**ASSET ALLOCATION POLICY ANALYSIS, SHARE SELECTION,** **AND LEVEL OF MUTUAL FUND RISK IN INDONESIA**

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| **Article Information:**  **Keywords:**  **Equity Mutual Fund Performance**  **Asset Allocation Policy**  **Stock Selection**  **Risk Level**  **Article History:**  Received : January 3, 2022  Revised : January 7, 2022  Accepted : January 8, 2022  **Article Doi:**  http://doi.org/10.22441/profita.2020.v6 | **ABSTRACT**  This research aims to analyze the performance of equity mutual funds in Indonesia by observing their asset allocation policy, stock selection, and risk level. This research uses pooled data, the data choosing with purposive sampling. Data availability at: www.portalreksadana.com, www.bi.go.id,www.lps.go.id, and www.finance.yahoo.com. The sample consists of 63 items of equity mutual funds since January 2017 until December 2019. The hypothesis of this research are examined using the multiple regression. The result of this research shows that equity mutual funds performance is affected by asset allocation policy, stock selection, and risk level. It indicates that mutual funds performance is determined by those activities of investment managers and market return conditions. |

**INTRODUCTION**

There are three important elements in mutual funds, namely the existence of a collection of public funds, both individuals and institutions; there is joint investment in the form of a diversified securities portfolio; and the existence of investment managers who are trusted as fund managers belonging to the investor community (Pratomo and Nugraha, 2015). The securities portfolio itself is a collection of securities such as stocks, bonds, SBI, time deposits, government securities, and money market securities. Therefore, mutual funds are an investment vehicle for investors to be able to invest in various investment instruments available in the market. The aims of this study are: 1) to measure the performance level of equity mutual funds based on the Sharpe Ratio method.

Mutual funds have been traded in Indonesia since 1995 with the issuance of Law no. 8 of 1995 concerning the capital market. The ease of investment makes the development of mutual funds more rapid. In 2017, according to Bapepam data as of the end of December 2017 (Bapepam, 2017), the total managed funds for all types of mutual funds amounted to IDR 52.28 trillion and 16% or IDR 8.36 trillion of the total managed funds of equity mutual funds. Data from the Capital Supervisory Agency and Financial Institutions (Bapepam-LK) shows that as of December 2019 the total net asset value (NAV) was IDR 74.35 trillion. The biggest contributor to the managed funds is equity mutual funds. The total managed fund of equity mutual funds at the end of December 2019 had reached Rp 19.89 trillion (Bapepam, 20194).

Investment Managers in managing funds vary from one mutual fund to another. The asset allocation policy adopted can be divided into instruments in the money market and instruments in the capital market or a mixture of the two with a certain composition. Although the asset allocation policies set are different, the principle is the same, namely providing a higher level of investment return compared to other investments with certain risks. Investment in mutual funds has two sides that are always opposite, namely profits and risks. The level of risk of a mutual fund depends on the asset allocation policy, meaning how the Investment Manager allocates funds to the available asset classes and how big the portion of the distribution of the funds is. The selection of securities/shares (stock selection) is very important for investors to be able to be included in the portfolio. This stage requires evaluating each security that wants to be included in the portfolio (Pratomo and Nugraha, 2015). The performance of a mutual fund will affect investors' decisions in buying mutual funds (Hikmawaty, 2014).

Assessment of the level of performance whose portfolio is actively managed can be managed by assessing the level of success in selecting securities and the ability of market timing (Kaslani, 2014). Mulyana (2015) in his research concluded that the asset allocation policy and the selection of securities carried out by investment managers had a positive effect on the performance of open-ended mutual funds in the form of Collective Investment Contracts (KIK) both stocks, fixed income, and mixed. Purnomo (2017) states that asset allocation policies and securities selection have a significant positive effect on the performance of Islamic mutual funds. In contrast to Untung's research (2017) which concludes that investment managers in Indonesia on average do not have superior stock selection abilities and market timing abilities.

The stock selection ability factor of investment managers has a significant positive effect on returns, while the market timing ability of investment managers makes a negative contribution to mutual fund returns (Ekandini, 2016). Gumilang and Subiyantoro (2019) using the Henriksson and Merton model, and the Treynor and Mazuy model, it is found that the investment manager has succeeded in carrying out stock selection and market timing ability, although it is not statistically significant. The risk level variable was added as a research variable due to the lack of this variable being used in assessing the performance of mutual funds. In addition to the return factor, risk is another factor that needs to be considered (Hikmawaty, 2014). This study focuses on the activities of Investment Managers in managing equity mutual funds, The main issue is how to choose equity mutual funds as an investment channel, in particular the factors that affect the performance of equity mutual funds, which consist of asset allocation policy, stock selection, and the level of risk. First, a performance assessment will be carried out on a number of stock mutual funds that are sampled in the study.

**Based on the explanation above, the writer is interested in submitting a research entitled** "Analysis of Asset Allocation Policy, Stock Selection, and the Risk Level of Mutual Funds in Indonesia".

**THEORETICAL FRAMEWORK AND HYPOTHESES**

**Asset Allocation Policy**

The asset allocation policy for each equity fund is stated in the prospectus of each mutual fund which is referred to as the investment policy. There are rules

Bapepam Number IV.C.3 of 1997 which stipulates that: "Equity mutual funds are mutual funds that invest at least 80% (eighty percent) of their assets in equity securities". Based on this regulation, investment managers determine asset allocation policies for the equity mutual funds they manage.

**Stock Selection (Stock Selection)**

Stock selection is the ability of investment managers to choose the right stocks in their portfolio so that they are able to provide high returns. The investment management literature states that the ability of market timing is very difficult to do so that the stock selection ability of investment managers is very reliable to get superior returns (Untung, 2017). Therefore, this study ignores the market timing factor and only assesses the effect of the stock selection variable which is represented by (alpha).

**Risk Level (Risk Level)**

The level of risk is the level of possibility of the actual return not being as expected due to the factors that influence it (Arifiani, 2015). Portfolio beta (β) is market risk which provides an overview of the relationship between portfolio returns and returns from the comparison. The tool to measure the level of risk in this study uses Beta (β). In this study, Beta was obtained by means of linear regression of stock mutual fund returns with comparison returns (IHSG) (Gumilang and Subiyantoro, 2019). The greater the return and the smaller the resulting risk, the higher the ratio, the better the performance of a mutual fund (Pratomo and Nugraha, 2015).

**Prior Research and Hypothesis Development**

There are several activities that must be carried out by investment managers in managing their funds, including determining asset allocation policies and stock selection. Asset allocation policy is the determination of asset allocation regarding the distribution of funds held in various available asset classes (Drobetz and Kohler, 2014). In addition, investors must pay attention to various limitations that affect asset allocation policies, such as how much funds are owned and the portion of the distribution of these funds. Measurement of asset allocation policy, Ibotson and Kaplan (2000) do it with a model consisting of return policy (PRit) and active return (ARit). The return policy is part of the asset allocation policy (Rit), while the active return is the rest. active return, depends on the ability of managers to actively determine the weighting of asset classes and sets of securities into policy and market cycle determination. The research period is 10 years, starting from April 2009 to March 2019. Based on this research, it can be concluded that the performance of mutual funds is largely influenced by asset allocation policies, this has not taken into account the selection of securities to be included in the portfolio. The sample used was 98 mixed mutual funds and 58 American pension funds, with the results that asset allocation policies affect mutual fund performance by 40%, 90%, and 100% depending on the questions asked. Although the asset allocation policies set are different, in principle they have the same goal,

Mulyana (2015) examines whether asset allocation policies and securities selection have an influence on the performance of open mutual funds in the form of collective investment contracts (stock mutual funds, fixed income mutual funds, and mixed mutual funds) in 2012-2014. The method used to assess the performance of each mutual fund uses the Sharpe Ratio and to determine how effectively the investment manager performs its functions, which consist of asset allocation policy and securities selection using the Asset class factor model (Sharpe). , 2015). The results showed that the effect of asset allocation policy was 56.22% and the selection of securities was 43.78% on the performance of equity mutual funds, 64% and 36% on the performance of fixed income mutual funds, and 52.54% and 47, respectively. 46% of mixed mutual fund performance. Purnomo (2007) examines the effect of asset allocation policies and securities selection on the performance of Islamic mutual funds in the period January 2016 to December 2017. The results show that 5 out of 10 Islamic mutual funds have higher performance than the comparison returns used. Another result of Purnomo (2007) research that asset allocation policies and securities selection has a positive and significant effect on the performance of Islamic mutual funds. The first hypothesis is formulated as follows.: The results showed that 5 out of 10 Islamic mutual funds had higher performance than the comparison returns used. Another result of Purnomo (2007) research that asset allocation policies and securities selection has a positive and significant effect on the performance of Islamic mutual funds. The first hypothesis is formulated as follows.: The results showed that 5 out of 10 Islamic mutual funds had higher performance than the comparison returns used. Another result of Purnomo (2007) research that asset allocation policies and securities selection has a positive and significant effect on the performance of Islamic mutual funds. The first hypothesis is formulated as follows.:

HA1: Asset allocation policy affects the performance of equity mutual funds in 2017-2019.

Untung (2017) conducted a study on whether there are stock mutual fund investment managers in Indonesia who have superior stock selection abilities (positive alpha) using the formula model from Treynor and Mazuy (2016). The method used in Untung's journal is the Treynor and Mazuy model which is a regression analysis model. To test whether there are stock mutual fund investment managers in Indonesia with positive alpha is to check the significance of the regression results of the 17 equity mutual funds. The results of research in the journal Untung (2017), namely that there are 11 equity mutual funds with a positive alpha coefficient, while with a 99% confidence level, there is only one equity mutual fund with a statistically significant positive alpha, namely TRIM Kapital. One thing that is interesting is that this mutual fund has a low level of diversification with an adjusted R2 of 68.58%. The conclusion is that there are stock mutual fund investment managers in Indonesia with positive alpha or superior stock selection ability.

Research conducted by Ekandini (2016) examines the analysis of market timing performance and stock selection in equity mutual funds in Indonesia using the GARCH application.

(Generalized Autoregressive Conditional Heteroscedasticity) in January 2015 to August 2018. The results show that the stock selection ability factor of investment managers has a significant positive effect on returns, while the market timing ability factor of investment managers only contributes negatively to returns from mutual funds. .

Research conducted by Gumilang and Subiyantoro (2016) examines the analysis of the effect of market timing and stock selection on the performance of fixed income mutual funds based on the asset class owned by the investment manager. Measurement of each variable is measured by the Henriksson and Merton model and the Treynor and Mazuy model, while to measure its performance using the Sharpe Ratio, Treynor Ratio, Jensen Ratio, and Appraisal Ratio (Information Ratio) methods. The results obtained stated that using the Henriksson and Merton model, it was found that all groups

investment management has succeeded in conducting market timing and stock selection. This is indicated by the positive values ​​of and of each fixed income mutual fund product, although not statistically significant. Similar results were also obtained using the Treynor and Mazuy models, but only investment management group I had statistically significant market timing and stock selection. The second hypothesis is formulated as follows.

HA2 : Stock selection has an effect on the performance of equity mutual funds in 2017-2019.

Investment in mutual funds has two sides that are always opposite, namely profits and risks. The level of risk of a mutual fund depends on the asset allocation policy, meaning how the Investment Manager allocates funds to the available asset classes and how big the portion of the distribution of the funds is. It is very important for investors to choose stocks to be included in the portfolio. This stage requires evaluating each stock that you want to include in the portfolio. This is in line with the portfolio theory proposed by Markowitz (2014), that an investor can form a portfolio that produces the highest expected return with a certain risk or form a portfolio that produces a certain expected return with the lowest level of risk.

Mohammad and Mokhtar (2017) in their research examine the performance of several Islamic mutual funds in Malaysia by measuring the risk and return variables during the 2013-2017 period which are compared with the market index, namely the Kuala Lumpur Syariah Index (KLSI). The measuring instrument uses the Treynor and Sharpe Index model. The results showed that the return and risk were significantly positive on the performance of Islamic mutual funds listed in the Kuala Lumpur Syariah Index (KLSI), while from the Sharpe Index and Treynor Index measurements, the performance of these Islamic mutual funds underperformed the benchmark except for Public Etikal mutual funds which the performance of the benchmark.

Research conducted by Arifiani (2015) analyzes the effect of management compensation, mutual fund size, and risk level on mixed mutual fund performance in Indonesia in 2017-2019. Arifiani's research (2015) found that the level of risk had a significant influence on the performance of mixed mutual funds in 2017, 2018, 2019 and 2017-2019. This is because in theory, risk is positively related to portfolio performance (mutual funds). The level of risk is the probability that the actual return will not be as expected due to the factors that influence it. The greater the return and the smaller the resulting risk, the higher the ratio, the better the performance of a mutual fund (Pratomo and Nugraha, 2015). The third hypothesis is formulated as follows.

HA3 : The level of risk has a significant effect on the performance of equity mutual funds in 2017-2019.

**METHOD**

Data, Population and Sample

The data needed in this study is secondary data where the data collection method uses the documentation method from various literatures, magazines, and sites from the internet [(www.portalreksadana.com,](http://www.portalreksadana.com/) [www.bi.go.id,](http://www.bi.go.id/) [www.finance.yahoo.com,](http://www.finance.yahoo.com/)and www.lps.go.id). The nature of the data is time series. The data needed in this study: 1) The rate of return (return). Portfolio return (Rp) using net asset value (NAV)/unit, 2) Risk-free interest rate represented by SBI (, 3) JCI data for the period January 2017 to December 2019, 4) Data on deposit rates, 5) Data on the proportion of asset allocation and stock selection.

The population in this study are equity mutual funds registered with Bapepam in

2017-2019. The research sample was carried out using a purposive sampling technique with pooling data (Ghozali, 2015). The considerations are as follows: a) The selected sample must have an effective date before the research period, namely January 2017, b) The selected sample operates during the research period, namely from January 2017 to December

2019, c) The sample is still actively managing its funds in the form of equity mutual funds, d) Availability of data according to the research observation period. Based on the sample selection criteria, a sample of 21 mutual funds was obtained for each year. Data pooling is carried out in a regression test so that the number of samples becomes 63 equity mutual funds during 2017-2019.

**Equation**

Operational Definition and Measurement of Variables

Before measuring the influence of the variables of asset allocation policy, stock selection, and the level of risk on mutual fund performance, the steps taken are as follows.

1. Average return on equity fund portfolio

wherethe average portfolio return, the number of stock mutual fund samples, and return on the mutual fund portfolio in period t.



1. The average risk-free interest rate (SBI) in this study is limited to the average 1-month SBI interest rate. The data used is daily data and the interest rate obtained is reduced by taxes.



where:  = average risk-free interest rate for a period, interest rate = monthly SBI return, and 1 month = 30 days.

1. Measuring risk (), the calculation of the standard deviation is done using the STDEV formula in Microsoft Excel software.
2. Calculating mutual fund performance based on Sharpe Measure with the following formula.



where:= Sharpe Ratio, = the average expected return of the portfolio in a period, = the average risk-free interest rate in a period, and = standard deviation of return portfolio for a period. Calculate the independent variable as follows.

a. Asset Allocation Policy

The measuring tool to calculate the effect of asset allocation policy on mutual fund performance is a regression analysis model whose mathematical model was developed based on the Asset Class Factor Model (Sharpe, 2015). This model is used to determine how effectively a mutual fund investment manager performs its function from an Asset Allocation Policy. The asset allocation policy is analyzed using 3 variables, namely:= asset allocation for shares, = asset allocation for bonds, and = asset allocation for deposits.



=



=



=



The following is the formula for the Asset class factor model (Sharpe, 2015):



where:  = return on asset i in period t, = the proportion of mutual fund i for asset class 1 asset allocation, namely shares, the proportion of mutual fund i for asset class 2 asset allocation, namely bonds, the proportion of mutual fund i for asset class 3 asset allocation, namely deposits, the return obtained from the asset class index 1, namely the JCI in period t,the return obtained from the asset class index 2, namely the 12-month deposit interest rate in period t, the return obtained from the asset class index 3, namely the 3-month deposit interest rate in period t, and = error term

(selecting securities) which includes timing and stock picking.

1. Stock Selection (Stock Selection)

The measuring instrument for calculating stock selection is the Treynor and Mazuy models. This method is often used to see the effect of stock selection and market timing. If the investment manager has (α> 0) it means that there is a good stock selection ability, and vice versa if (α < 0), it means that the stock selection ability is

not good. The following is the formula for Treynor and Mazuy (2016):



where:  = mutual fund portfolio return, = return for risk-free assets,  = return from the stock market,  = intercept which is an indication of stock selection from the investment manager,  = regression coefficient of excess market return or slope when the market is down (bearish),  = regression coefficient which is an indication of the investment manager's market timing ability, and = is an error term.

1. Risk Level (Risk Level)

Portfolio beta (β) is market risk which provides an overview of the relationship between portfolio returns and returns from the comparison. Systematic risk measurement (beta) is carried out using the Single Index Method developed by William Sharpe. Sharpe developed a market model which is a form of relationship between the rate of return on individual assets and the average return on the market (market index). The formula for calculating beta is as follows.

|  |
| --- |
| **Rp,t = + p Rm,t +** |

## 

where: Rp,t = return on the mutual fund portfolio in period t, and Rm,t = market return in period t, = part of the mutual fund portfolio profit rate that is not affected by market changes and this variable is a random variable, p = beta mutual fund portfolio, and = error term.

### Data Analysis Technique

To analyze using multiple linear regression techniques. The regression model that will be used in this study is as follows.

|  |
| --- |
| **Y = 0 + 1AssetAllo + 2StockSel + 3RiskLev +** |

where: Y = performance of equity mutual funds, 0 = Constant (intercept), 1, 2, β3 = Regression coefficient, AssetAllo = Asset allocation policy, StockSel = stock selection, RiskLev = Risk level ( risk level), and  **=** Error terms. The research model in this study can be illustrated in

**Figures and Tables**

Figure 3.1. Conceptual Framework below.

Independent Variable Dependent Variable

**Asset Allocation Policy**

(

**Asset**

**Allocation Policy**

)

**Stock Selection**

**(**

**Stock**

**Se**

**lection**

**)**

**Risk Level**

**(**

**Risk Level**

**)**

**Mutual Performance**

**D**

**ana Saha**

**m**

**(**

**equity**

**Mutual Fund Performance**

**)**

### Classic Assumption Test

The use of multiple regression analysis model is bound by a number of assumptions and must meet the classical assumptions underlying the model in order to obtain an unbiased estimate. Testing these assumptions includes normality test, multicollinearity test, heteroscedasticity test, and autocorrelation test. The data in this study have met the classical assumption test.

### Hypothesis test

The accuracy of the sample regression function in interpreting the actual value can be measured from the Goodness of Fit. Statistically, Goodness of Fit can be measured at least from the value of the coefficient of determination, the value of the F statistic, and the value of the t statistic with a significance level of 5%.

**RESULTS AND DISCUSSION**

**Testing the Regression Model and the Coefficient of Determination**

The regression equation in 2017-2019 obtained from the results of the analysis is written as follows.

**Y = -0.057 + 0.965 X1 + 0.854 X2 + 0.038 X3+ e**

The results of multiple regression analysis show the adjusted R2 value of 0.357, this shows that 35.70% of the variation in performance can be explained by the variable asset allocation policy, stock selection, and the level of risk, while 64.30% is explained by other variables that are not included. in the regression equation. The results of data processing are summarized in table 4.1 below.

**Tabel 4.1**

**Hasil Uji Hipotesis Tahun 2017-2019**

Koefisien

Nama Variabel Keterangan

t

Signifikan

t

Regresi

|  |  |  |  |
| --- | --- | --- | --- |
| Asset Allocation Policy |  | 0,965 | 3,339 0,001 Signifikan |
| Stock Selection |  | 0,854 | 2,958 0,004 Signifikan |
| Tingkat Risiko  Konstanta (α) = **-**0,057 |  | 0,038 | 3,485 0,001 Signifikan |
| R = 0,623 |  |  | Predictor: (Constant): Asset Allocation |
| R2 = 0,389  Adjusted R2 = 0,357 |  |  | Policy, Stock Selection, Tingkat Risiko |

F = 12,496 Dependent Variable: Kinerja Reksa Dana

Saham

Sig. F = 0,000

Sumber: Data Sekunder, diolah

The F value shows a value of 12.496 with a significance of 0.000. The value of F gives significant results. So it can be concluded that the variable asset allocation policy, stock selection, and the level of risk simultaneously have a significant effect on the performance of equity mutual funds. Simultaneous hypothesis testing is shown in table 4.2 below.

**Table 4.2**

**F . Test Results**

|  |  |  |
| --- | --- | --- |
| **F value** | **Sig. F** | **Description** |
| **12, 496** | **0.000** | **H0 rejected** |

Source: Secondary data, processed

The t-value of the asset allocation policy, stock selection, and risk level variables, respectively, are 3.339, 2.958, and 3.485. The t value of each variable gives significant results. So it can be concluded that the variable asset allocation policy, stock selection, and the level of risk simultaneously have a significant effect on the performance of equity mutual funds. Partial hypothesis testing is shown in table 4.3 below.

**Table 4.3**

**t test results**

Variable

th

that

P

Value

Description

Asset Allocation Policy

3,339

0.001



rejected

Stock Selection

2,958

0.004



rejected

Risk Level

3,485

0.001



rejected

Source: Secondary data, processed

**Hypothesis testing**

**Hypothesis 1**

The results of the regression analysis show that the significance level of asset allocation policy is at 0.001. This value is smaller than the specified value, namely = 0.05, then HA1 is accepted. The asset allocation policy has a positive beta coefficient of 0.965 on the performance of equity funds, so that if the asset allocation policy increases by one unit, the performance of equity funds will also increase by 0.965 units. The results of this study support the results of research by Ibotson and Kaplan (2000), Mulyana (2005), and Purnomo (2007).

**Hypothesis 2**

The results of the regression analysis showed the significance level of stock selection was at 0.004. This value is smaller than the specified value, namely = 0.05, then HA2 is accepted. Stock selection has a positive beta coefficient of 0.854 on the performance of equity mutual funds, so that if stock selection increases by one unit, the performance of stock mutual funds will also increase by 0.854 units. The results of this study support the research results of Purnomo (2007) and Ekandini (2008).

**Hypothesis 3**

The results of the regression analysis showed that the significance level of the risk level was at 0.001. This value is smaller than the specified value, namely = 0.05, then HA3 is accepted. Stock selection has a positive beta coefficient of 0.038 on the performance of equity mutual funds, so that if stock selection increases by one unit, the performance of stock mutual funds will also increase by 0.038 units. The results of this study support the results of research by Mohammad and Mokhtar (2007) and Arifiani (2009).

**CONCLUSION**

**Conclusion**

Based on data analysis and discussion of research results, it can be concluded that the asset allocation policy has a positive and significant effect on the performance of equity funds, which means that the higher the asset allocation policy, the better the performance. The stock selection variable has a positive and significant effect on the performance of stock mutual funds, because stock selection is the ability of investment managers to choose the right stocks in their portfolio so that they are able to provide high returns. The risk level has a positive and significant effect on performance, the higher the risk of a mutual fund, the higher the return obtained, so the better the performance of a mutual fund.

**Limitations and Suggestions**

This study took a relatively short research period span, namely the 2017-2019 period, due to limitations in obtaining main data, this cannot be separated from the Bapepam site which experienced improvements at the time this research was conducted. Given the investment characteristics of long-term equity funds (long-term investment), which is above three years, it is hoped that further research can extend the research period by taking sample data from various publication sources using purposive random sampling which is expected to obtain a large sample size. .

The use of the Sharpe Ratio model in finding the performance of equity mutual funds can cause differences between several performance appraisal methods. In addition to using the Sharpe Ratio model, further research can use the Jensen Ratio, Treynor Ratio, and Appraisal Ratio models, so that the performance ratios of several models can be compared.

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