Macroeconomics and Net Asset Value (NAV) on Equity Mutual Funds

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Abstract---The number of equity mutual funds in Indonesia continues to grow. The increase in the number of equity mutual funds pushed the net asset value (NAV) up 7.9 percent from the end of 2017. However, the development of the number of equity mutual funds was not followed by an increase in Net Asset Value per Participation Unit (NAB / UP). During the first semester of 2017 the equity mutual fund industry's performance showed a downward trend. The purpose of this study was to determine the effect of the Composite Stock Price Index (IHSG), Inflation, Interest Rates and Exchange Rates on Net Asset Value Per Unit Participation in Equity Mutual Funds in Indonesia in 2013-2017. This research sample consisted of 70 equity mutual funds that were actively traded during the study period which were taken using Purposive Sampling. The research method used is the description of analysis using multiple linear regression. Based on data processing, the results are obtained that only the exchange rate has an influence on the Price of Equity Mutual Funds, while the IHSG (NAB / UP), Inflation and Interest Rates have no effect on the Price of Equity Mutual Funds.

Keywords---Macroeconomics, Net Asset Value, Equity Mutual Funds.

I. INTRODUCTION

The development of investment in Indonesia is currently quite rapid. This also happens to investment in the capital market. There are many types of investment instruments in the capital market. One of them is investment in equity mutual funds. Equity mutual funds are a container that is used to raise funds from the investor community to be subsequently invested in the securities portfolio by the investment manager (Capital Market Law No. 8 of 1995, article 1 paragraph 27). In other words, equity mutual funds arise because in general investors experience difficulties in making their own investments separately on various effects. Investors consider equity mutual funds as investment products that can provide ideal benefits given the relatively high level of profits offered and also have relatively lower risks because of the diversification of investments that are realized in the portfolio so that the risk can be spread. Equity mutual funds provide greater potential for investment growth compared to fixed income funds, money market, protected and mixed mutual funds, which means that these equity funds have a greater potential risk. For this reason, a tool to measure the performance of equity mutual funds is commonly called a Net Asset Value (NAV).

The number of equity mutual funds in Indonesia continues to grow. As of the end of August 2018, the number of equity mutual funds rose 12.49 percent from the end of 2017. The increase in the number of equity mutual funds pushed the net asset value (NAV) up 7.9 percent from the end of 2017 position (www.ojk.co.id/2018). However, the development of the number of mutual funds is not followed by an increase in Net Asset Value per Participation Unit (NAV / PU). During the first semester of 2017 the performance of the equity mutual fund industry showed a downward trend. In the period of January - June 2017, investors moved their investments from equity mutual funds to fixed income funds and money markets because investors began to reduce risk in early 2017. These conditions

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contradicted the performance of the joint stock price index, which managed to rise significantly (www. bareksa.com/2017).
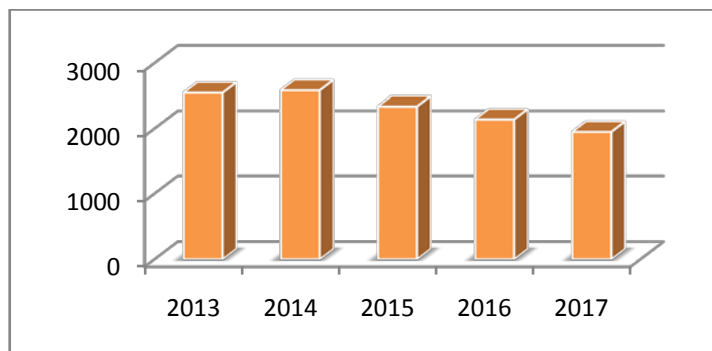

Figure 1:Growth of NAV / PU of Equity Mutual Funds in 2013-2017.
Source: www.ojk.co.id (data processed)

Net Asset Value is an indicator to determine the purchase price and selling price of each mutual fund unit by summing all the funds held from each of the securities owned such as stocks, bonds, etc. then deducted by liabilities or operating costs. Whereas to find out the price of an investment unit in mutual funds known as NAV / Participation Unit is calculated by the number of units owned by mutual funds multiplied by the difference from the selling NAV price with the NAB price to buy equity mutual funds (Grevina, 2013).

The development in the equity mutual fund industry is inseparable from the various underlying factors such as the demand factor from the community and supply carried out by investment managers, as well as other factors, such as macro factors that can affect the development of equity mutual funds both positively and negatively (Saudi, 2018). Factors that influence the rate of return of equity mutual funds are divided into three, namely: political security factors, global market conditions and macroeconomic factors (Sholihat: 2015).

Macroeconomic indicators that are often associated with the capital market are Inflation, BI Rate and Exchange Rate. The researcher also took the variable of the Composite Stock Price Index (Indonesia composite index) because this study focused on equity mutual funds. The Indonesia composite index movement will affect the price movements of equity mutual funds (NAV / PU), because the portfolio of shares incorporated in equity mutual funds refers to the price of shares on the stock. Inflation is an important factor in the macro economy in a country. The effect of an increase in inflation is an increase in raw material prices and will reduce profitability which results in a decrease in dividends distributed among shareholders. This certainly makes investment in stock instruments and equity mutual funds unattractive. If the interest rate is raised, investors will choose alternative investments that provide higher income, such as debt instruments, so that investment in shares becomes less attractive. This of course will have an effect on stock prices and equity mutual funds. Fluctuations in the value of the rupiah against a stable foreign currency will greatly affect the climate of domestic investment, especially in the capital market. This will have an impact on the price fluctuations of equity mutual funds (Hifdzia, 2012).

Based on data collected from IDX and BI, the current Indonesia composite index growth shows an increasing trend, inflation shows the best performance, as well as interest rates and exchange rates. However, this is not in line with the development of equity mutual fund prices (NAV / PU) which shows a downward trend (Hussain et al., 2019).

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Investment is investment for one or more assets owned and usually long-term in the hope of gaining profits in the future (Sunariyah, 2011). There are various types of investments available in the capital market including instruments of stocks, bonds, derivatives and also equity mutual funds. Among these instruments, there is one type of instrument that is quite attractive to many investors today, namely Equity Mutual Funds. Equity mutual funds themselves are certificates that explain the owner entrusts a number of funds to a mutual fund company, to be used as investment capital in both the capital market and money market (Tandelilin, 2012). Investors choose equity mutual funds because usually they have capital but lack the time to go directly into management or knowledge of financial decisions. There are various types of equity mutual funds traded in the Indonesian capital market, namely fixed income funds, balanced funds, money market funds and equity mutual funds. At present, equity funds are more desirable than other mutual funds. Equity mutual funds are mutual funds that invest funds specifically in the company's stock portfolio

(Tandelilin, 2010). In it invests at least 80% of its assets into shares and 20% in cash, so the risk is higher than other mutual funds, so is the return. This type of investment is usually used by investors with long-term nature.

To find out whether or not a investment performance in a equity mutual fund portfolio managed by an investment manager, is strongly influenced by investment policies and strategies carried out by the appointed investment manager. Therefore, we need to understand the benchmark or calculation of prices of the equity mutual funds, also to know the development of the investment value of a equity mutual fund that we can see from the increase in Net Asset Value because the investment performance in managing a equity mutual fund portfolio is reflected in it (Soemitra, 2009). Because the increase in NAV indicates that the investment value of shareholders per unit of investment is increasing, while if there is a decrease in NAV it means that the investment value of shareholders per unit of participation decreases. The size of the NAV is influenced by several factors, one of which is the macro factor. In this study, Indonesia composite index variables, inflation, interest rates and exchange rates are used as factors that influence the price of equity mutual funds (NAV / PU).

II.I. Effect of Indonesia composite index on the Price of Equity Mutual Funds

The Indonesia composite index is often used as a barometer of a country's economic health, especially the performance of the capital market. Indonesia composite index is a value used to measure the performance of shares listed on a stock exchange (Hermuningsih, 2012). The Indonesia composite index movement becomes a benchmark or benchmark for all stock price fluctuations in the capital market. This will affect the price of equity mutual funds and the performance of equity mutual funds. In addition, the high value of the Indonesia composite index will increase the interest of investors to invest in equity mutual funds (Fatharani et. Al, 2015). For this reason, the first hypothesis for this study is:

H1: Indonesia composite index affects the price of stock mutual funds

II.II. Influence of Inflation on Equity Mutual Fund Prices

Inflation is an event that shows an increase in the price level in general and continuously, in the aggregate in an economy (Murni, 2013). This increase will result in a decrease in people's purchasing power and also affect the increase in the company's operational costs. This increase in operating costs will result in a decrease in company profits which has an impact on the possibility of decreasing shareholders' income and also a decrease in stock prices. This of course makes investment in stock mutual funds less attractive and will cause mutual fund prices to fall. If inflation occurs continuously it will cause a decline in overall economic conditions and be able to reduce the performance of the Indonesian capital market and the investment power of its investors (Dalimunthe and Lestari, 2019). For this reason, the second hypothesis for this study is:

H2: Inflation affects the price of Equity mutual funds

II.III. Effect of Interest Rates on Equity Mutual Fund Prices

Interest rate is the price of a loan. Interest rates are expressed as a percentage of principal per unit of time. Interest is a measure of the price of resources used by debtors that must be paid to creditors (Sunariyah, 2011). Indonesia uses the BI-Rate mechanism by announcing the target of the SBI interest rate that Bank Indonesia wants for the auction for a certain period of time. The interest rate has various impacts on the overall economic condition including Net Asset Value (NAV) of equity mutual funds. The higher the interest, the demand for credit will decrease so that it affects the decline in investment (Karim, 2011). In addition, investors also argued that the increase in the BI Rate would trigger an increase in deposit rates, which led to a shift in investment to banks and reduce the level of investment in the capital market, including Net Asset Value (NAV) of stock mutual funds. While changes in SBI interest rates can affect the variability of an investment return (Nurlaili, 2012). This happens because if interest rates increase, the stock price will tend to fall. The negative response from the increase in the BI Rate will also negatively affect the total net asset value (NAV) of stock mutual funds because 80% of the managed funds are invested in shares by investment managers (Nandari, 2017). For this reason, the third hypothesis for this study is:

H3: Interest Rates Influence on Equity Mutual Fund Prices

II.IV. Exchange Rate Effect on Equity Mutual Fund Prices

One of the functions of international trade is to maintain the balance of the international market by following its rules of equalizing payment instruments that have been formalized. The transaction tool is the exchange rate. Understanding exchange rates in general is the value or price of a country's currency that is measured or expressed in the currency of another country. The definition of exchange rates according to the Minister of Finance Regulation No.114 / PMK.04 / 2007 Article 1, namely the price of the rupiah against foreign currencies. Because this exchange rate includes two currencies, the balance point is determined by the supply and demand side of the two currencies.

The movement of a stable exchange rate can be used as a balancing wheel for balance of payments in international trade such as exports and imports. However, changes in foreign exchange rates can also cause various problems with the capital market. The sharp rise in the exchange rate against the rupiah will lead to two sides of gains and losses. Losses can be felt by importers because the required raw materials must be purchased at high prices. This can reduce stock prices on the Stock Exchange and negatively affect the Net Asset Value (NAV) of equity mutual funds. This opinion is in line with the statement that the rupiah exchange rate has a negative effect on Net Asset Value (NAV) of equity mutual funds (Saraswati, 2013). Besides that, an increase in the exchange rate of the rupiah against the US dollar marked by the price of the rupiah that is getting cheaper (depreciated) results in increased demand for the rupiah or capital inflow, which will increase the Net Asset Value (NAV) of the Equity Mutual Fund. Investors will immediately make an investment by buying instruments in the capital market including stocks, as a result the demand for shares rises and so does the price. This can improve company performance and net asset value (NAV) of stock mutual funds as the rupiah exchange rate research has a positive influence on equity mutual fund performance (Sjahputra, 2005). Exchange rates affect the performance of equity mutual funds (Nandari, 2017). For this reason, the fourth hypothesis for this study is:

H4: Exchange Rates Affect Towards Equity Mutual Fund Prices

III. METHODOLOGY

The research method used in this study is descriptive and verification analysis. In this study, researchers took secondary data. The sampling technique used purposive sampling with the criteria of equity mutual funds actively traded during the study period. Based on the established criteria, 70 types of equity mutual fund stocks are traded on the Indonesia Stock Exchange. Data collection in this study is library techniques and documentation techniques by tracing historical data from the IDX official website at www.idx.co.id, www.ojk.co.id, www.bareksa.com and www.bi.go.id . Data analysis using time series for 60 months or 5 years with multiple regression models. Regression models in this study are as follows:

NAV/PU = a +β1Indonesia composite index+ β1Inflation + β2BIRATE + β3 exchange rate+ e

The analysis technique in this study uses descriptive statistical analysis and inferential statistics which include: classic assumption test, F test, t test, and coefficient of determination.

IV. RESULT AND DISCUSSION
IV.I. Result

The data that will be used in the regression model must meet several classic assumption tests. First, BLUE (Best Linear Unbiased Estimators) test was conducted to avoid the occurrence of classical assumptions so that problems do not arise in the use of multiple linear regression analysis by conducting normality tests, autocorrelation tests, multicollinearity tests and heteroscedasticity tests (Ghozali, 2009).
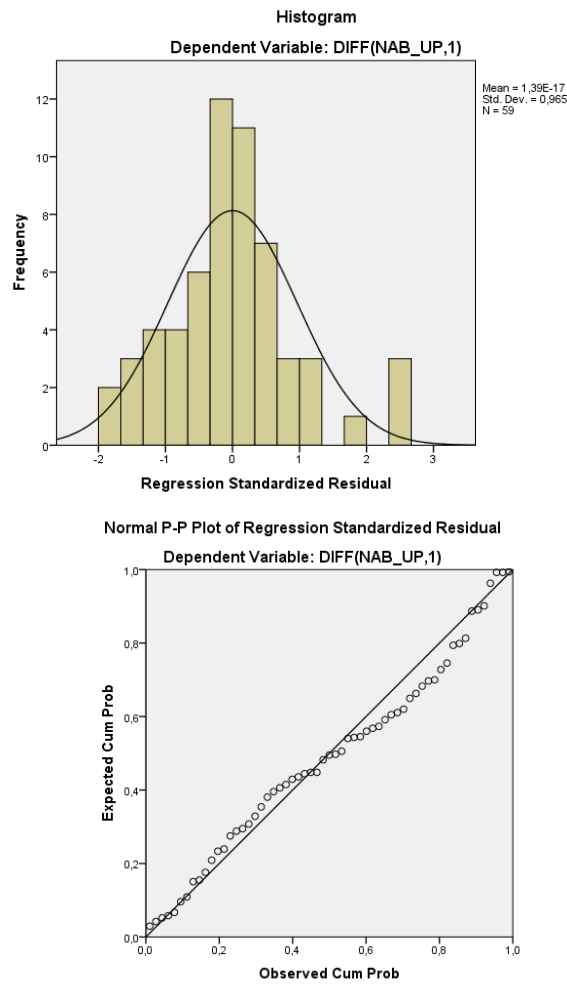
Figure 2:*Normality Test*

Based on the histogram image and the normal PP-Plot of Standardized Residual Regression above, showing that the points spread around the diagonal line of the axis, it is stated that the data is normally distributed.

Table 1:*Multicollinearity Test*

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	DIFF(IHSG,1)	,959	1,043
	DIFF(INFLASI,1)	,989	1,011
	DIFF(BI_RATE,1)	,923	1,084
	DIFF(KURS,1)	,896	1,116

a. Dependent Variable: DIFF(NAB_UP,1)

Multicollinearity test can be done by looking at the Tollerance (TOL) value and the Variance Inflation Factor (VIF) value of each independent variable on the dependent variable. In Table 1 above, it can be seen that the VIF value is in the range of 1 or less than 10. This shows that the model is declared free from the symptoms of multicollinearity.
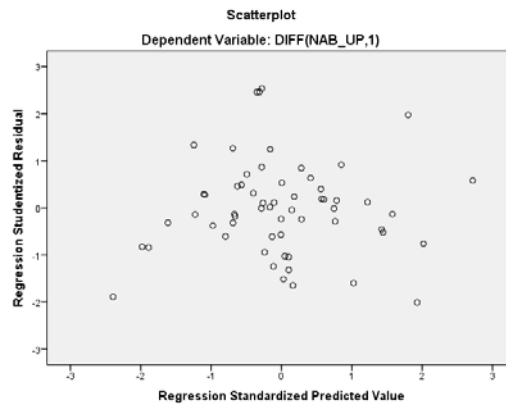
Figure 3:*Heteroscedasticity Test*

Based on the image of the scatterplot above, it can be seen that the scattered points form an unclear pattern above and below the zero on the Y axis, so in the regression model there is no heteroscedastic problem.

Table 2:*Autocorrelation Test*

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,569[a]	,324	,229	127,25789	1,854

a. Predictors: (Constant), DIFF(KURS,1), DIFF(INFLASI,1), DIFF(IHSG,1), DIFF(BI_RATE,1)

b. Dependent Variable: DIFF(NAB_UP,1)

Durbin Watson's value shows 1.8854. This value is close to number 2 or in the range of -2 to 2. This shows that this study is free from symptoms of autocorrelation.

Table 3:*Research Test*

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	30,187	24,959	1,209	0,232
Indonesia composite index	0,001	0,003	0,442	0,660
Inflation	-22,960	32,336	-0,710	0,481
BI Rate	11,983	108,958	0,110	0,813
Exchange rate	-0,292	0,090	-3,231	0,002
R	569[a]		Adj R-Square	0,229
F-statistic	2,958		Prob (F-statistic)	0,028[b]

Based on table 3 above, the regression equations to be formed are as follows:
NAV / PU = 30,187 + 0,0011Indonesia composite index - 22,960 Inflation + 11,983BIRate
- 0,292Exchange rate

The coefficient of determination (R^2) essentially measures how far the model's ability to explain the variation of the dependent variable. In table 3 above, the adjusted R-square value obtained is 0.229. This shows that the three independent variables consisting of Indonesia composite index, inflation, interest rates and exchange rates contribute to stock returns of 22.90%, while the remaining 77.10% is a contribution from other variables not examined. Prob.t value of 0.028 <0.05 means that the regression model used is correct (fit). Value prob t. Indonesia composite index variable is 0.660> 0.05 means that JCI does not affect the price of equity mutual funds, prob.t Inflation is 0, 481> 0.05 means that inflation does not affect the price of equity mutual funds, prob.t variable interest rate is 0.813> 0.05 which means that interest rates do not have a significant effect on the prices of equity mutual funds, and the exchange rate prob.t is 0, 02 <0.05, which means that the exchange rate affects the price of a stock mutual fund. Then, based on data processing, the results show that only the exchange rate has an influence on the Price of the Equity Mutual Funds

(NAV / PU), while the Indonesia composite index, Inflation and Interest Rates do not have an effect on the Price of Equity Mutual Funds (NAV / PU).

IV.II. Discussion

Based on the results of the study, the Indonesia composite index has no influence on the NAV / PU. This means that Indonesia composite index fluctuations do not affect the size of the NAV / Unit. Indonesia composite index is a value that shows the performance of all shares listed on the Indonesia stock exchange. While the equity mutual fund portfolio carried out by the Investment Manager is only done on a few stocks, so that the fluctuations in the stock index do not always affect the performance or price of equity mutual funds, depending on the type of stock chosen by the Investment Manager in its stock portfolio.

Inflation has no effect on NAV / PU. This means that the high and low inflation does not affect the size of the NAV / Unit. If we look at the inflation trend in Indonesia, the tendency of the inflation rate to decline, so that this small inflation does not affect the performance of equity mutual funds that we see from the NAV / PU. The high return and risk generated from investment in equity mutual fund compared to other types of equity mutual funds shows that the type of investor who has a equity mutual fund is the risk taker type, so that the high and low inflation does not significantly influence his decision to invest in stocks and equity mutual funds. The performance of equity funds is still strong so that it is not affected by inflation (Miha, 2017).

The interest rate has no effect on the NAV / PU. This means that the high and low interest rates do not affect the size of the NAV / Unit. Equity mutual funds are still the leading type of equity mutual funds in the capital market, so the high and low interest rates do not affect the value of the NAV / PU (Miha, 2017). The interest rate will affect the performance or price of fixed income equity mutual funds, this is because the return on the type of fixed income investment is highly dependent on the high or low coupon, while the investment return type of stock is influenced by fluctuations in stock prices and dividends. This result is consistent with the statement that the Hong Kong Interbank Offer Rate (HIBOR) does not have a causal relationship with Net Asset Value (NAV) equity mutual funds in Hong Kong (Chu, 2011).

Exchange rates have an influence on NAV / PU with a negative relationship direction. This means that the higher the exchange rate, the lower the NAV / Unit. The high exchange rate shows the weakening of the rupiah (depreciated), this will affect the cost of imported raw materials which is expensive which results in high production costs. High production costs will cause a decrease in profits and the possibility to get dividends will be small. Of course this will affect stock demand which results in a decline in stock prices on the Stock Exchange and negative effect on Net Asset Value (NAV) of equity mutual funds.

V. CONCLUSION AND SUGGESTIONS

Only the exchange rate has an effect on the Price of Equity Mutual Funds (NAV / PU), while the Indonesia composite index, Inflation and Interest Rate have no effect on the price of equity mutual funds. Some suggestions to the companies issuing equity mutual funds, investors and future researchers: (1) For companies that issue equity mutual funds, especially Investment Managers, the results of this study can be taken into consideration in making stock portfolio decisions. The high exchange rate that occurs in Indonesia will affect the profitability of issuers issuers, which will have an effect on the welfare of shareholders who will reduce share prices and equity mutual funds. This of course can be taken into consideration to pay attention to the rate of exchange that occurred in Indonesia. (2) For investors, equity mutual funds can be an investment choice, because at present stock mutual funds still provide higher returns compared to other types of mutual funds. However, it needs to be taken into account the currency conditions in our country, because when the rupiah weakens, then the possibility of return from investment in equity funds will decrease. (3) For future researchers who are interested or will investigate more deeply about mutual funds, it is recommended to compare the types other mutual funds such as fixed income or mixed equity mutual funds. Or it can also be compared with Islamic equity mutual funds.

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