360	-0.139974	0.8890	
Fund Size	7.85E-14	2.05E-13	0.382665	0.7029	
Expense Ratio	9.249924	4.500161	2.055465	0.0430	
Portfolio Turnover	-0.130467	0.047449	-2.749639	0.0073	

Table 6 shows the t-test result in this study. Based on the estimation of the t-test using the Common Effect Model, not all hypotheses are empirically supported. Only three variables are significant with the probability value less than 0.05. These variables include stock selection skill on the performance of Islamic Equity Funds with probability value of 0.0113, expense ratio on the performance of Islamic Equity Funds with probability value of 0.043, and portfolio turnover on the performance of Islamic Equity Funds with probability value of 0.0073.

Robustness Test

To further substantiate the findings on the performance of Islamic Equity Funds and shed more light on the issues under consideration, additional analyses were conducted. We employed the Treynor Ratio, developed by Treynor (1965) which calculates the excess return generated above the risk-free investment per unit of market risk. This ratio calculates risk-adjusted return based on systematic risk and serves as an alternative ratio to measure the performance of Equity Funds.

Treynor Ratio =
$$\frac{Rp - Rf}{\beta}$$

Where:

Rp= return of the portfolio

Rf= risk-free rate

 β = Beta or the systematic risk of the portfolio.

The results are presented in Table 7.

Table 7. T-Statistic Test Results Using Treynor Ratio

Variable	Coefficient	Std. Error	t-Statistic	Prob.
$\overline{\mathbf{C}}$	-0.012159	0.043138	-0.281854	0.7788
Stock Selection Skill	-0.195449	0.075796	-2.578608	0.0117
Market Timing Ability	-7.59E-05	4.97E-05	-1.528687	0.1301
Fund Age	0.004943	0.003441	1.436498	0.1546
Fund Size	-7.72E-15	4.25E-14	-0.181900	0.8561
Expense Ratio	-0.091942	0.831351	-0.110593	0.9122
Portfolio Turnover	-0.007615	0.008406	-0.905848	0.3676

According to table 7, the results reaffirm that stock selection skill has a significant effect on the performance of Islamic Equity Funds. Consistent with the initial findings, the coefficient of market timing ability and portfolio turnover exhibit negative effects. However, the coefficient of expense ratio demonstrates a negative and insignificant effect on the performance of Islamic Equity Fund. Despite a few discrepancies, the overall results do not overturn the previous findings.

Discussion

Panel data regression analysis aims to determine the effect of stock selection skill, market timing ability, funds age, funds size, expense ratio, and portfolio turnover partially on the performance of Islamic Equity Funds in Indonesia. The hypothesis proposing that stock selection skill has a positive and significant effect on the performance of Islamic Equity Funds is accepted. This study is consistent with the study conducted by Omri et al., (2019) and Zouaoui (2019), indicating that the performance of Islamic Equity Funds is affected by stock selection skills, the capacity of investment managers to select the appropriate portfolio. Additionally, it corroborates the study conducted by Ferson & Mo (2016) regarding the significant effect of selectivity skills on the performance of equity funds. It also confirm the study conducted by Mohammad & Ashraf (2015), Mustofa & Kusumawardani (2016), Putri et al., (2016) and Sari et al., (2019), revealing that stock selection skills have an effect on the performance of Islamic Equity Funds, measured by Treynor-Mazuy ratio. Therefore, it can be concluded that the higher the investment manager's ability to select its portfolio stock, the better the return obtained (Tan, 2015). Overall, the data indicate that the stock selection skill variable has a positive and significant effect on the performance of Islamic Equity Funds.

The second result indicates that market timing ability has no significant effect on the performance of Islamic Equity Funds. Therefore, a hypothesis proposing that market timing ability has a positive and significant effect on the performance of Islamic Equity Funds is rejected. This study is consistent with the study conducted by Ahsraf (2013) and Zouaoui (2019), examining market timing ability on the performance of Islamic Equity Funds using the Treynor-Mazuy model. However, the finding of this study contradict the previous study conducted by Mansor et al., (2015), Merti et al., (2017), and Pillbeam & Preston (2019), indicating that market timing ability has a positive and significant effect on the performance of Islamic Equity Funds. Market timing ability has an effect on the success of equity funds as it provides a direct means to understand the portfolio management strategies employed by investment managers (Rao et al., 2017). Furthermore, this finding is consistent with the studies conducted by Gusni et al., (2018) and Juniar & Rachmah (2018), that market timing ability has no significant effect on the performance of Islamic Equity Funds in Indonesia. Fundamentally, the investment managers of Islamic Equity Funds in Indonesia aim to optimize returns (yield) while ensuring strict adherence to Sharia compliance in all transactions. Consequently, the application of market timing theory is believed to be challenging for Islamic Equity Funds (Anita, 2013). This irrelevance of investment managers' timing abilities may be ascribed to the fact that the flow of funds to Islamic Equity Funds is consistent since investors are less sensitive to market performance and selection skills of investment managers with a long-term perspective (Ashraf, 2013).

This study also indicates that the fund age has a negative and insignificant effect on the performance of Islamic Equity Funds. The results of this study are consistent with the study conducted by Bai et al., (2019), equity funds with a longer lifespan tend to possess a more extensive track record, which can potentially result in better performance for investors. The age of an equity fund serves as an indicator of the investment manager's experience in managing the equity fund. The longer the age of the equity fund, the investment manager will be more experienced in managing the portfolio (Bani Atta & Marzuki, 2019). This is consistent with the findings of Asad and Siddiqui (2019), who discovered that fund age has a positive effect on equity fund performance. While fund age holds significance, it does not imply that equity funds with a longer lifespan will consistently outperform newer equity funds. Therefore, past performance by investment managers of Islamic Equity Funds does not guarantee future results. Consequently, the hypothesis that fund age has a positive effect on the performance of Islamic Equity Funds is rejected.

Furthermore, another finding of this study indicates that fund size has no significant effect on the performance of Islamic Equity Funds. This finding is consistent with the study conducted by Nguyen et al., (2018), that fund size is defined as the total amount of assets of Islamic Equity Funds. They argue that a larger fund size can provide flexibility, increase bargaining power, and facilitate the creation of economies of scale, potentially leading to cost reduction and positively impacting the performance of equity funds. As the size of the managed assets increases, it brings about greater flexibility, enhanced bargaining power, and facilitates the creation of economies of scale. These factors can lead to cost savings and potentially have a negative impact on equity performance (Bai et al., 2019). However, the result of this study revealed that fund size has a positive effect on the performance of Islamic Equity Funds. In contrast to the finding that indicates no significant effect between size and performance. This finding contradicts the studies conducted by Chen Lai (2014), Kaur (2018), and Rokhim & Octaviani (2019), that fund size has a negative and significant effect on Islamic Equity Funds. Additionally, the results of this study contradict the studies conducted by Dharmastuti & Dwiprakasa (2017), and Asriwahyuni (2017). On the other hand, these results are consistent with the studies conducted by Hermawan & Wiagustini (2016), Phillipps, et al., (2018), and Gusni et al. (2018) that the fund size has no direct effect on the performance of equity funds. This suggests that the size of the equity fund has no effect on the investment manager's success in managing the equity fund. Due to this minor effect, the size of the equity fund should not be used as a guide for investors considering equity funds. Based on the aforementioned results, it can be inferred that larger funds do not necessarily correlate with higher performance. The performance of an Islamic Equity Fund is not solely dependent on its size but could be the result of well-planned and executed investment activities by the investment manager, which builds trust among investors. Therefore, it is possible for equity funds with a small net asset value to deliver good performance. As a result, the hypothesis proposing that fund size has a negative and significant effect on the performance of Islamic Equity Fund is rejected.

This finding also suggests that the expense ratio has a positive and significant effect on the performance of Islamic equity funds. This study is consistent with the study conducted by Rehan (2020) stating the role of expense ratio in cultivating the returns on investment of Islamic Equity Funds. An equity fund's expense ratio reflects the costs associated with portfolio management, administration, marketing, distribution, and other related expenses (Naveed, Khawaja, et al., 2020). A lower expense ratio indicates greater efficiency and effectiveness of the investment manager in fulfilling their responsibilities as the investment manager of equity funds (Sukmaningrum et al., 2016). Furthermore, the findings of this study are consistent with the study conducted by Marzuki & Worthington (2015) revealing a positive and significant relationship between fund costs and fund performance in both conventional and Islamic Equity Funds. These findings also corroborate the study by Nguyen et al., (2018, who stated that the expense ratio has a statistically significant positive effect on equity fund performance. Consequently, the hypothesis proposing that the expense ratio has a positive effect on the performance of Islamic Equity Funds is accepted.

The other finding suggests that the portfolio turnover has a negative and significant effect on the performance of Islamic Equity Funds. This study is consistent with the study conducted by Livingston et al., (2019), that equity funds employing more active strategies and exhibiting higher turnover rates tend to have significantly higher performance compared to equity funds with lower portfolio turnovers or more passive approaches.

The high portfolio turnover might be regarded by investment managers as an indication of their endeavors to add value to the fund's portfolio by identifying undervalued or overvalued assets and executing market-timing purchase and sell decisions (El-Masry et.al, 2016). Additionally, the finding of this study contradicts the studies conducted by Kiymaz (2018), Kaur (2018), and Da Silva et al., (2020), that portfolio turnover has a significant effect on the performance of equity funds. Furthermore, the finding of this study is consistent with the studies conducted by Carhart (1997) and Wu (2014), revealing that portfolio turnover has a negative and significant effect on equity fund performance. Furthermore, Rao (2011) and Satrio & Mahfud (2016) found that portfolio turnover has a statistically negative and insignificant effect. Equity fund performance is strongly and negatively connected to equity fund expense and portfolio turnover. According to the study conducted by Carhart (1997), portfolio turnover has a negative and significant effect on the performance of equity funds. Wu (2014) found that equity funds with higher turnover rates and fee ratios tend to have lower fund returns.

Additionally, the study revealed that underperforming funds had a higher portfolio turnover, indicating that turnover is a crucial determinant of fund performance. Furthermore, funds with high turnover rates tend to have higher expenditures, whereas funds with low turnover rates have lower expenditures. Rao (2011) suggested that increasing portfolio turnover could result in improved fund performance, suggesting that large portfolio turnover percentages do not always boost fund performance over an extended period of time. According to Chow et al., (2011), higher turnover is associated with better performance. However, in the case of the lowest-performing portfolio, turnover has a significant negative effect on performance. In other words, The lowest-performing stock funds exhibit worse performance as turnover increases. This suggests that for fund managers with lowperformance funds, engaging in more trading leads to a further decline in performance. Additionally, Satrio & Mahfud (2016) asserted that portfolio turnover incurs additional costs associated with buying and selling portfolios managed by investment managers. As the number of investment transactions increases, the turnover rate also rises. Ultimately, the turnover fee significantly affects the potential profitability of the invested funds. Consequently, the hypothesis proposing that portfolio turnover has a positive effect on the performance of Islamic Equity Fund is rejected (H6 is rejected).

Conclusion

Based on the overall findings of this study, it can be concluded that investors share similar investment objectives, including maximizing returns, managing risk exposure, achieving return on investment, and considering capital costs. Consequently, the return on investment can vary significantly from the market return and can differ based on the investor's specific area. Investment managers play a crucial role in making decisions in managing their funds that simultaneously affect investor behavior and their investment in Islamic Equity Funds. Portfolio diversification refers to the inclusion of various financial assets such as bank deposits, savings certificates, treasury bills, stocks, bonds, and equity funds in a portfolio. Therefore, Islamic Equity Funds can be considered as a diversified portfolio of financial assets. It is observed that funds with a higher portfolio concentration, both across different industries and within industries, tend to have a significantly higher portfolio concentration. Investment managers managing client funds to invest in portfolios must have a thorough understanding of their client's risk and return. Diversifying the portfolio of an equity fund helps to mitigate risk as investment managers must deviate from the Net Asset Value (NAV) by investing in various types of securities.

A systematic approach is necessary to minimize risk and, to the greatest extent possible, eliminate the negative impact of emotions, behavior, excessive fees, and taxes on investment performance. Additionally, this approach should outline how investment opportunities and managers will be identified. The Capital Asset Pricing Model (CAPM) is connected to the Treynor-Mazuy ratio, which relies on the Exceed Portfolio Return (EPR) and Excess Market Return (ERM) derived from CAPM. Additionally, CAPM has a relationship in terms of Sharpe ratio which describes the relationship between systematic risk and expected return for assets, particularly stocks. CAPM is widely used in finance to price risky securities and estimate expected returns based on asset risk and cost of capital. In this case, the Sharpe ratio, similar to the Treynor ratio, measures the risk premium per unit of total risk, but it uses portfolio total risk instead of systematic risk. Market timing ability has an effect on the performance of Islamic Equity Funds as it reveals the portfolio strategies employed by investment managers. However, the timing abilities of investment managers may be irrelevant due to the consistent flow of funds to Islamic Equity Funds, indicating that investors are less sensitive to market performance and selection skills of investment managers with long-term perspectives. Equity funds with a longer lifespan tend to have a more extensive track record, suggesting a better performance for the investors. The longer the age of equity funds, the more experienced the investment manager becomes in managing a portfolio. While fund age is indeed important, it does not guarantee that equity funds with a long lifespan will always outperform newer equity funds.

This study employs the Net Asset Value (NAV) of Islamic Equity Funds as a criterion for determining their fund size. This approach not only provides flexibility but also enhances bargaining power and facilitates the creation of economic scale. These factors, in turn, have the potential to reduce costs and positively impact the performance of equity funds. Based on the findings of this study, fund size has no effect on the performance of Islamic Equity Funds. It is important to note that a strong performance does not necessarily require a large fund size; rather, it can be attributed to well-planned activities and effective execution by investment managers. Consequently, there is a possibility for equity funds with a low net asset value to outperform their counterparts. The findings of this study indicate that the expense ratio has an effect on the performance of Islamic Equity Funds. It can be inferred that the expense ratio of an equity fund reflects the costs associated with various aspects such as portfolio management, administration, marketing, and distribution. The lower the expense ratio, the more efficient and effective the Investment Manager is in carrying out its duties as an investment manager of equity funds. Islamic Equity Funds that adopt more active strategies and engage in greater portfolio turnovers exhibit significantly stronger performance compared to equity funds with lower portfolio turnovers. Investment managers often view high portfolio turnover as an indication of their efforts to enhance the value of the fund's portfolio. However, it is important to note that as investment managers increase the frequency of turnover, the turnover fee also rises. Ultimately, the turnover fee has a negative and significant effect on the potential profitability of the invested funds.

This study provides valuable insights for further studies and offers recommendations for investment managers of Islamic Equity Funds. For the Islamic Equity Funds investment managers, the findings of this study can be referenced in scholarly evaluations that explore the factors affecting the performance of Islamic Equity Funds. While this study yields results on stock selection skills and market timing ability using the Treynor-Mazuy ratio, there is still room for improvement and further investigation. It is hoped that future studies will delve into the determinant analysis of the Islamic Equity Funds performance using Jensen's Alpha ratio and Treynor ratio. To further enhance the determinant analysis of Islamic Equity Funds, the Henriksson model (1984) can be employed to measure stock selection skill and market timing ability. Additionally, measuring portfolio turnover using Modified Portfolio Turnover can provide another valuable result. Furthermore, exploring other forms of Islamic Equity Funds, such as Islamic Money Market Funds, Fixed Income Islamic Equity Funds, Mixed Islamic Equity Funds, Islamic Indexed Funds, Sukuk Equity Funds, Protected Islamic Equity Funds, and Islamic Equity Funds based on foreign Islamic securities, can contribute to a more comprehensive understanding of their performance dynamics.

References

- Alam, M. M., Akbar, S. C., Shahriar, M. S., & Elahi, M. M. (2017). The Islamic Shariah principles for investment in stock market. Emerald Insight, 132-146. https://doi.org/https://doi.org/10.1108/QRFM-09-2016-0029
- Alexandri, M. B. (2015). Mutual Fund Performance: Stock Selection or Market Timing. Proceedings of the International Conference on Economics and Banking 2015, 5, 173–179. https://doi.org/10.2991/iceb-15.2015.26
- Ali, S., Zani, R. M., & Kasim, K. (2015). Factors Influencing Investors' Behavior in Islamic Unit Trust: An Application of Theory of Planned Behavior. Journal of Islamic Economics Banking and Finance, 10(2), 183–201. https://doi.org/10.12816/0025176
- Aljaed, S., Maizaitulaidawati, & Khairuzzaman, W. (2019). Factors Influencing Saudis Investors' Attitude to Invest in Islamic Mutual Funds. Research Journal of Finance and Accounting, 10(8), 16-23. https://doi.org/10.7176/RJFA
- Amman, M., Bauer, C., Fischer, S., & Muller, P. (2018). The Impact of the Morningstar Sustainability Rating on Mutual Fund Flows. Wiley. https://doi.org/https://doi.org/10.1111/eufm.12181
- Anita. (2013). Pengukuran Pemilihan Saham dan Penetapan Waktu Menggunakan Model Treynor-Mazuy Pada Reksadana Syariah di Indonesia. Etikonomi, 12(1), 1–20.
- Asad, M., & Siddiqui, D. A. (2019). Determinants of Mutual Funds Performance in Pakistan. International Journal ofSocial and Administrative Sciences, 4(2), 85–107. https://doi.org/10.18488/journal.136.2019.42.85.107
- Ashraf, D. (2013). Performance evaluation of Islamic mutual funds relative to conventional funds: Empirical evidence from Saudi Arabia. International Journal of Islamic and Middle Eastern Finance and Management, 6(2), 105–121. https://doi.org/10.1108/17538391311329815
- Asriwahyuni, I. G. A. P., & Prima, G. A. (2017). Pengaruh Ukuran dan Umur Pada Kinerja Reksa Dana Saham di Indonesia. E-Jurnal Akuntansi Universitas Udayana, 21(2), 1460-1487.
- Bai, J. (Jianqiu), Ma, L., Mullally, K. A., & Solomon, D. H. (2019). What a difference a (birth) month makes: The relative age effect and fund manager performance. Journal of Financial Economics,

- 132(1), 200–221. https://doi.org/10.1016/j.jfineco.2018.10.003
- Bani Atta, A. A. B., & Marzuki, A. (2019). The Determinants of Islamic Mutual Fund Flows: Evidence From Malaysia. International Journal of Advanced Research in Economics and Finance, 1(1), 10–21. http://myjms.mohe.gov.my/index.php/ijaref
- Bareksa. (2019). Industri Reksadana Indonesia Jauh Tertinggal Dibanding Negara Lain, Ini Datanya. Bareksa.Com. https://www.bareksa.com/berita/en/text/2019/04/10/industri-reksadana-indonesiajauh-tertinggal-dibanding-negara-lain-ini-datanya/22034/news
- Basso, A., & Funari, S. (2017). The role of fund size in the performance of mutual funds assessed with models. European Journal Finance, 23(6), 457–473. of https://doi.org/10.1080/1351847X.2016.1164209
- Basuki, A. T., & Prawoto, N. (2016). Analisis Regresi Dalam Penelitian Ekonomi & Bisnis (2nd ed.). Rajagrafindo Persada.
- Boo, Y. L., Ee, M. S., Li, B., & Rashid, M. (2017). Islamic or conventional mutual funds: Who has the upper hand? Evidence from Malaysia. Pacific Basin Finance Journal, 42, 183-192. https://doi.org/10.1016/j.pacfin.2016.01.004
- Borochin, P., & Yang, J. (2017). The effects of institutional investor objectives on firm valuation and governance. Journal Economics, of Financial *126*(1), 171-199. https://doi.org/10.1016/j.jfineco.2017.06.013
- Cai, W., & Lu, J. (2019). Investors' financial attention frequency and trading activity. Pacific Basin Finance Journal, 58(March), 101239. https://doi.org/10.1016/j.pacfin.2019.101239
- Carhart, M. M. (1997). On persistence in mutual fund performance. *Journal of Finance*, 52(1), 57–82. https://doi.org/10.1111/j.1540-6261.1997.tb03808.x
- Chen, X. H., & Lai, Y. J. (2014). On the concentration of mutual fund portfolio holdings: Evidence Taiwan. Research in International Business and Finance, 33, https://doi.org/10.1016/j.ribaf.2014.10.004
- Chow, E. H., Lin, H. M., Lin, Y. M., & Weng, Y. C. (2011). The performance of overconfident fund managers. Emerging Markets **Finance** and Trade, 47(2), 21-30.https://doi.org/10.2753/REE1540-496FUND SIZE70202
- Constantinides, G. M., & Malliaris, A. G. (1995). Portfolio theory. Handbooks in Operations Research and Management Science, 9(C), 1–30. https://doi.org/10.1016/S0927-0507(05)80045-3
- da Silva, S. E., da Silva Roma, C. M., & Iquiapaza, R. A. (2020). Portfolio turnover and performance of equity investment funds in Brazil. Revista Contabilidade e Financas, 31(83), 332-347. https://doi.org/10.1590/1808-057Market Timing Ability01909420
- Deb, S. G. (2019). Persistence in performance of actively managed equity mutual funds: New Indian evidence. IIMB Management Review, 31(2), 145-156. https://doi.org/10.1016/j.iimb.2019.03.014
- Devi, F., & Sudirman, I. M. S. N. (2021). The Effect of Stock Selection Ability, Market Timing Ability, Fund Size and Portfolio Turnover on Equity Fund Performance in Indonesia. American Journal of Humanities and Social Sciences Research (AJHSSR), 5(3), 58–64.
- Dharmastuti, C. F., & Dwiprakasa, B. (2017). Karakteristik Reksa Dana Dan Kinerja Reksa Dana Saham Di Indonesia. Jurnal Ekonomi, 22(1), 52-67.
- Droms, W. G., & Walker, D. A. (1996). Mutual fund investment performance. Quarterly Review of Economics and Finance, 36(3), 347–363. https://doi.org/10.1016/S1062-9769(96)90020-4
- El-Masry, A. A., de Mingo-López, D. V., Matallín-Sáez, J. C., & Tortosa-Ausina, E. (2016). Environmental conditions, fund characteristics, and Islamic orientation: An analysis of mutual fund performance for the MENA region. Journal of Economic Behavior & Organization, 132, 174-197.
- Ferson, W., & Mo, H. (2016). Performance measurement with selectivity, market and volatility timing. Journal of Financial Economics, 121(1), 93–110. https://doi.org/10.1016/j.jfineco.2016.02.012
- Financial Services Authority. (2021). Statistik Reksa Dana Syariah Maret 2021. Financial Services https://www.ojk.go.id/id/kanal/syariah/data-dan-statistik/reksa-dana-Authority. syariah/Pages/Statistik-Reksa-Dana-Syariah---Maret-2021.aspx
- Galagedera, D. U. A., Roshdi, I., Fukuyama, H., & Zhu, J. (2018). A new network DEA model for mutual fund performance appraisal: An application to U.S. equity mutual funds. Omega (United

- Kingdom), 77, 168–179. https://doi.org/10.1016/j.omega.2017.06.006
- Goldman, E., Sun, Z., & Zhou, X. T. (2016). The effect of management design on the portfolio concentration and performance of mutual funds. Financial Analysts Journal, 72(4), 49-61. https://doi.org/10.2469/faj.v72.n4.9
- Golec, J. (1996). The effects of mutual fund managers' characteristics on their portfolio performance, risk and fees. Financial Services Review, 5(2), 133-147. https://doi.org/10.1016/s1057-0810(96)90006-2
- Grinblatt, M., & Titman, S. (1989). Mutual Fund Performance: An Analysis of Quarterly Portfolio Holdings Author (s): Mark Grinblatt and Sheridan Titman Source: The Journal of Business, Vol. 62, No. 3 (Jul., 1989), pp. 393-416 Published by: The University of Chicago Press St. The Journal of Business, 62(3), 393–416.
- Gujarati, D. N. (2009). Dasar-Dasar Ekonometrika (J. Mulyadi, S. Saat, & W. Hardani (eds.); Indonesia). Mc Graw Hill Company.
- Gusni, Silviana, & Hamdani, F. (2018). Factors affecting equity mutual fund performance: Evidence from Indonesia. Investment Management and Financial Innovations, 15(1), 1-9. https://doi.org/10.21511/imfi.15(1).2018.01
- Hartono, J. (2017). Teori Portofolio dan Analisis Investasi (A. M. Kumar, A. Hamid, A. Prasetyo, A. Sartono, A. A. Mardiyah, A. Naim, Algifari, A. Prastiwi, Askam, & A. Purnamwati (eds.); 11th ed.). BPFE-Yogyakarta.
- Hassan, A., Chachi, A., & Munshi, M. R. (2020). Performance measurement of Islamic mutual funds using DEA method. Journal of Islamic Accounting and Business Research, 11(8), 1481–1496. https://doi.org/10.1108/JIABR-04-2018-0053
- Henriksson, R. D. (1984). Market Timing, Selectivity, and Mutual Fund Performance: An Empirical Investigation. The Journal of Business, 57(1), 73–96. https://doi.org/10.1086/296505
- Hermawan, D., & Wiagustini, N. L. P. (2016). Pengaruh inflasi, suku bunga, ukuran reksa dana, dan umur reksa dana terhadap kinerja reksa dana (Doctoral dissertation, Udayana University).
- Hoepner, A. G. F., Rammal, H. G., & Rezec, M. (2011). Islamic mutual funds' financial performance and international investment style: Evidence from 20 countries. European Journal of Finance, 17(9–10), 829–850. https://doi.org/10.1080/1351847X.2010.538521
- Juniar, A., & Rachmah, D. A. (2018). Analisis Pengaruh Stock Selection Skill, Market Timin Ability, dan Fund Longevity Terhadap Kinerja Reksadana Saham Syariah. Jurnal Sains Manajemen Dan *Kewirausahaan*, 2(1), 61–69.
- Kabir Biplob, M. N. (2017). Performance Evaluation of Bangladeshi Mutual Fund: An Analysis of Monthly Return Based on Net Asset Value. International Journal of Economics & Management Sciences, 06(03). https://doi.org/10.4172/2162-6359.1000428
- Kaur, I. (2018). Effect of mutual funds characteristics on their performance and trading strategy: A panel dynamic approach. Cogent **Economics** and Finance, 6(1), 1-17.https://doi.org/10.1080/23322039.2018.1493019
- Kiymaz, H. (2018). A performance evaluation of Chinese mutual funds. International Journal of Emerging Markets, 13(5), 998–1025. https://doi.org/10.1108/IJoEM-07-2017-0263
- Livingston, M., Yao, P., & Zhou, L. (2019). The volatility of mutual fund performance. Journal of Economics and Business, 104(February), 105835. https://doi.org/10.1016/j.jeconbus.2019.02.001
- Low, S. W. (2012). Market timing and selectivity performance: A cross-sectional analysis of Malaysian unit trust funds. Prague Economic Papers, 21(2), 205–219. https://doi.org/10.18267/j.pep.419
- Maftukhah, A. (2020). The Performance of Sharia Equity Fund Investment Manager. Jurnal Igtisaduna, 1(1), 81. https://doi.org/10.24252/iqtisaduna.v1i1.16056
- Mansor, F., Bhatti, M. I., & Ariff, M. (2015). New evidence on the impact of fees on mutual fund performance of two types of funds. Journal of International Financial Markets, Institutions and Money, 35, 102–115. https://doi.org/10.1016/j.intfin.2014.12.009
- Markowitz, H. (1952). Portfolio Selection. American Finance Association, 7(1), 77–91. http: //links.jstor.org/sici? Sici = 0022-1082%25 28195203%25297%253A1%25 3C77%253APS%25 3E2.0.CO%25 3B2-1
- Marzuki, A., & Worthington, A. (2015). Comparative performance related fund flows for Malaysian Islamic and conventional equity funds. International Journal of Islamic and Middle Eastern

- Finance and Management, 8(10), 380–394. https://doi.org/10.1108/mf.2008.00934jaa.001
- Merti, D., Nur, E., & Nasrizal. (2017). The Effect of Market Timing Ability, Stock Selection Skill and Risk Levels on Sharia Stock Mutual Funds Performance with The Inflation Level as A Variable of Conditional and Unconditional Models in Period 2015-2017. International Journal of Economics, Business, and Applications, 4(19), 74–86.
- Mohammad, N., & Ashraf, D. (2015). The market timing ability and return performance of Islamic equities: An empirical study. Pacific Basin Finance Journal, https://doi.org/10.1016/j.pacfin.2015.07.001
- Mustofa, F. S., & Kusumawardhani, A. (2016). Pengaruh Stock Selection Ability Dan Market Timing Ability Terhadap Menggunakan Model Conditional Dan Unconditional Pada Periode 2009 -2015. Diponegoro Journal of Management, 5, 1–10.
- Naveed, F., Khawaja, I., & Maroof, L. (2020). Are Islamic mutual funds exposed to lower risk compared to their conventional counterparts? Empirical evidence from Pakistan. ISRA International Journal of Islamic Finance, 12(1), 69–87. https://doi.org/10.1108/IJIF-01-2019-0012
- Naveed, F., Khurshid, M. K., & Saqib, S. (2020). Corporate governance mechanism and the ratings of Islamic and conventional mutual funds: Evidence from Pakistan. International Journal of Islamic and Middle Eastern Finance and Management, 13(5), 769–786. https://doi.org/10.1108/IMEFM-08-2018-0257
- Nguyen, A. N., Shahid, M. S., & Kernohan, D. (2018). Investor confidence and mutual fund performance in emerging markets: Insights from India and Pakistan. Journal of Economic Studies, 45(6), 1288–1310. https://doi.org/10.1108/JES-07-2017-0175
- Oliveira, L., Salen, T., Curto, J. D., & Ferreira, N. (2018). Market Timing and Selectivity: An Empirical Investigation of European Mutual Fund Performance. International Journal of Economics and Finance, 11(2), 1. https://doi.org/10.5539/ijef.v11n2p1
- Omri, A., Soussou, K., & Ben Sedrine Goucha, N. (2019). On the post-financial crisis performance of Islamic mutual funds: the case of Riyad funds. Applied Economics, 51(18), 1929–1946. https://doi.org/10.1080/00036846.2018.1529403
- Othman, J., Asutay, M., & Jamilan, N. (2018). Comparing the determinants of fund flows in domestically managed Malaysian Islamic and conventional equity funds. Journal of Islamic Accounting and Business Research, 9(3), 401-414. https://doi.org/10.1108/JIABR-07-2016-0084
- Papadamou, S., Kyriazis, N., & Mermigka, L. (2017). Japanese Mutual Funds before and after the Crisis Outburst: A Style- and Performance-Analysis. *International Journal of Financial Studies*, 5(1), 9. https://doi.org/10.3390/ijfs5010009
- Petters, A. O., & Dong, X. (2016). Markowitz Portfolio Theory. 83–150. https://doi.org/10.1007/978-1-4939-3783-7_3
- Pew Research. (2017).Pew Research Center. Pew Research Center.Com. https://www.pewresearch.org/
- Phillips, B., Pukthuanthong, K., & Rau, P. R. (2018). Size does not matter: Diseconomies of scale in the mutual fund industry revisited. Journal of Banking and Finance, 88(2018), 357-365. https://doi.org/10.1016/j.jbankfin.2017.12.005
- Pilbeam, K., & Preston, H. (2019). An empirical investigation of the performance of Japanese mutual luck? International Journal of Financial Skill or Studies, https://doi.org/10.3390/ijfs7010006
- Punch III, W. F., Goodman, E. D., Pei, M., Chia-Shun, L., Hovland, P. D., & Enbody, R. J. (1993, July). Further Research on Feature Selection and Classification Using Genetic Algorithms. In ICGA (pp. 557-564).
- Putri, D. S., Hidayati, N., & Slamet, A. R. (2016). Pengaruh Stock Selection, Market Timing Ability dan Fund Longevity Terhadap Kinerja Reksadana (Studi Kasus Pada Reksadana Saham Syariah Yang Terdaftar Di OJK Tahun 2017-2019). E – Jurnal Riset Manajemen, 8, 82–94.
- Ramayanti, T. P., & Purnamasari, K. (2018). Kemampuan Pemilihan Saham dan Penetapan Waktu Pada Manajer investasi Reksa Dana Saham di Indonesia. Esensi: Jurnal Bisnis Dan Manajemen, 8(1), 29-40. https://doi.org/10.15408/ess.v8i1.6552
- Rao, D. N. (2011). Portfolio Turnover and its Effect on Performance of Equity-Oriented Mutual Fund

- Schemes: An Empirical Study in the Indian Context. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.1549878
- Rao, Z., Tauni, M. Z., Iqbal, A., & Umar, M. (2017). Emerging market mutual fund performance: evidence China. Journal of Asia Business Studies, 11(2), for https://doi.org/10.1108/JABS-10-2015-0176
- Rehan, M. (2020). Evaluation between Islamic and Conventional Mutual Fund. European Academic Research, November. https://doi.org/doi:10.1016/j. jfineco.2013.04.014.
- Ringov, D. (2017). Dynamic capabilities and firm performance. Long Range Planning, 50(5), 653–664. https://doi.org/10.1016/j.lrp.2017.02.005
- Rokhim, R., & Octaviani, I. (2019). Is there a Ramadhan effect on Sharia mutual funds? Evidence from Indonesia and Malaysia. International Journal of Islamic and Middle Eastern Finance and Management, 13(1), 135-146. https://doi.org/10.1108/IMEFM-04-2019-0147
- Rusmita, S. A., Che, M., Salleh, M., & Sukmaningrum, P. S. (2019). Growth and Value Effect on Jakarta Islamic Index: Analysis towards Performance of Sharia Equity Mutual Fund. 11(January), 153-165.
- Sari, M. M., Mulyati, S., & Widarwati, E. (2019). The Effect of Stock Selection Skill, Market Timing Ability, Turnover Ratio and Cash Flow on Sharia Mutual Funds Performance (Case Study of Sharia Mutual Fund Companies Registered in OJK for the Period of 2011-2014). JABI (Journal of Accounting and Business Issues), 1(1), 69–78. https://ojs.stiesa.ac.id/index.php/jabi
- Satrio, Y., & Mahfud, M. K. (2016). Analisis Pengaruh Total Asset, Fund Age, Expense Ratio dan Portofolio Turnover Terhadap Kinerja Reksadana Periode 2012-2014. Diponegoro Journal of Management, 5(2), 1-9.
- Seetharaman, A., Niranjan, I., Patwa, N., & Kejriwal, A. (2017). A Study of the Factors Affecting the Choice of Investment Portfolio by Individual Investors in Singapore. Accounting and Finance Research, 6(3), 153. https://doi.org/10.5430/afr.v6n3p153
- Sharpe, W. F. (1966). Mutual Fund Performance. Journal of Business, 39(1), 119-138. https://www.jstor.org/stable/2351741?seq=1&cid=pdf-reference#references_tab_contents
- Sharpe, W. F. (1994). The Sharpe Ratio. Journal of Portfolio Management.
- Suharyadi. (2016). Statistika Untuk Ekonomi Dan Keuangan Modern (3rd ed.). Salemba Empat.
- Sukmaningrum, G., Kholiq Mahfud, M., & Manajemen, J. (2016). Analisis Fund Cash Flow, Fund Size, Fund Longevity, Expense Ratio dan Turnover Ratio Terhadap Kinerja Reksa Dana (Studi Kasus: Reksa Dana Pendapatan Tetap Periode Tahun 2011-2015). Diponegoro Journal of Management, 5(3), 1–11. http://ejournal-s1.undip.ac.id/index.php/dbr
- Sunariyah. (2011). Pengantar Pengetahuan Pasar Modal. Upp Stim Ykpn.
- Syahrum, & Salim. (2012). Metodologi Penelitian Kuantitatif (R. Ananda (ed.); 1st ed.). Citapustaka
- Tan, Ö. F. (2015). Mutual Fund Performance: Evidence from South Africa. EMAJ: Emerging Markets Journal, 5(2), 49–57. https://doi.org/10.5195/emaj.2015.83
- Treynor, J. L. (1965). How to Rate Management of Investment Funds. Harvard Business Review, 43, 63 - 75.
- Treynor, & Mazuy. (1966). Can mutual funds outguess the market. In Harvard Business Review (Vol. 44, pp. 131–136).
- White, H. (1980). A Heteroskedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroskedasticity. Econometrica, Journal of The Econometric Society, 48(4), 817-838. https://doi.org/https://doi.org/10.2307/1912934
- Widjaja, G., & Ramaniya, A. P. (2009). Reksadana & Peran serta Tanggungjawab Manajer Investasi dalam Pasar Modal. Kencana Prenada Media Grup.
- Widyastuti, U., Febrian, E., Sutisna, & Fitrijanti, T. (2019). Factors explaining the market discipline of sharia mutual funds from a behavioural finance perspective: A theoretical approach. *International* of **Economics** and **Business** Administration. 7(3). https://doi.org/10.35808/ijeba/319
- Widyastuti, U., Febrian, E., Sutisna, S., & Fitrijanti, T. (2020). Sharia compliance in sharia mutual funds: A qualitative approach. International Journal of Economics and Business Administration, 8(3), 19–27. https://doi.org/10.35808/ijeba/483

- Winarno, W. W. (2015). Analisis Ekonometrika dan Statistika dengan EViews (4th ed.). Upp Stim
- Wu, S.-C. (2014). Interaction between Mutual Fund Performance and Portfolio Turnover. Finance and (JEIEFB) Online International Research Journal, 3(4),www.globalbizresearch.com
- Zouaoui, M. (2019). Selectivity and market timing ability of fund managers: Comparative analysis of islamic and conventional HSBC Saudi mutual funds. International Journal of Financial Studies, 7(3). https://doi.org/10.3390/ijfs7030048