Determinants of Islamic Equity Funds Performance: Case Study of Indonesia

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\textbf{Abstract:} The performance of Islamic mutual funds is significant either for investors or policy-makers. Many factors affect the performance of Islamic mutual funds, such as internal factors, external factors (macroeconomics), and market index. This study aims to analyze the impact of the past return of Islamic mutual fund, BI rate, and the Jakarta Islamic Index (JII) on the performance of Islamic equity mutual funds. By employing panel data regression analysis, this study documented some interesting findings. The statistical testing revealed that BI rate, which is used as an indicator for external factors and JII (as Market factors), have a positive impact on the performance of Islamic equity mutual funds. In contrast, the past return does not affect the performance of Islamic equity funds. This study suggests that the investor must consider internal, and external factor in the investment activities.

\textbf{Keywords:} Past Return, BI Rate, Jakarta Islamic Index, Net Asset Value, Islamic Equity Fund.

\section*{Introduction}

Investment can be defined as the deferment of the current consumption by putting in a productive assets for a certain time. With the existence of productive assets, the delayed of current consumption to invest in productive assets is expected can increase the total utility (Hartono, 2017). One of the medium to invest is through capital market, which is suitable for long-term investment. There are various kinds of investment instruments in the capital market including stocks, bonds, derivatives, and mutual funds (Hartono, 2017).

Mutual funds are an alternative for investors who want to participate in the capital market with a relatively small capital and the ability to bear the risk (Othman, Kameel, & Aziz, 2015). There are two types of mutual funds, namely conventional mutual funds, and Islamic mutual funds, which are both have the same working system. According to Law Number 8 of 1995 concerning the Capital Market, states that mutual funds are a vehicle used to collect funds from the investor community for further investment in securities portfolios conducted by investment managers. The difference between conventional mutual funds and Islamic mutual funds is in terms of contracts, operations, investments, transactions, and its profit-sharing system. In Islamic mutual funds, each transactions is based on sharia contracts. Whereas in the conventional mutual funds there are no binding Sharia rules, and only focusing on how to achieve the highest profit (Qoyum, 2017).

Evaluating Mutual funds performance is crucial to determine its comptitability with other mutual funds in the market, as well as its ability to generate profits. This performance measurement basically tries to determine whether the activities carried out by the investment manager have provided an additional rate of return on the funds. Mutual fund returns can be measured by the daily changes in Net Asset Value (NAV). The Net Asset Value (NAV) of mutual funds determines whether investors are willing to invest or not (Gumilang & Herlambang, 2017).

Net Asset Value (NAV) is the ratio between the total investment value made by the investment manager and the total volume of mutual funds (Susilo, et al, 2000). NAV is an analysis that can be used

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to evaluate and determine the development of mutual funds that have been managed by investment managers for a certain period (Tricahyadinata, 2016).

The stock exchange publishes NAV daily, as an indicator for investors to carry out buying or selling transactions and becomes an indicator for novice investors to make investment decisions in mutual funds. If the NAV of Islamic equity funds increases, it will encourage investors to shift their portfolios to Islamic equity funds. Conversely, if the NAV of Islamic equity funds has decreased, it will result in investors moving their investment from Islamic equity funds to other types of mutual funds. Such as Sukuk mutual funds, sharia fixed income mutual funds, sharia mixed mutual funds, and others.

The development of the NAV of Islamic equity mutual funds, as the most dominant type of Islamic mutual funds cannot be separated from the factors that consist of internal factors, external factors, and market index. Kusumanisita (2014), and Pratiwi (2018) analyzed regarding on the impact of return on NAV documented that the rate of return has no significant effect on the NAV of Islamic mutual funds. However, research conducted by Septiana (2017) shows that in the short term return affects the NAV of Islamic mutual funds, while in the long term return does not affect.

There are many previous studies on momentum theory, for example, research which was conducted by Jegadesh and Titiman (2000) revealed that medium-term momentum in the past returns cumulatively week 5 to week 52 has a positive effect on return. This result is consistent with the study from Maharani and Arfianto (2016), which found that short, medium and long term momentum on cumulative past returns has a positive effect on capital overhangs and returns.

Regarding to external factors that determine the NAV, research from Macau (2016), Hermawan and Wiagustini (2016), Pipit (2016), Malaya (2017), and Nandari (2017), found that the BI rate as an external factors has a negative effect on the NAV of Islamic mutual funds. However, in a study conducted by Gumilang and Herlambang (2016), it was found that the BI rate has a positive effect on the NAV of Islamic mutual funds. While, Rachman and Mawardi (2015), Minha and Laila (2017) explain that the BI rate does not affect the NAV of Islamic equity mutual funds.

The next factor that affects the NAV of Islamic mutual funds is the market index, one of which is the Jakarta Islamic Index. There are some previous study on the impact of JII on NAV such as Putratama (2007), Sholiha (2008), Mursyidin (2010), Amelia (2010), and Agustina (2015). The research documented that the Jakarta Islamic Index has a significant positive effect on the net asset value of Islamic mutual funds.

Based on the previous research there are still exist an inconclusiveness result. Therefore, the authors are interested in examining the factors that influence the net asset value of Islamic mutual funds. The factors discussed in this study are internal factors, namely past return, external factors, namely the BI rate and the market index factor of these mutual funds, namely the Jakarta Islamic Index.

**Literature Review**

*Markowitz Portfolio Theory*

According to Sunariyah (2011: 190) there are two investment risks, namely unsystematic risk and systematic risk. Systematic risk is the risk associated with a particular investment that can generally be avoided or minimized by diversification. Whereas, systematic risk is the general market risk and applies to all in the relevant capital market. Investors may not avoid this risk even through diversification (Lewis, 2010).

Portfolio theory and a capital market theory are interrelated, which is based on the investors' decisions. Accordingly, there is strong relationship between returns and risk (Asriwahyuni, 2017). This theory describes an investment strategy where investing can produce maximum returns with minimal risk (Qoyum, 2021).

Mutual funds are a diversified portfolio of financial assets. The process of forming a mutual fund or portfolio is the same as creating an optimal portfolio by fulfilling the basic principles of investing, i.e. minimizing the risk of expected returns. Diversifying the portfolio of a mutual fund will reduce risk because the funds is invested in various securities, so the risk will also be spread (Sunariyah, 2011). Investment managers, in managing client funds, must know their clients' risks profile. An understanding of investors' risk preferences will help in selecting securities to be included in the established portfolio (Husnan, 2009).
**Momentum Theory**

Momentum is an investment strategy that takes advantage of the continuation of a price trend on the exchange. Investors or traders believe that the next price will follow a sharp rise in stock price. Conversely, a sharp fall in prices will be followed by further falls. Jagadeesh and Titman (1993) are the first researchers who capture the effect of momentum on stocks in the U.S.

The capital strategy is an investment strategy where the positive (negative) returns in the past will continue for a certain period in the future (Beigi, Hosseini, & Qodsi, 2016). Jagadeesh and Titman (1993) shows that stocks with a good or bad performance for 3 to 12 months tend not to experience significant changes for the next period. Profits obtained by investors based on the assumption of abnormal returns. Abnormal return is the difference between the actual profit level and the expected profit level (Husnan, 2009).

Charhart (1997) that improved the Fama and French Three-Factor Model research by adding one factor, namely momentum. This factor is taken because the Fama-French (1996) model cannot explain the short term reversal pattern. This momentum variable will later reduce the error pricing from portfolio returns (Chandika, 2017). Momentum is also a phenomenon that exists in stock movements where past stock prices influence the current stock price. This theory is in line with the weak market efficiency theory (Ross et al., 2015).

To test the momentum factor on the price of a security, the Carhart model (1997) uses the UMD or Up Minus Down formula. UMD is a stock portfolio return with winner stocks minus loser stock portfolio returns. If the UMD value is positive, it will follow the momentum phenomenon, which states that good or bad stock performance for one to three years tends not to experience significant changes (Candika, 2017).

**Capital Asset Pricing Model Theory**

The Capital Asset Pricing Model (CAPM) was used by Sharpe (1964) to analyze the relationship between the return on an asset (Ri) and the portfolio market return (Rm). By making a simple regression equation where the dependent variable is the return of an asset and the independent variable is the return of the market portfolio, it will show the relationship between the return from the market portfolio and the return on a particular asset. This relationship will be seen from the coefficient of the regression equation’s market portfolio (slope). This slope is often called β (beta). If β equal to 1, the size and direction of the movement in the value of the security's price are the same as the market movement. While if β> 1 means that the change of the security price is higher than the change of the market portfolio, and if β <1, then the movement of the security price is lower than the market movement (Arifin, 2007). Mathematically the CAPM formula is as follows:

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

Where :
- \( E(R_i) \) = Expected return of i stock
- \( R_f \) = Risk free return
- \( R_m \) = Market return
- \( \beta_i \) = Systematic risk of i stock
- \( (R_m - R_f) \) = Market risk premium

Based on the previous studies, this research uses the the equation is as follows:

\[ \text{NAV} = \text{Return} + \text{BI rate} \cdot \text{JII} \] (2)

**Hypothesis**

Expectations of future returns represent compensation for the time and risk. The higher the return, the higher the net asset value of Islamic mutual funds (Tandelilin, 2001). Research conducted by Jegadeesh (200) found that buying shares of winners in the previous period and selling shares of losers in the last period obtained abnormal return (Lokuwaduge & Heenetigala, 2017).

It is necessary to look the relationship of medium-term momentum on week 5 to week 52 cumulative past returns to returns to analyze its momentum effect (Fama & French, 2016). To prove the existence of medium-term momentum, the medium-term momentum on the cumulative past returns of week 5 to
week 52 has a positive impact on returns. Based on aforementioned theory and previous study, the hypothesis as follows:

**H₁: Past Return has a positive effect on the net asset value of Islamic Equity Mutual Funds.**

BI rate is one of the macroeconomic factors that can affect investment decisions. The CAPM theory explains that beta has a positive effect on return (Black, 1972). This study uses the CAPM theory approach, namely, \( E(R_i) = R_f + (R_m - R_f) \beta_i \). A risk-free return on assets in this research is to use the previous month's realized return or the past return obtained from the change in net asset value. The BI rate is a systematic risk position for \( i \) share that can affect and become a risk to the net asset value of mutual funds. The Jakarta Islamic Index is in a market risk premium position because the JII variable is a market factor that affects the net asset value of mutual funds (Abdullah et al. 2007).

Based on the CAPM theory, it assumes that investors will invest in risk-free assets instead of borrowing with risk-free interest. The relationship between the CAPM theory equation with the BI rate and NAV is that if the interest rate or BI rate is positive, it will have a positive correlation with the asset value. Therefore, the interest rate or BI rate positively affects the net asset value of mutual funds. The statements are supported by previous research from Ferikawita (2009), which explains that the interest rate on government bonds and the interest rate on Bank Indonesia certificates have a positive effect on the net asset value of mutual funds. Furthermore, Gumilang and Herlambang (2016) also explained that interest rates have a significant positive effect on mutual funds’ net asset value. Then an alternative hypothesis can be taken as follows:

**H₂: BI rate has positive effect on the net asset value of Islamic Equity Mutual Funds.**

The risk of mutual funds can be seen from the market index, or JII. Looking at the relationship between the market index (JII) and the net asset value of a mutual fund will help us see the condition of a mutual fund. According to Hariyani and Serfianto (2010), JII is used as a benchmark to measure the performance of sharia-based stock investments. The Jakarta Islamic Index will be closely related to the net asset value of Islamic equity funds (Ciccotello & Grant, 1996). The increase in the Jakarta Islamic Index will also increase the NAV of Islamic equity mutual funds and vice versa, because 80% of mutual fund assets are placed in equity or stocks (Wardani & Sutrisno, 2010; Abdelsalam, 2014; Hassan et al., 2015). Based on research conducted previously, it can be concluded that JII has a significant positive effect on NAV. This thinking can be put forward in the following hypothesis:

**H₃: JII has positive effect on the net asset value of Islamic Equity Mutual Funds.**

**Method**

Data used in this study were obtained from the Islamic mutual fund financial reports and also some official websites such as Central Statistics Agency (BPS), Bank Indonesia, Yahoo Finance and the Financial Services Authority (OJK). The sample selection in this study was purposive sampling which is the selection of samples is based on the following criteria: Islamic equity funds that were consistently registered in the, and actively or consistently publish changes in net asset value every month, during the period 2014-2018. In addition, the Islamic fund also publish renewal prospectuses as the author's reference.

The type of research used in this study is more in a quantitative approach, which puts more emphasis on testing theories through measuring research variables with numbers and analyzing data with statistical procedures (Indriantoro & Supomo, 2002). Panel regression analysis is employed in this study to answer all research questions.
Result and Discussion

Return is the expectation of profit in terms of investment. Investment is a commitment of several funds to obtain future benefits. Expectations of future returns represent compensation for the time and risk associated with investing in an investment context. The higher the return, the higher the net asset value of Islamic mutual funds (Tandelilin, 2001).

Table 1. Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>NAB</th>
<th>Past Return</th>
<th>BI rate</th>
<th>JII</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>153,161,252,143.42</td>
<td>0.550714</td>
<td>5.793.750</td>
<td>687.8023</td>
</tr>
<tr>
<td>Median</td>
<td>82,348,007,733.49</td>
<td>-0.008200</td>
<td>5.375.000</td>
<td>696.9600</td>
</tr>
<tr>
<td>Maximum</td>
<td>1,110,345,354,122</td>
<td>3.132.213</td>
<td>7.750.000</td>
<td>777.1100</td>
</tr>
<tr>
<td>Minimum</td>
<td>16,805,527.59</td>
<td>-0.995000</td>
<td>4.250.000</td>
<td>574.5400</td>
</tr>
<tr>
<td>Stdevi</td>
<td>195,780,558,347.03</td>
<td>1.152.748</td>
<td>1.274.785</td>
<td>509.2580</td>
</tr>
<tr>
<td>Observations</td>
<td>912</td>
<td>912</td>
<td>912</td>
<td>912</td>
</tr>
</tbody>
</table>

Source: Data is processed with Eviews 10.

Table 1 reports the descriptive statistics of the study. Based on the table above, the average Net Asset Value (NAV) generated by 19 Islamic equity mutual fund companies that were sampled in this study was 153,161,252,143.42. The highest data value of this NAV variable is 1,110,345,354,122.00 owned by Trim Syariah Saham mutual funds in May 2015, while the lowest data value is 16,805,527.59 owned by OSO Sharia Equity Fund in December 2018. For the past return, the average is at 0.550714. In addition, based on the results of the research above, the BI rate variable has an average of 5.793.750 with a median value of 5.375.000. While the variable Jakarta Islamic Index has an average of 687.8023 with a median value of 696.9600. The highest Jakarta Islamic Index data value of 777.11 occurred in February 2018, and the lowest data value occurred in September 2015 of 574.54.

The return used in this study is the realized return, where the realized return used is the past return or the previous month's return using the momentum theory approach. Based on research from Maharani and Denny (2016), it shows that past returns can be used as an indicator to predict momentum; in the two regression models tested, it can be seen that the trend of momentum for three time periods is positive and significant.

These results illustrate the condition of stock prices that tend to be consistent in one particular position. Stocks with excellent performance (winner) will still perform well. This proves that investors are slow in making investment decisions and cause underreaction in the market, which causes prices to change little. These results are in line with research conducted by Grinblatt and Han (2005).

However, it is different from the results obtained in this study based on the partial test (t test) as described in the Table 1, which shows that the past return variable has a probability value of 0.5259 which is greater than the α value of 0.05 (0.5259> 0.05), which we can conclude that return is not affect the net asset value of Islamic equity funds.

Table 2. Regression Result

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std.Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>1.067.713</td>
<td>3.358.770</td>
<td>3.178.882</td>
<td>0.0015</td>
</tr>
<tr>
<td>Past Return</td>
<td>0.001548</td>
<td>0.002440</td>
<td>0.634591</td>
<td>3.652083333</td>
</tr>
<tr>
<td>BI Rate</td>
<td>0.246115</td>
<td>0.029479</td>
<td>8.348.900</td>
<td>0.0000</td>
</tr>
<tr>
<td>LNJII</td>
<td>1.971.032</td>
<td>0.496220</td>
<td>3.972.090</td>
<td>0.0001</td>
</tr>
</tbody>
</table>

Source: Data is processed with Eviews 10.

Therefore in this study shows that the investment manager is not good at managing these mutual funds, and also in this study shows that the Net Asset Value of Islamic Mutual Funds has the potential to become a reference for investors to choose superior Islamic mutual funds because it is not bound by changes in returns so that investors can at any time invest funds for Islamic mutual funds.
The BI rate is one of the macroeconomic factors that can affect investment decisions in the community, because the BI rate is the policy interest rate that reflects the monetary stance or stance set by Bank Indonesia (Liembono, 2016: 74). In this study, it shows that the probability value of the BI rate using the fixed effect model is 0.000 smaller than the $\alpha$ value of 0.05 (0.00 <0.05), and the BI rate coefficient is 0.246115, which means that in this study the results show that the BI rate has a significant positive effect on net asset value of Islamic equity funds.

Based on the results of the partial t-test, it shows that the results are in line with the hypothesis that the BI rate has a significant positive effect on the net asset value of Islamic equity mutual funds, which means that if the BI rate falls, the net asset value of Islamic equity mutual funds also decreases. If the BI rate goes up, the net asset value of Islamic equity funds will also increase (Glosten & Harris, 1988).

The effect of the BI rate on the net asset value of Islamic equity mutual funds is based on the CAPM theory approach, which explains the finding that beta has a positive effect on returns (Black, 1972). The equation used in this study to determine the effect of interest rates on the net asset value of mutual funds is to use the CAPM theory equation approach, namely, $E(R_i) = R_f + (R_m - R_f) \beta_i$, which in this study the NAB is in position $E(R_i)$. In the CAPM equation used, because NAV is the main variable under study. Risk-free return on assets in this research is to use the previous month's realized return or the past return obtained from the change in net asset value. The BI rate is in a systematic risk position for share i, because the BI rate is a macroeconomic factor, the amount of which has been determined by Bank Indonesia, and can affect and become a risk to the net asset value of mutual funds (Fama & French, 2016). The Jakarta Islamic Index is in a market risk premium position, because the JII variable is a market factor that affects the net asset value of mutual funds.

Based on the CAPM theory, Black (1972) explains that this result assumes that investors will invest in risk-free assets instead of borrowing with risk-free interest. The connection between the CAPM theory equation with the BI rate and NAB is that if the interest rate or BI rate is positive it will also have a positive correlation to asset value. net mutual funds, in other words investors can turn mutual funds as investments even though the interest rate or BI rate has increased, this indicates mutual funds as risk-free instruments that can be chosen, therefore the interest rate or BI rate has a positive effect on the net asset value of mutual funds. This is also supported by previous research from Ferikawita (2009), which explains that the interest rate on government bonds and the interest rate on Bank Indonesia certificates have a positive effect on the net asset value of mutual funds. Furthermore, Gumilang and Herlambang (2016) also explained that interest rates have a significant positive effect on the net asset value of mutual funds.

In this study, researchers examined whether the Jakarta Islamic Index affects the net asset value of Islamic equity mutual funds, and the results in this study indicate that the probability value of JII based on a partial test or t test with a fixed effect model is 0.001 smaller than the $\alpha$ value of 0.05 (0.001 <0.05), and the coefficient value of JII is 1.971032, which means that the JII variable has a significant positive effect on the net asset value of Islamic equity mutual funds.

The results of this study are in line with the hypothesis that the Jakarta Islamic Index affects the net asset value of Islamic equity funds, where JII is a sharia index that collaborates with management investment mutual funds. This research is also supported by research from Sholihah (2008) where the regression results on the Jakarta Islamic Index (JII) and inflation affect the performance of Islamic equity funds while the Bank Indonesia Wadiah Certificate (SWBI) and the Composite Stock Price Index (IHSG) do not have a significant effect. on the performance of Islamic equity funds. According to Sholihah (2008), the increase in the performance of Islamic stocks in the Jakarta Islamic Index (JII) also has an impact on the increase in managed funds for Islamic mutual funds, which makes the performance of Islamic equity funds better.

Subsequent research by Wardani and Sutrisno (2010) and Putratama (2007). Putram (2007) shows that in the long term JII has a significant positive effect on the net asset value of mutual funds and is in accordance with the investment period of Islamic equity mutual funds that have a long investment period. Shares contained in Islamic equity mutual funds are types of shares listed on the Jakarta Islamic Index, so that JII can be used as a guide for investors who want to invest in sharia by using and viewing the closing value data from the Jakarta Islamic Index every month (Makau, 2016).
Conclusion

The results of this study are in line with the hypothesis or prove that the Jakarta Islamic Index affects the net asset value of Islamic equity funds. JII is a sharia index that collaborates with management investment mutual funds. This research evidenced the same result with previous studies, such as Sholihah (2008) where the regression results on the Jakarta Islamic Index (JII) and inflation affect the performance of Islamic equity funds while the Bank Indonesia Wadiah Certificate (SWBI) and the Composite Stock Price Index (IHSG) do not have a significant effect.

On the performance of Islamic equity funds. According to Sholihah (2008), the increase in Islamic stocks' performance in the Jakarta Islamic Index (JII) also has an impact on the increase in managed funds for Islamic mutual funds, which makes the performance of Islamic equity funds better. Research from Putrama (2007) shows that in the long term, JII has a significant positive effect on the net asset value of mutual funds and is in accordance with the investment period of Islamic equity mutual funds that have a long investment period. Shares contained in Islamic equity mutual funds are types of shares listed on the Jakarta Islamic Index, so that JII can be used as a guide for investors who want to invest in sharia by using and viewing the closing value data from the Jakarta Islamic Index every month.

Reference


