PULL FACTOR AND PUSH FACTOR INFLUENCES ON THE VOLATILITY OF FOREIGN INVESTMENT FLOWS IN INDONESIAN CAPITAL MARKET

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Abstract

The purpose of this study is to determine the factors that affect the flow of foreign investment into the Indonesian Stock Market that includes the factors of return, risk and inflation derived from foreign markets/ global (push factor) and from the domestic market (pull factor). Testing is done by using the analysis model Autoregressive Conditional Heteroscedasticity (ARCH) and Generalized Autoregressive Conditional Heteroscedasticity (GARCH). Testing is done with six estimation models among them ARCH, GARCH, ARCH-M (2,1), ARCH-M (2,2), Threshold Autoregressive Conditional Heteroscedasticity (TARCH) and Exponential Generalized Autoregressive Conditional Heteroscedasticity (EGARCH). Using the significance of estimation parameters, goodness of fit model, Akaike's Information Criterion test, Schwarz Information test and ARCH effect test, found the best model is the ARCH-M (2,1) estimation, model. The results of testing with ARCH-M (2,1) model showed that the return and domestic risk (pull factor) significantly have a relation with the flow of foreign investment in Indonesia Stock Exchange, while return, risk, global inflation (push factor) and domestic inflation have no significant effect.

Abstrak

Penelitian ini bertujuan untuk mengetahui faktor-faktor yang mempengaruhi aliran investasi asing ke pasar saham Indonesia yang mencakup faktor return*, risiko dan inflasi yang berasal dari pasar luar negeri/ global* (push factor) *dan dari pasar dalam negeri/ domestik* (pull factor)*. Pengujian dilakukan dengan menggunakan model analisis* Autoregressive Conditional Heteroscedasticity (ARCH) *dan* Generalized Autoregressive Conditional Heteroscedasticity (GARCH)*. Pengujian dilakukan dengan enam model estimasi yaitu* ARCH, GARCH, ARCH-M (2,1), ARCH-M (2,2), Treshold Autoregressive Conditional Heteroscedasticity (TARCH) *dan* Exponential Generalized Autoregressive Conditional Heteroscedasticity (EGARCH)*. Dengan menggunakan signifikansi parameter estimasi,* the goodness of fit *model, Uji* Akaike's Information Criterion*, Uji* Schwarz Information *dan Uji Efek* ARCH*, ditemukan model terbaik yaitu model estimasi* ARCH-M (2,1)*. Hasil pengujian dengan model* ARCH-M (2,1) *menunjukkan bahwa return dan risiko domestik* (pull factor) *berpengaruh signifikan terhadap aliran investasi asing di Bursa Efek Indonesia, sedangkan return, risiko, inflasi global* (push factor) *dan inflasi domestik tidak berpengaruh signifikan.*

INTRODUCTION

The flow of investment in Indonesia is inseparable from the development of global economic activity. This development of global economic activity led to the opening of relationships between financial markets and the emergence of integration between a country's and regional financial markets with global financial markets. This integration resulted in the flow of investment from a country's financial market with other countries' financial markets become very dynamic so that the flow of investment not only come from the country of origin but also from other countries called foreign investment (Elfarij et al., 2016). Foreign investment is indicated as one of the main routes in economic development (Budijanto & Rachman, 2010). According to Yulianto et al. (2014) in the short term investment and income are used to repay debt.

Salomons and Grootveld (2003) said that the capital market in the emerging market country provides a higher risk premium than in developed countries so that the expected return earned is also higher. On the other hand, the influx of foreign investment inflows increased international confidence in economic fundamentals as reflected in the rise in the level of foreign investment in Indonesia (Indawan et al., 2013). Leiderman et al. (1994) said that the movement of foreign investment flows into a country is influenced by two things: the factor of the foreign (push factor) and the factor of the country (pull factor). A push factor is a factor that occurs abroad so as to influence the decision of an investor to invest his capital in the country of a country. While the pull factor is a factor or condition within the country that can attract investors to invest in the country (Forbes & Warnock, 2011).
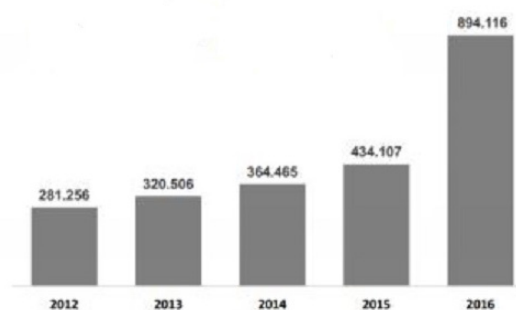

Figure 1. The growth of SID Year 2012-July 2016

Kustodian Sentral Efek Indonesia (KSEI) released ownership of Single Investor Identification (SID) amount increased every year from 2012 until 2016 to penetrate the number 894.116.

The increase in SID indicates that the number of local investors in Indonesia capital market continues to increase. Although the number of SID rise continues, share ownership in Indonesia capital market until July 2016 is still dominated by foreign investors (KSEI, 2017).

In July 2016 Kustodian Sentral Efek Indonesia (KSEI) noted that total shareholdings in Indonesia capital market are still dominated by foreign investors. The percentage of ownership of foreign investors with domestic investors in Indonesia Stock Exchange (IDX) is versus 64% versus 36%. So it can be said that profit and return from investment in the capital market mostly enjoyed by a foreign investor.
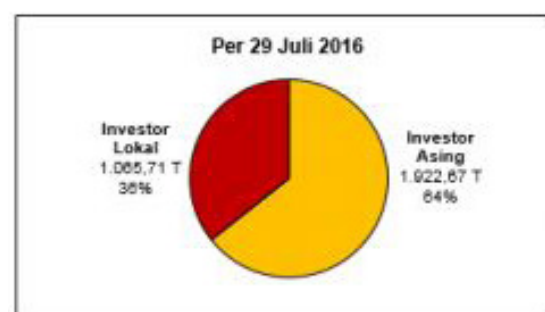
Figure 2. The Composition of Stock Ownership in IDX Year 2016

There are several studies that analyze the factors influencing the flow of foreign investment in a country. Forbes and Warnock (2011) has conducted research that the result of factors from the outside (push factor) is a major factor affecting the flow of foreign investment in emerging markets. Meanwhile, according to Agung et al. (2011) the flow of foreign investment is influenced by the pull factor, and influenced by push factors such as global risks.

In 2016, the economy in developing countries including Indonesia grows more sTable with inflation being kept under control. Economic growth in developing countries in 2016 was 4.1%, slightly increased compared to the previous year's achievement of 4.0% (Bank Indonesia, 2016). Inflation is one of the factors influencing the flow of foreign investment (Sudarsono, 2008). Inflation is one indicator that describes the level of economic stability of a country. A high inflation rate indicates internal economic instability that can hamper the entry of investments into a country (Septifany et al., 2015). This condition causes multinational companies to avoid or reduce investment in countries that have high inflation (Dhaka et al., 2007).

Theoretically, stock returns are related to the flow of foreign investment, so that with the opening of the market to the flow of foreign investment can diversify the risk and make the stock more liquid (Clark & Berko, 1997). Figure 3 shows the relatively positive movement of domestic returns and foreign investment flows in Indonesia.

Figure 3. Fluctuation of Stock Return and Foreign Investment Flows in Indonesia 2012-2016

Besides return, theoretically, the risk is also related to the flow of foreign investment. The high-risk index of a country illustrates the weakness of a country's economy which will lead to a decrease in the flow of investment into the country (Zaretta et al., 2015).
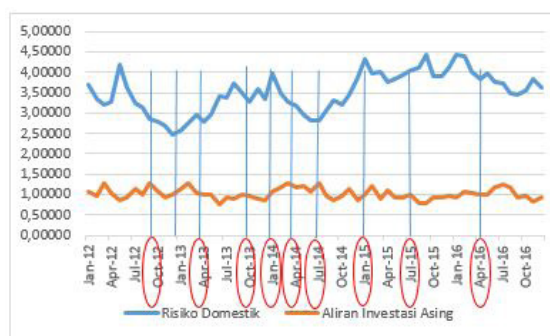
Figure 4. Fluctuation of Domestic Risk and Foreign Investment Flow in Indonesia 2012-2016

Aron et al. (2010) said that the internal factor (pull factor) has an adverse effect on the flow of foreign investment in South Africa. Then Nugroho et al. (2014) show that global risks positively affect the flow of foreign investment in Indonesia.

Fratzscher (2011) analyzed that the internal factor (pull factor) is an important and significant factor in influencing the flow of foreign investment in emerging market. Then another study showed different results. Leiderman et al. (1994) concluded that the flow of foreign invest-

ment is more influenced by push factors. While De Vita and Kyaw (2008) in their research using Structural Vector Autoregressive (SVAR) stated that the flow of foreign investment is influenced by both factor (push factor and pull factor).

Investment theory says how important the concept of portfolio diversification in the formation of investments, which would then be better if there is capital market integration. Capital market integration is a relatively sophisticated concept whereby a group of countries seeks to improve their level of prosperity. Diversification strategy is also done by a company to gain market power among its competitors (Kusumaningtyas & Yendrawati, 2015).

Integrated capital markets are a condition where there is no constraint to having securities in every capital market (Husnan, 2005). Conditions where stock prices in various world capital markets have a very close relationship and have a correlation between the movement of the index (Sugiyanto & Sudarwan, 2016). So that investors have many investment options to maximize the profit on their investment funds (Purwaningsih & Khoiruddin, 2016). Rational investors will invest their money by choosing an active stock (Pardosi & Wijayanto, 2013). The primary objective of investors in the investment is to minimize risk and maximize return (Listyaningsih & Krishnamurti, 2015).

Foreign Investment Flow

Foreign investment plays a vital role in fund mobilization and structural transformation, so the entry of foreign investment is handy for emerging markets (Ahmed & Zlate, 2014). According to Elfarij et al. (2016) foreign investment in a country can be made in two forms, namely portfolio investment (foreign portfolio investment) and foreign direct investment. In deciding investment, investors need adequate information (Yendrawati & Pratiwi, 2014).

Stock Market Return

Boediono (2005) said that stock returns are earnings gained during the investment period over a certain amount of funds invested in shares. Stock returns will rise along with rising stock prices (Sudiyanto & Suharmanto, 2011). The Company will make several efforts in increasing the value of the company including maintaining the stock price (Sari & Wijayanto, 2015). Every investor who invests in the capital market will expect future returns (Srianingsih & Khoiruddin, 2015). According to Yulianto (2014) the value of

the company also positively related to managerial share ownership. So managers will be more trying to choose investment decisions to increase shareholder value.

Country Risk

Oktaviani and Wijayanto (2015) define that risk is the uncertainty faced because the value of money or investment is smaller than the expected rate of return on investment. Country risk is the overall political and financial status of a country and the extent to which it can affect a country's ability to repay debt (Haque, 2008). Damodaran (2003) states that the most accessible and most popular measurement tool to take into account risks is the yield of bonds issued by the government of a country.

Inflation

Iriani and Yuliadi (2015) defines that inflation is a tendency of prices of goods that rise in general and continuously and extends to most of the price of other. So it can be concluded that inflation is a process of increasing the price of goods in general and associated continuously with market mechanisms. The most commonly used indicator in estimating the inflation rate is the Producer Price Index/ PPI (Jayanti & Sudjana, 2014).

This study aims to determine the factors that influence the flow of foreign investment to the Indonesian stock market which includes return, risk and inflation factors derived from the foreign/ global market (push factor) and from the domestic/ domestic market (pull factor).

Hypotheses Development

According to Froot et al. (2001) the investment is influenced by the return of the previous period. So when the expected return cannot be realized, then the flow of investment next period will decrease. Foreign investors will see and take decisions on the movement of stock returns so that a change in the stock market return of a country will influence the decision of a foreign investor to decide in which country he or she will invest (Elfarij et al., 2016).

H1: The global market return (push factor) has an adverse effect on the flow of foreign investment in IDX.

The high level of stock return will increasingly attract investors to invest their capital. This happens because the return is the underlying factor of the investment decision. So it can be said that the higher the return on shares given by stock, it will further increase the transaction will also be done by investors (Tandelilin, 2010).

H2: The return of the domestic market (pull factor) has a positive effect on the flow of foreign investment in IDX.

The international diversification context states that foreign investors will decide to shift their portfolio investment from developing market to emerging market by looking at the level of return and risk of the country to be faced (Reis et al., 2008).

Portfolio theory developed by Markowitz (1952) states that investors will choose an efficient portfolio, which is a portfolio with a high return and with a certain level of risk.

H3: The global risk (push factor) has a positive effect on the flow of foreign investment in IDX.

The selection of investment portfolios can be made to various financial markets in accordance with the concept of market integration (Clark & Berko, 1997). Theory of base extension says that the more integrated markets will encourage risk sharing. With the risk sharing, investors will choose an investment portfolio that has a lower risk (Elfarij et al., 2016).

H4: The internal factor (pull factor) has an adverse effect on the flow of foreign investment in IDX.

Inflation becomes the primary focus in a country's economy (Utama et al., 2017). Septifany et al. (2015) said that when inflation occurs in a country, investors will tend to attract their investment in the country and move to another country. So in other words, inflation abroad will encourage the entry of investment in the country.

H5: Global inflation (push factor) has a positive effect on the flow of foreign investment in IDX.

When a country has an unstable level of inflation, prices of goods will fluctuate and make it difficult for investors to predict the returns that will result from investment (Sudarsono, 2008). Mishkin (2008) in the theory of asset demand reveals that when the estimated inflation rate increases, then it will lower the level of demand for assets (shares). So if the domestic inflation increases then the value of investment in the country will decrease and vice versa.

H6: Domestic inflation (pull factor) has an adverse effect on the flow of foreign investment in IDX.

METHOD

This research uses quantitative and explanatory approach. The data used in this research is time series data with secondary data type, ie foreign buy, foreign sell, closing IHSG, closing S&P 500 index, VIX monthly data, EMBI+ monthly data, monthly data of Indonesian producer price index and monthly data of US producer price index. This study takes time from 2012-2016. The selection of this period is based on the consideration that during that period there was a period of the European crisis, US economic recovery, and Indonesia's economic condition while sTable with a reason to know the relationship between variables more comprehensively. The population that became the object of research is as follows:

1) Foreign buy and foreign sell data from IDX Statistics at Indonesia Stock Exchange from January 2012 to December 2016; 2) S&P 500 Index data from January 2012 to December 2016; 3) Composite Stock Price Index (IHSG) in Indonesia Stock Exchange period January 2012 until December 2016; 4) VIX index data for the period of January 2012 to December 2016; 5) Emerging Market Bond Index Plus (EMBI+) index data from January 2012 to December 2016; 6) The United States Inflation Data from January 2012 to December 2016; 7) Indonesia Inflation Data from January 2012 to December 2016.

The samples were taken in this study using a saturated sampling technique, namely the technique of determining the sample where all members of the population used as a sample (Sugiyono, 2001).

Foreign Investment Flow

In this research, the value of foreign investment flows is obtained by using the ratio of foreign buyer's value to the selling value of foreign investors on the stock trading in Indonesia Stock Exchange during the month (Egly et al., 2010).

$$FI_t = \text{Foreign Buy}_t / \text{Foreign Sell}_t$$

Return of US Stock Market/ S & P 500 Index

The US market return using the concept of return calculation is obtained from the change of the S & P 500 stock market index to the previous S & P 500 stock market index (Tandelilin, 2010).

$$RS\&P500_t = (IS\&P500_t – IS\&P500_{t-1})/IS\&P500_{t-1}$$

Return of Indonesia Stock Market/ IHSG

The Composite Stock Price Index (IHSG) can be used to assess the general market situation or measure whether stock prices increase or decrease (Listriono & Nuraina, 2015). Return is calculated using the concept of return calculation (Tandelilin, 2010).

$$RIHSG_t = (IHSG_t – IHSG_{t-1})/IHSG_{t-1}$$

Global Risk/ VIX

The VIX index represents a neutral risk on expected returns from the S & P 500 market (Bekaert & Hoerova, 2014). VIX is used as a proxy for global/ developed country risks. The VIX calculation in this study is with the closing value of the period VIX t index.

Domestic Risk/ EMBI +

EMBI + is the emerging market bond index released by J.P Morgan which is used as a proxy for domestic risk (Reis et al., 2008). EMBI + calculation in this research is with closing value of index EMBI + period t.

Global Inflation/ US Producer Price Index

The Producer Price Index represents a change in prices received by local producers over the output already generated. The American Producer Price Index is used as a proxy for the value of foreign inflation over the flow of foreign investment in India (Rai & Bhanumurthy, 2004). The calculation of PPI in this study is with the closing value of PPI period t.

Domestic Inflation/ Producer Price Index Indonesia

Producer Price Index (PPI) is a proxy for inflation because PPI is the most common indicator used by investors and consumers in predicting inflation. Calculation of PPI in this research is with data of PPI at the end of month period t.

The technique used in this research is ARCH-GARCH method by using Eviews computer program. The basis for using the ARCH-GARCH model is because of the nature of financial data that has a tendency to fluctuate rapidly from one period to another so that the variance of the error will always change over time (heteroskedasticity), while other time series analysis models have homoskedasticity assumptions (Widarjono, 2013).

Descriptive Statistics Test

The definitive statistical test aims to explain the data of one variable studied using the mean, median, maximum, minimum and standard deviation.

Multicollinearity Test

The purpose of multicollinearity test is to test whether the regression model found a correlation between independent variables. The model is useful if there is no linear relationship between independent variables, namely the value of the correlation between independent variables smaller than 0.8 (Gujarati & Porter, 2009).

Data Stationality Test

This assumption says that the analysis will be valid if the time series used is stationary (Juanda & Junaidi, 2012). The stationary test serves to identify a variable whether stationary.

The unit Root Test method of Augmented Dickey-Fuller (ADF)

To identify the data stationer visually, a formal test is needed, known as unit root test. The ADF test is a serial correlation test between residuals with ΔYt. The statistical t values obtained are then compared with t-McKinnon Critical Value. If t statistic is < r Table, that means data is not stationer (Widarjono, 2013).

Differencing Process of Non-Stationery Data

Differencing is a process done to obtain stationary data from the trend of non-stationary data. Differencing the data is done if the data generated from the ADF test results are not stationary at the level of zero, i.e., by reducing the data with the data of the previous period, so that will be obtained delta or difference. The first generated data is then used as tested data again using the ADF test to test the data stationarity.

Identify ARCH Effect with ARCH LM Test

The ARCH-LM test serves to detect the presence or absence of ARCH-GARCH elements in an equation model.

Model Estimates

Model estimation is done by doing the calculation through 6 model that is ARCH, GARCH, ARCH-M (2,1), ARCH-M (2,2), TARCH and EGARCH.

Selection of the Best Model

The best model selection is made to get the best estimation model from the ARCH / GARCH model variant to estimate the model in this research. Selection of the model, i.e.: (1) Significance of Estimation Parameters, (2) Goodness of Fit Model, (3) Akaike's Information Criterion (AIC) Test, (4) Schwarz Information Criterion (SIC) Test and (5) ARCH Effect Test.

RESULT AND DISCUSSION

Description of Research

This study uses the type of time series data. The data used in this research is time series data with secondary data type, ie foreign buy, foreign sell, closing IHSG, closing S&P 500 index, VIX monthly data, EMBI+ monthly data, monthly data of Indonesian producer price index and monthly data of American producer price index. This research is about the volatility of foreign investment flow. The sample of this research data is taken with saturated sampling method, that is sample determination technique where all member of the population used as a sample (Sugiyono, 2001).

Descriptive Statistics Test

Foreign investment flow variables have a mean of 1.020572 with a standard deviation of 0.134621. The value of standard deviation of 0.134621 means that the value of deviation data of foreign investment flow variable amounted to 0.134621 against its mean value. The S & P500 return variable has a mean of 0.010092 with a standard deviation value of 0.029745. The default deviation value of 0.029745 means that the value of the global variable return data deviation of 0.029745 against its mean value. The return variable of IHSG has a mean of equal to 0.006143

Table 1. Descriptive Statistics Test

	FI	R S&P500	R IHSG	VIX	EMBI+	INF US	INF INDO
Mean	1.020572	.010092	.006143	16.03433	351.0833	107.6670	158.6992
Median	.999731	.011829	.012247	15.57000	350.0000	107.7603	145.4250
Maximum	1.297935	.082983	.076810	28.43000	443.0000	109.3320	210.0900
Minimum	.757845	-.062651	-.090077	11.40000	248.0000	105.0098	119.5300
Std. Dev.	.134621	.029745	.037111	3.274319	49.52667	1.191536	28.80113
Observations	60	60	60	60	60	60	60

Table 2. Multicollinearity test

	R_S_P500	R_IHSG	VIX	EMBI_	INF_US	INF_INDO
R_S_P500	1.000000	.382908	-.650919	-.320260	-.118170	.076942
R_IHSG	.382908	1.000000	-.276610	-.288278	-.054168	-.013050
VIX	-.650919	-.276610	1.000000	.405573	-.319427	.159779
EMBI_	-.320260	-.288278	.405573	1.000000	.212693	-.431977
INF_US	-.118170	-.054168	-.319427	.212693	1.000000	-.760666
INF_INDO	.076942	-.013050	.159779	-.431977	-.760666	1.000000

with a standard deviation value of 0.037111. The standard deviation value of 0.037111 means that the value of domestic data variable deviation of 0.037111 against its mean value.

The VIX variable has a mean with a ratio of 16.03433 with a standard deviation of 3.274319. The standard deviation value of 3.274319 means that the value of the global variable risk data deviation of 3.274319 against its mean value. EMBI + has a mean of 351,0833 with a standard deviation value of 49.52667. The standard deviation value of 49.52667 means that the value of internal variables risk deviation of 49.52667 against its mean value.

The American PPI has a mean of a ratio of 107.6670 with a standard deviation of 1.191536. The standard deviation value of 1.191536 means that the value of global inflation variable data deviation of 1.191536 against its mean value. PPI Indonesia has a mean with a ratio of 158.6992 with a standard deviation of 28.80113. The standard deviation value of 28.80113 means that the value of private variables deviation.

Multicollinearity Test

From the multicollinearity test Table above, it is known that the correlation value between the variables is no higher than 0.8. Therefore, it is proven that there is no multicollinearity because the correlation value between the independent variables is each smaller than 0.8 (Widarjono, 2013).

Data Stationality Test

The stationary test is performed by a unit root test with Augmented Dickey-Fuller (ADF) Test. The result of the stationary test as in Table 3 shows that Foreign Investment Flow variable, Return of S&P500 variable, Return of IHSG variable and VIX variable stationary at the level, while EMBI + variable, US PPI variable and Indonesian PPI variable are not stationary at the level so it should be done differencing data.

Based on Table 4, the results of differencing data first order, EMBI + variable, PPI US variable and Indonesian PPI variable stationary on first difference.

Table 3. Test of Data Stationality with Augmented Dickey-Fuller Test

Variables	t-Statistic				Results
	1% level	5% level	10% level	ADF Test Statistic	
Aliran Investasi Asing	-3.546099	-2.911730	-2.593551	-5.348824	Stationary
Return of S&P 500	-3.546099	-2.911730	-2.593551	-8.990706	Stationary
Return of IHSG	-3.546099	-2.911730	-2.593551	-6.867122	Stationary
VIX	-3.546099	-2.911730	-2.593551	-6.007424	Stationary
EMBI+	-3.546099	-2.911730	-2.593551	-2.286142	Not Stationary
PPI_US	-3.548208	-2.912631	-2.594027	-1.619947	Not Stationary
PPI_IND	-3.546099	-2.911730	-2.593551	-1.787414	Not Stationary

Table 4. Augmented Dickey-Fuller Test Differencing First Order

Variables	t-Statistic				Results
	1% level	5% level	10% level	ADF Test Statistic	
EMBI+	-3.548208	-2.912631	-2.594027	-8.334149	Stationary
PPI_US	-3.548208	-2.912631	-2.594027	-5.261812	Stationary
PPI_IND	-3.548208	-2.912631	-2.594027	-8.449452	Stationary

Table 5. ARCH-LM test

Heteroskedasticity Test: ARCH			
F-statistic	1.222601	Prob. F (2.55)	.0302
Obs*R-squared	2.468818	Prob. Chi-Square (2)	.0291

ARCH Effects Test

From Table 5 it can be seen that the probability of Chi-Square is 0.0291 (smaller than a = 5%), then the data is heteroscedasticity. One way to overcome the problem of heteroskedasticity is by using model ARCH/ GARCH.

Model Estimation and Best Model Selection

Referring to the best model selection parameters, the best model was chosen is the ARCH-M model (2.1) with consideration of having the largest likelihood log coefficient, the smallest Akaike Information Criterion (AIC) coefficient and the smallest Schwarz Criterion (Juanda & Junaidi, 2012).

Hypothesis testing

Hypothesis testing is done by using the variables contained in the selected model to be used as a parameter. A hypothesis test is used to know the influence of each independent variable to dependent variable by using the best model that is ARCH-M model (2.1) with the equation:

D (FI) = 2.819564 – 0.731971 D (RSP500) + 1.873917 D (RIHSG) – 0.011237 D (VIX) – 0.000449 D (EMBI) – 0.013239 D (INF_US) – 0.000377 D (1NF_IND) + e.

The residual variant of the ARCH-M model equation (2.1):

Table 6. Recapitulation of Model Estimation Results

Model	ARCH Effect/ Nilai P	Variable Significance Coefficient						Log Likeli-hood	AIC	SC
		R S&P 500	R IHSG	VIX	EMBI+	INF US	INF INDO			
ARCH	no effect / 0.06	-.4133	1.7994*	-.0009	-.0005	-.0128	-.0007	56.299	-1.5766	-1.2625
GARCH	no effect / 0.81	-.6341	2.1232*	-.0092	-.0003	-.0135*	-.0003	57.846	-1.5948	-1.2458
ARCH-M (2.1)	no effect / 0.51	-.7319	1.8739*	-.0112	-.0004*	-.0132	-.0003	58.992	-1.5954	-1.2665
ARCH-M (2.2)	no effect / 0.53	-.7688	1.9312*	-.0112	-.0004	-.0132	-.0003	58.985	-1.5328	-1.0791
TARCH	no effect / 0.96	-.5497	1.9816*	-.0109	-.0004	-.0132	-.0003	56.381	-1.5127	-1.1287
EGARCH	no effect / 0.54	-.5351	1.8627*	-.0009	-.0003	-.0195	-.0003	54.435	-1.4478	-1.0639

Information :
 * Significant at a significance level of 1%
 * Significant at a significance level of 5%

D (FI) = 2.819564 − 0.731971 D (RSP500) + 1.873917 D (RIHSG) − 0.011237 D (VIX) − 0.000449 D (EMBI) − 0.013239 D (INF_US) − 0.000377 D (1NF_IND) + e.

The ARCH-M element is shown by SQRT (GARCH), where this variable is statistically significant at a = 1%. This means residual volatility affects the flow of foreign investment.

H1 : The global market return (push factor) has an adverse effect on the flow of foreign investment in IDX.

Based on hypothesis test by using the equation in best model ARCH-M (2,1) obtained the result of coefficient of return of S&P 500 equal to -0,731971 indicate that return of S&P500 has negative influence to flow of foreign investment. While the t-count is 1.299779 or smaller than t-Table 2.00 at the significance level α = 5%. The probability coefficient of 0.1937 is higher than the significance of α = 5%. The results of the hypothesis test show that the global return/ S&P 500 has no significant effect on the flow of foreign investment in Indonesia Stock Exchange. Based on these results, the hypothesis that the global market return index/ S&P500 (Push Factor) negatively affect the flow of foreign investment into the IDX is rejected.

H2 : The return of the domestic market (pull factor) has a positive effect on the flow of foreign investment in IDX.

Based on hypothesis test by using the equation in best model ARCH-M (2,1) obtained by return coefficient of IHSG equal to 1,873917 indicate that return of IHSG has positive influence to flow of foreign investment. While t-count of 4.710533 or greater than t-Table 2.00 at the significance level α = 5%. The probability coefficient of 0.0000 is smaller than the significance of α = 5%. The results of the hypothesis test show that the domestic return/ IHSG significantly influence the flow of foreign investment in Indonesia Stock Exchange. Based on these results, the hypothesis that the return of domestic market index/ IHSG (Pull Factor) has a positive effect on the flow of foreign investment in BEI is accepted.

H3 : The global risk (push factor) has a positive effect on the flow of foreign investment in IDX.

Based on hypothesis test by using the equation in best model ARCH-M (2,1) obtained by global risk coefficient equal to -0.011237 indicate that global risk has negative influence to flow of foreign investment. While the t-count is 1.450909 or smaller than t-Table 2.00 at the significance level α = 5%. The probability coefficient of 0.1468 is higher than the significance of α = 5%. The result of the hypothesis test shows that global risks have no significant effect on the flow of foreign investment in Indonesia Stock Exchange. Based on these results, the hypothesis stating the global risks (Push Factor) has a positive effect on the flow of foreign investment into the IDX is rejected.

H4 : The domestic factor (pull factor) has an adverse effect on the flow of foreign investment in IDX.

Based on the hypothesis test using the equation in the best model of ARCH-M (2,1), the result of domestic risk coefficient of -0.000449 shows that domestic risk has a negative influence to the flow of foreign investment. While t-count of 7.989712 or greater than t-Table 2.00 at a significance level α = 5%. The probability coefficient of 0.0000 is smaller than the significance of α = 5%. The result of the hypothesis test shows that domestic risks significantly influence the flow of foreign investment in Indonesia Stock Exchange. Based on these results, the hypothesis stating the domestic risk (Pull Factor) has an adverse effect on the flow of foreign investment in the IDX is accepted.

H5 : Global inflation (push factor) has a positive effect on the flow of foreign investment in IDX.

Based on hypothesis test by using the equation in best model ARCH-M (2,1) obtained by the result of global inflation coefficient equal to -0,013239 indicate that global inflation has negative influence to flow of foreign investment. While t-count equal to 0.716072 or smaller than t-Table 2.00 at significance level α = 5%. The probability coefficient of 0.4739 is higher than the significance of α = 5%. The results of the hypothesis test show that global inflation has no significant effect on the flow of foreign investment in Indonesia Stock Exchange. Based on these results, the hypothesis stating that global inflation (Push Factor) has a positive effect on the flow of foreign investment into the IDX is rejected.

H6 : Domestic inflation (pull factor) has an adverse effect on the flow of foreign investment in IDX.

Based on the hypothesis test by using the equation in the best model ARCH-M (2,1), the

result of the domestic inflation coefficient of -0.000377 shows that domestic inflation has an adverse effect on the flow of foreign investment. While the t-count of 0.568409 or smaller than t-Table 2.00 at a significance level α = 5%. The probability coefficient of 0.5698 is higher than the significance of α = 5%. The result of the hypothesis test shows that domestic inflation has no significant effect on the flow of foreign investment in Indonesia Stock Exchange. Based on these results, the hypothesis stating that domestic inflation (Pull Factor) has an adverse effect on the flow of foreign investment in IDX is rejected.

RESULT AND DISCUSSION

Influence of Return S&P 500 against Foreign Investment Flow

The results of this study indicate that the S&P 500 return does not significantly affect the flow of foreign investment so that Ha1 is rejected. These results indicate that the S&P 500 return as a push factor is not able to influence the decision of foreign investors to invest in emerging markets such as Indonesia.

This is due to the lack of correlation between global market returns/ R S&P500 with the flow of foreign investment in the Indonesian stock market. This condition means that any movement of global stock market return will not affect the flow of foreign investment in Indonesian stock market. This supports the research of Elfarij et al. (2016) which reveals that the Indonesian capital market tends to be more resistant to the pressures arising from the capital markets of the United States and another developed country.

In addition, the results of this study are also in line with research Gordon and Poonam (2003) which states that the global stock market return does not affect the flow of foreign investment into the Indian stock market. Then linked with the driving factor of foreign investment flow to emerging market that is pushing factor and pull factor, the result of this research indicates that push factor has no significant effect to the flow of foreign investment in Indonesia capital market.

Influence of Return of IHSG to Foreign Investment Flow

The results of this study indicate that the return of IHSG has a significant positive effect on the flow of foreign investment so that Ha2 is accepted. These results indicate that the return of IHSG as a pull factor can influence the decision of foreign investors to invest in emerging markets such as Indonesia.

This condition means that the higher returns of IHSG resulted in more and more inflows of foreign investment into the Indonesia Stock Exchange and the declining IHSG returns resulted in the outflow of foreign investment flows from the Indonesia Stock Exchange. These results are in line with previous research by Egly et al. (2010) and Anayochukwu (2012) which stated that the domestic market return positively affected the flow of foreign investment into the country.

Then, if it is related to push factor and pull factor, the research result shows that the pull factor significantly influences the flow of foreign investment to the emerging market, which is in line with Fratzscher (2011) which states that the pull factor has a significant effect on capital inflows.

Global Risk/ VIX Influence on Foreign Investment Flow

The results of this study indicate that VIX has no significant effect on the flow of foreign investment so that Ha3 is rejected. These results indicate that global risk as a push factor is not able to influence the decision of foreign investors to invest in emerging markets such as Indonesia.

This is due to the absence of a link between global/ US risks and the flow of foreign investment in the Indonesian stock market. This condition means that any global risk movement will not affect the flow of foreign investment in Indonesian. The results of this study also support the study of Elfarij et al. (2016) which revealed that the Indonesian capital market tends to be more resistant to the pressure arising from the capital markets of the United States or other developed countries.

The results of this study are also in line with previous research conducted by Fratzscher (2011) which states that global/ VIX risks do not affect the flow of foreign investment into the emerging market. It also concludes that the push factor has no significant effect on the flow of foreign investment to the emerging market.

Influence of Domestic Risk/ EMBI + to Foreign Investment Flow

The results of this study indicate that the risk of domestic/ EMBI + has a significant adverse effect on the flow of foreign investment so that Ha4 is accepted. These results indicate that the risk of domestic/ EMBI + as a pull factor can influence the decision of foreign investors to invest in emerging markets such as Indonesia.

This condition means that the higher the domestic/ EMBI + risks lead to a more signifi-

cant flow of foreign investment out to the Indonesia Stock Exchange and the increasingly deteriorating domestic risks contribute to the influx of foreign investment flows from the Indonesia Stock Exchange. These results are in line with previous studies by Egly et al. (2010) and Indawan et al. (2013) which state that domestic risks negatively affect the flow of foreign investment into the country.

Then, if it is related to push factor and pull factor, the research result shows that the pull factor has a significant effect on the flow of foreign investment to the emerging market, which is in line with Fratzscher (2011), Indawan et al. (2013) and Elfarij et al. (2016) that the pull factor in the form of domestic risks has a significant effect on capital inflows of foreign investment.

Influence of Global Inflation on Foreign Investment Flow

The results of this study indicate that US inflation has no significant effect on the flow of foreign investment so that Ha5 is rejected. These results indicate that US inflation as a push factor is not able to influence the decision of foreign investors to invest in emerging markets such as Indonesia.

This is due to the absence of a relationship between US inflation and the flow of foreign investment in the Indonesian stock market. This condition means that any movement of US inflation will not affect the flow of foreign investment in the Indonesian stock market. It supports research (Eliza & Ismail, 2013) states that the effect of inflation on the flow of foreign investment in Indonesia in the short and long-term is found to be insignificant.

Then linked with the driving factor of foreign investment flow to emerging market that is pushing factor and pull factor, the result of this research indicates that push factor has no significant effect to the flow of foreign investment in Indonesia capital market.

Influence of Domestic Inflation on Foreign Investment Flow

The results of this study indicate that domestic inflation has no significant effect on the flow of foreign investment so that Ha6 is rejected. These results indicate that domestic inflation as a pull factor is not able to influence the decision of foreign investors to invest in emerging markets such as Indonesia.

This is due to the absence of a relationship between Indonesia's inflation and the flow of foreign investment in the Indonesian stock market. This condition means that any inflationary mo-

vement of Indonesia will not affect the flow of foreign investment in Indonesian stock market. It supports research (Eliza & Ismail, 2013) states that the effect of inflation on the flow of foreign investment in Indonesia in the short and long-term is found to be insignificant.

CONCLUSION AND RECOMMENDATION

Return of S & P500 as a proxy for global return (push factor) has no significant effect on the flow of foreign investment in Indonesia Stock Exchange. Return of IHSG as a proxy for domestic return (pull factor) has a significant positive effect on the flow of foreign investment in Indonesia Stock Exchange. The VIX index as a proxy for global risk (push factor) has no significant effect on the flow of foreign investment in the Indonesia Stock Exchange. The EMBI + Index as a proxy of the domestic factor (pull factor) has a significant adverse effect on the flow of foreign investment in the Indonesia Stock Exchange. The Producer Price Index (PPI) of the United States as a proxy of Indonesia's inflation (push factor) and Producer Price Index (PPI) as a proxy of the pull factor did not significantly affect the flow of foreign investment in the Indonesia Stock Exchange.

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