An Analysis of Relationship Between Domestic and Global Variables and Indonesia Composite Index for the Period of January 2011-January 2019

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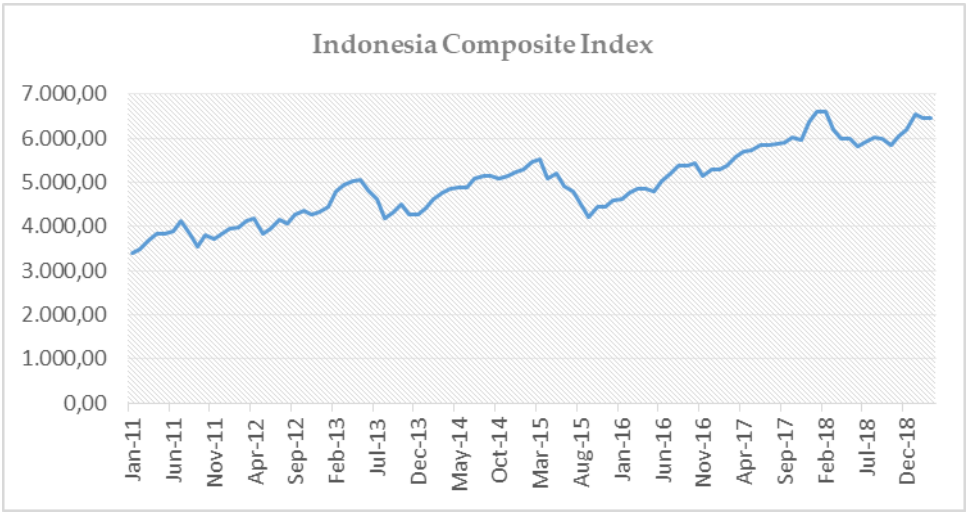
Abstract
Indonesia Composite Index (ICI) is a lump of stocks traded on the Indonesian Stock Exchange. In some literature, it was found that the movement of ICI was influenced by domestic factors and global factors. This study used monthly time series secondary data 2011M01-2019M01, consisting of ICI, BI rate, inflation, JUBM2 and the Fed interest rate. This study used Vector Autoregression (VAR) method by Johansen Cointegration test, followed by an estimation of Vector Error Correction Model (VECM) and forecasted by Impulse Response Function (IRF) and Forecast Error Variance Decomposition (FEVD) analyses. The results showed that in the long term there were two variables that negatively affected ICI in Indonesia, namely inflation and money supply M2. The IRF analysis (Impulse Response Function) indicated BI rate shock response and that money supply M2 reached a balance point in the long run, while ICI, inflation and the Fed variables always experienced shock. FEVD analysis showed that each variable contributed the most to the variable itself
***Keywords**: ICI, BI Rate, inflation, money supply M2, the Fed*

Introduction
Capital market is one of the factors that supports the economy of a country and can give a depiction of a country's economy because of its functions. The first function of capital market is as a means for a company to get funds from investors. Funds obtained from capital market can be used for business development, expansion and addition of working capital. The second function is as a means for society to invest in financial instruments such as stocks, obligations and mutual funds. Society can place their funds according to financial characteristics and risks of each instrument.

Macroeconomic changes will have an impact on a country's economic situation, one of which is in terms of investment in capital market. Investment according to Tandelilin (2010) is a commitment activity carried out at present to obtain profits in the future. There are 2 types of investment according to Sunariyah (2004), namely investment in real assets and investment in the form of financial assets.

Investment in Indonesian capital market in recent years has experienced an upward-and-downward trend that has a close relationship with economic condition. Stable economic condition. Capital market can be an alternative to investment that can provide profit level from investing in share, which also depends on the level of existing risks.

The performance of capital market can be seen from stock price index. Stock price index that can be used as a measure of capital market performance is the index that uses all listed companies as the component of index calculation. Stock price index that describes the condition of capital market in Indonesia is Indonesia Composite Index (ICI). ICI is an index that uses all listed companies as the component of index calculation. Figure 1.1 shows the fluctuations in ICI starting from January 2011 to January 2019. Based on Figure 1.1, there were fluctuations in Indonesia Composite Index (ICI). Based on previous studies there are several factors that cause fluctuations, such as macroeconomics and variable global condition. This study was conducted in an attempt to find out the factors that cause fluctuations in Indonesia Composite Index.



Source : Investing.com

Figure 1 **Indonesia Composite Index**

Economic condition and capital market today are experiencing fluctuations. The industrial revolution that has entered industry 4.0 makes every country must be prepared to face the industrial era 4.0. In entering the industrial revolution 4.0, go-public companies in Indonesia must adapt quickly, because the development of global economy is very complex and uncertain. The Indonesian government and related authorities must be prepared to face the new industrial era, so that Indonesia does not experience a lag in economy and capital market.

According to Hermann (2015), industrial revolution is a collection of technologies and value chain organizations in the forms of smart factory, CPS, IoT and IoS. Industrial revolution 4.0 that is happening now will provide benefits and influence economic development including capital market. At present, the rapid development of industrial revolution 4.0 has given the idea of integrating all these technologies into various industrial fields. Industry 4.0 provides many benefits but cannot be separated from the challenges that must be faced. According to Qin (2016) there are quite wide gaps in terms of technology between the industry world at this time and the expected condition in industry 4.0. In addition, the study conducted by Balasingham (2016) found that there was a factor of company reluctance to implement Industry 4.0 because of concerns about the uncertainty of its benefits.

Investment can be interpreted as an effort to get profit goals in the future. In capital market, changes in stock price are also influenced by micro fundamental (internal) factor and macro fundamental (external) factor in a company. Macroeconomy fundamental factor is called State fundamental factor. This factor is uncontrollable. Some of the factors that can influence the movement of stock index are macroeconomics and monetary policy from other countries. The macroeconomic factors discussed in this study are inflation, BI rate and money supply M2, while the global variable is American monetary policy in the form of the Fed interest rate.

The factor of monetary policy from abroad from the United States is reflected in the benchmark interest rate. Many investors base their investment decisions on information obtained from the United States economy (Surbakti, 2011). The information used as the basis for making investment decisions is the movement of interest rate of the central bank of the United States (The Fed). The increase in the Fed interest rate will enable investors to move their funds from Indonesia back to the United States (Surbakti, 2011).

Inflation can also influence Indonesia Composite Index (ICI). The increase in inflation will negatively affect ICI (Rusbariandi, 2012). Then, based on the result of the study conducted by Astuti (2013) inflation had a positive effect on ICI. In addition, Wirawati (2013) found that inflation had no effect on ICI. Besides, Rahayu

(2003) in her study discovered that the higher the inflation rate was, the lower the stock price index return would be. Then there was a significant negative effect of inflation on stock price index return. The purpose of this study is to describe the influence of macroeconomic factors such as inflation, BI rate, money supply M2 and the Fed interest rate on ICI return. It is also hoped that this study can be used as a basis for decision making based on macroeconomic factors as well as global condition.

There are several literature that explains the influence of macroeconomic factor and monetary policy in the United States (The Fed). Based on the study conducted by Ayu and Akua (2018), the Fed interest rate and inflation simultaneously had a significant effect on Indonesia Conposite Index (ICI). Then, Ali (2014) in his study found that interest rate had a significant negative effect on stock market in Pakistan. Furthermore, in Wijayaningsih's study (2016) it was revealed that the Fed interest rate had no effect on the changes in ICI.

In addition, inflation will affect stock price changes in every country. Based on the study conducted by Putu Fenta Pramudya Cahya (2015) it was found that inflation had a negative influence on stock price. Then according to Raharjo's study (2010), it was found that inflation had a positive influence on ICI. Next, Aditya (2013) in his study revealed that inflation, either simultaneously or partially, had a significant positive effect on ICI. Besides, based on Hismendi's study (2013) inflation did not have a significant effect on the movement of ICI.

Then, ICI is also influenced by domestic interest rate, namely BI rate. Based on the study conducted by M.Budiantara (2012) interest rate variable (BI rate) had a significant negative effect on stock price. Besides, Kurniasari (2003) in her study found that the changes in interest rate had a significant influence on ICI. It is in line with the result of the study conducted by Jika Alon (2005) that BI rate had a significant influence on ICI.

Furthermore, based on the study conducted by Kusuma and Badjra (2016) money supply M2 had no significant effect on ICI. However, the study conducted by Novianto (2011) found that money supply M2 had a positive influence on ICI. Then Kurniardi (2013) in his study revealed that money supply M2 did not significantly influence share price on property sector. Kpanie and Esumanba (2014) in their study discovered that money supply had a significant negative effect on capital market in Ghaha.

Methods

This study used the time series analysis. The first test was stationarity test by Dickey-Fuller (ADF) test. Then a test to determine lag length criteria was conducted. Long-term relationships among variables were analyzed using Granger Johansen test. In addition, short term and long term relationships among variables were tested using causality analysis, Vector Error Correction model (VECM), Vector Autoregression (VAR) and impulse response analysis. Data analyses in this study used VAR (Vector Autoregression) model or VECM (Vector Error Correction Model).

This study aimed to find out the existence of a long-term relationship between short-run causality and variables of BI rate, inflation, money supply M2 (JUBM2), the Fed interest rate and Indonesia composite Index for the period of January 2011-January 2019. The sources of the data used in this study were Bank Indonesia, Central Bureau of Statistics and Indonesia stock exchange. The following is the VECM equation model used in this study:

$$\Delta Y_t = \mu_{0x} + \mu_{1x}t + \prod_x Y_{t-1} + \sum \Gamma_k \Delta Y_{t-1} + \varepsilon_t$$

Legends:

ΔY_t= a vector containing the variables in the study

μ_{0x}= vector intercept

μ_{1x}= regression coefficient vector

t = time trend

Y_{t-1}= variable in-level

Γ= matrix of regression coefficient

$\prod_x$= Granger causality (long term equation)

k-1= the order of VECM of VAR
ε_t= error term

Results and Discussion

Stationarity Test

To ascertain stationarity test, time series is needed to make estimates. If the variables in the regression model do not have stationary condition, then the standard assumptions needed for analysis will be invalid and will lead to misleading estimates (Vosvrda 2013; Akram 2012). This case is called false regression, analyzed by Granger and Newbold in 1974. Yule (1926) states that estimating a regression model including a non-stationary time series that has a divergent trend from a long-term average value will cause error standard bias and unreliable correlation (Korap, 2007). There are different unit root tests in the literature. The most popular unit root test is the ADF test developed by Dickey-Fuller.

Table 1. Stationarity Test

Variable	Unit Root Test	ADF Test Statistic	Prob	Description
BI Rate	Level	-3,5577	0,9737	Not stationary
	1stDifference	-3,5628*	0,0012	Stationary
ICI	Level	-3,5577	0,1155	Not stationary
	1stDifference	-3,5628*	0,0002	Stationary
Inflation	Level	-3,5577*	0,0000	Stationary
	1stDifference	-3,5806*	0,0003	Stationary
JUBM2	Level	-3,5577*	0,0095	Stationary
	1stDifference	-3,5628*	0,0000	Stationary
The Fed	Level	-3,5577	0,8615	Not stationary
	1stDifference	-3,5628*	0,0052	Stationary

Source: Processed Data

There is a difference between the two tests: the ADF Test makes parametric correction for sequential dependency problem. In this study, the ADF test (1981) was used to test series stationarity in this study. Thus, the researchers used the ADF Test and the results of thee data processing can be seen in Table 1. Based on Table 1 in the ADF test, it can be seen that the Prob value < 0.05, therefore the data were stationary on the First Difference in the ADF test. Next, to test the cointegration test, Granger causality and VECM, Lag Length Criteria were firstly determined. Thus, the transformed data were feasible to be used in VAR or VECM analysis.

Optimum Lag Test (Lag Length Criteria)

According to Batubara and Saskara (2013), the number of lags in the VAR model is determined by the information criteria recommended by the smallest value of FPE (Final Prediction Error), AIC (Akaike Information Criteria), SC (Schwarz Information Criterion) and HQ (Hannan-Quinn Information Criterion). From the results in Table 5, the lag determined as the optimum lag was obtained. Based on the results of the analysis, lag 1 was used for the next test.

Table 2. The Optimum Lag Test

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-701.6484	NA	1.01e+15	48.73437	48.97011	48.80820
1	**-582.9601**	**188.2642***	**1.62e+12***	**42.27311**	**43.68755***	**42.71609**
2	-555.7897	33.72872	1.65e+12	42.12343	44.71657	42.93557
3	-533.9032	19.62240	3.35e+12	42.33815	46.11000	43.51945
4	-486.3172	26.25433	2.41e+12	40.78050*	45.73105	42.33095*

Source: Processed Data, 2019

Stability Test of VAR Model

The stability test results of the VAR model indicated that the VAR model used in this study was stable in the optimal lag, namely lag 1. The stability test results of the VAR model can be seen in Table 3.

Table 3. VAR Modulation

Root	Modulus
0.945958 - 0.065103i	0.948196
0.945958 + 0.065103i	0.948196
-0.765600	0.765600
0.497053 - 0.501344i	0.705980
0.497053 + 0.501344i	0.705980
-0.314194 - 0.516123i	0.604236
-0.314194 + 0.516123i	0.604236
0.589406	0.589406
0.205259 - 0.333183i	0.391333
0.205259 + 0.333183i	0.391333

Source: Processed Data, 2019

Johansen Cointegration Test

According to Wassell and Saunders (n.d.), cointegration test is conducted to determine the absence or the existence of cointegration relationships among all test variables. Cointegration is a general movement among economic variables in the long run. Engle-Granger (1987) states that the linear component of the series can be stationary even though the series is not stationary at level (1). If the series is not stationary but the linear component does not move, then the Granger Causality test will be invalid. Then, Pesaran et al (2001) say that if the variables found are cointegrated, that is, there is a linear, stable and long-term relationship among variables, disequilibrium error tends to be close to zero. Before performing the Granger Causality test, the Johansen Cointegration test was first carried out.

The cointegration test can be done using Johansen method. The conclusion is based on the comparison between the value of Trace Statistic and the critical value at alpha 0.05, and the probability value to indicate the presence or the absence of equality in a cointegrated system. The results can be seen in Table 4, showing the value of Trace Statistic from critical value. Then, the equation was cointegrated and vice versa (Widiarjono, 2007). The trace test (76.6264) was greater than the critical value at alpha 0.05 (69.8188) which means that it was in a cointegrated equation system. Since the trace statistic value was greater than the cointegration test through Johansen Cointegration test, it indicates that in the four variables namely, ICI, BI RATE, INFLATION, JUBM2, and THE FED for the period of 2011Q1-2019Q1 there was a long-term or cointegrated relationship. Thus, in this study, VECM analysis was used.

Table 4. Johansen Cointegration Test

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.709352	76.62646	69.81889	0.0129
At most 1	0.417479	38.32151	47.85613	0.2882
At most 2	0.322681	21.56942	29.79707	0.3231
At most 3	0.199056	9.491408	15.49471	0.3219
At most 4	0.080761	2.610498	3.841466	0.1062

Source : Processed Data, 2019

Vector Error Correction Model

Cointegration test previously has concluded that the four variables were cointegrated or had a long-term relationship, so the analysis carried out was VECM analysis. Then, whether the influence of lag of variables was significant or not in the system, both the effect of lag of a variable on the variable itself and on other variables in the system could be identified through the significance test of the VECM estimation result. VECM is a form of Vector Autoregressive (VAR). Based on the results of the optimum lag test, the lag used in the VECM analysis was lag 1.

Table 5. VECM Estimation Results

Long Term			**Short Term**		
Variable	Coefficient	t- Statistics	Variable	Coefficient	t- Statistics
BI RATE	-156,0650	-1,0967	CointEq1	-0,0161	-0,8132
INFLATION	-3684,045	-7,3506*	D(ICI(-1)	-0,004	-1,1152
JUBM2	-0,0012	-4,6093*	D(BI RATE(-1)	0,1817	0,8628
THE FED	365,3701	0,8903	D(INFLATION(-1)	-0,0065	-0,0242
C	2229,712		D(JUBM2(-1)	7,92E-07	0,5894
			D(THE FED(-1)	0,3162	0,6994

Source : Processed Data, 2019

Based on Table 5, the results of VECM in the long term, t table value at alpha 5% was obtained: 1.6938. It can be seen that in the long term there were two variables that were significantly negative at the real level 5%, namely INFLATION and JUBM2. INFLATION variable was in the 1st lag. INFLATION variable in the first lag had a negative effect with the statistical t value of -7.3506, which means that if there was 1% increase in the previous 1 year, it would decrease INFLATION by -7.35% in the current year. Furthermore, the JUBM2 variable was also significantly negative at α 5% in the 1st lag with the statistical t value of -4.6093 meaning that if there was 1% increase in the previous 1 year, it would reduce JUBM2 by -4.61%. Based on Table 6 on the VECM results in the short term, no significant variable was found at α 5% either positive or negative significance.

Granger Causality Test

Based on Table 6, it is seen that the ICI and BI RATE variables were not statistically significant, so the two variables did not have a causality relationship. Then, INFLATION and BI RATE variables were statistically not significant so that the two variables did not have a causality relationship. Next, the JUBM2 and BI RATE variables were not statistically significant, so the two variables did not have a causality relationship.

Furthermore, THE FED and BI RATE variables were not statistically significant, so it can be concluded that the two variables did not have a causality relationship.

Table 6: Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
ICI does not Granger Cause BI RATE	32	0.00619	0.9378
BI RATE does not Granger Cause ICI		1.82491	0.1872
INFLATION does not Granger Cause BI RATE	32	1.04510	0.3151
BI RATE does not Granger Cause INFLATION		1.89551	0.1791
JUBM2 does not Granger Cause BI RATE	32	0.15103	0.7004
BI RATE does not Granger Cause JUBM2		0.93955	0.3404
THE FED does not Granger Cause BI RATE	32	2.48804	0.1256
BI RATE does not Granger Cause THE FED		0.00452	0.9468
INFLATION does not Granger Cause ICI	32	0.31184	0.5808
ICI does not Granger Cause INFLATION		1.21761	0.2789
JUBM2 does not Granger Cause ICI	32	9.03891	0.0054
ICI does not Granger Cause JUBM2		5.13269	0.0311
THE FED does not Granger Cause ICI	32	4.76785	0.0372
ICI does not Granger Cause THE FED		0.93763	0.3409
JUBM2 does not Granger Cause INFLATION	32	4.98775	0.0334
INFLATION does not Granger Cause JUBM2		4.1E-05	0.9950
THE FED does not Granger Cause INFLATION	32	2.98618	0.0946
INFLATION does not Granger Cause THE FED		0.02091	0.8860
THE FED does not Granger Cause JUBM2	32	0.00688	0.9345
JUBM2 does not Granger Cause THE FED		2.63484	0.1154

Source : Processed data, 2019

The JUBM2 and ICI variables were statistically significant with α value 5% and prob values of 0.0054 and 0.0311. It can be concluded that the two variables had a causality relationship. Then, for THE FED and ICI variables, only inflation variable statistically had prob value below α 5% (0.0372). It can be concluded that there was unidirectional causality between the JUBM2 and IHSG variables; only INFLATION was statistically significant and affected the ICI, and did not apply otherwise. Furthermore, there was no causal relationship between THE FED and INFLATION variables, and between THE FED and JUBM2 variables.

Impulse Response Function (IRF) Analysis

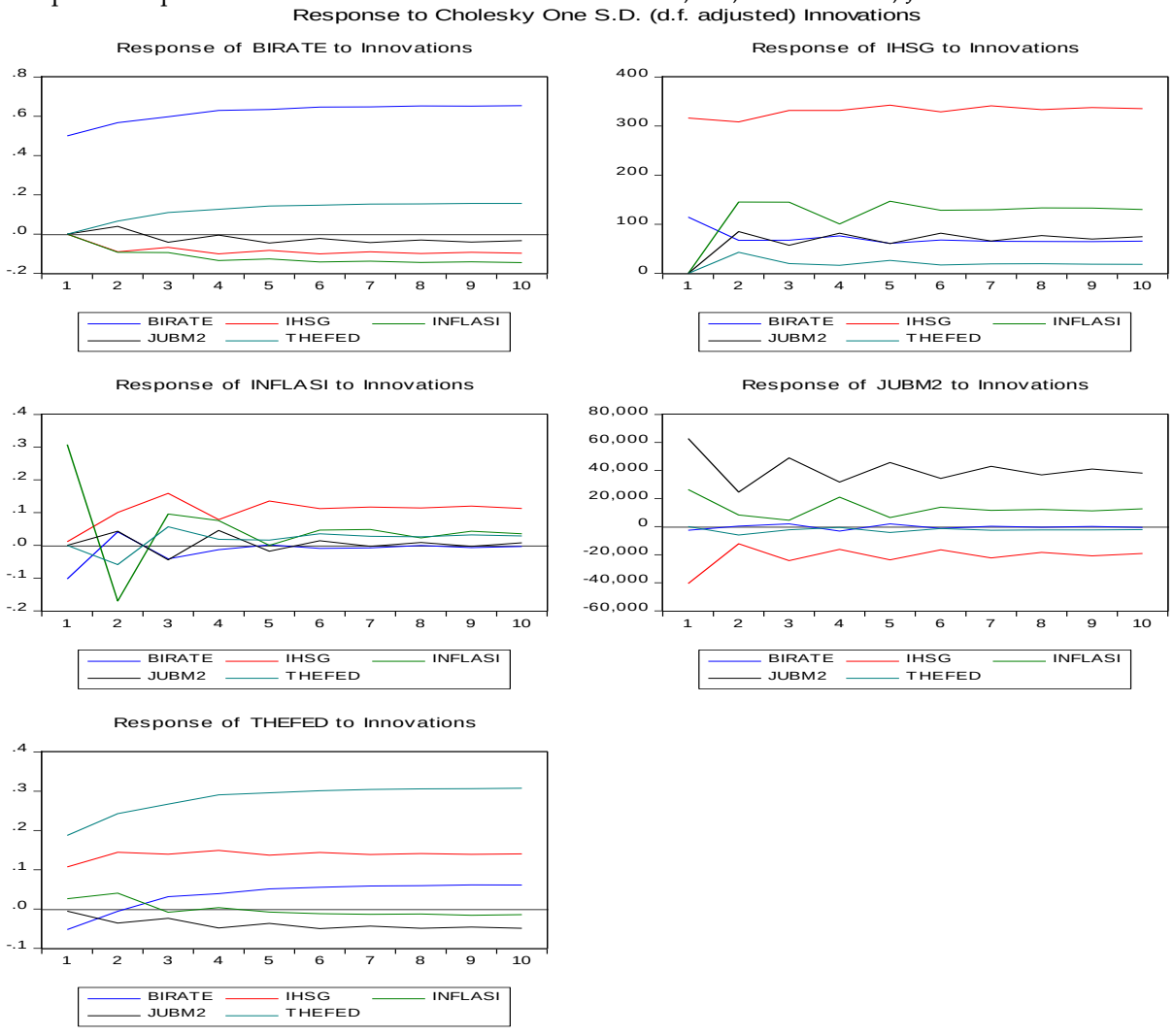
According to Ris Yuwono Yudo Nugroho (2009), the IRF analysis is used to determine the response of an endogenous variable to the shock of a certain variable. IRF is also used to see the shock of one other variable and how long the effect occurs. The IRF analysis is needed to find out how the effect of a variable's shock on

the variable itself and other variables in the system is, so the shock of a variable on other variables can be found out and which variable gives the greatest response to the shock can be revealed.

Based on Figure 1, using the IRF analysis with the BI RATE variable as the response, it can be concluded that from the first period to the tenth period (2011Q1-2019Q1) the highest response of the BI RATE variable was influenced by BI RATE itself, which is expected to always increase. Then, in terms of the IHSG variable as the response, it is concluded that the highest response was influenced by the IHSG variable itself, which always fluctuated starting from the first period to the tenth period. Next, in terms of the inflation variable as the response, it can be concluded that the highest response was influenced by the IHSG variable which always fluctuated and reached the stability point in the tenth period.

Furthermore, in terms of the JUBM2 variable as the response it was found that the highest response was influenced by JUBM2 itself which always fluctuated starting from the first period to the tenth period. Last, in terms of the THE FED variable as the response it is concluded that the highest respons e was influenced by the FED variable itself starting from the first period to the tenth period.

Figure 1. Impulse Response Function with the variables of BI RATE, ICI, INFLATION, JUBM2 and THE FED



Variance Decomposition (VD) Analysis

Variance decomposition (VD) is a part of the VECM analysis which functions to support the results of previous analysis. VD provides an estimate of how much a variable contributes to changes in the variable itself and other variables in the next few periods, of which value is measured in a percentage. Then, which variable is expected to have the greatest contribution to a particular variable can be revealed.

Based on Table 7, from the first period to the tenth period, the BI RATE variable was affected by the BI RATE shock itself as much as 100%. Then, based on Table 8, from the first period to the tenth period, the ICI variable was affected by the ICI shock itself. Next, based on Table 9, from the first period to the tenth period, the INFLATION variable was affected by the shock of the INFLATION variable itself. Furthermore, based on Table 10, from the first period to the tenth period, the JUBM2 variable was affected by the JUBM2 shock itself. Last, based on Table 11, the THE FED variable was affected by the THEFED shock itself starting from the first period to the tenth period.

Table 7. Variance Decomposition of the BI RATE variable

Period	S.E.	BI Rate	ICI	Inflation	JUBM2	The Fed
1	0.500003	100.0000	0.000000	0.000000	0.000000	0.000000
2	0.770937	96.19706	1.360656	1.443460	0.260772	0.738052
3	0.988770	94.91516	1.289982	1.784853	0.334305	1.675698
4	1.190935	93.36962	1.607243	2.517461	0.232266	2.273410
5	1.366258	92.52824	1.590958	2.769854	0.286859	2.824091
6	1.528964	91.78660	1.704860	3.079069	0.250716	3.178755
7	1.676132	91.30095	1.706480	3.241009	0.275301	3.476263
8	1.813875	90.89013	1.754582	3.404942	0.263059	3.687292
9	1.941502	90.59718	1.761483	3.503120	0.274245	3.863968
10	2.062275	90.34645	1.785843	3.601490	0.270032	3.996180

Table 8. Variance Decomposition of the ICI variable

Period	S.E.	ICI	BI Rate	Inflation	JUBM2	The Fed
1	336.3337	100.0000	0.000000	0.000000	0.000000	0.000000
2	492.9400	86.84564	0.722821	8.696162	2.974572	0.760810
3	618.3905	84.54801	1.099244	11.01929	2.746776	0.586679
4	717.9535	84.89589	1.142445	10.13914	3.335188	0.487344
5	813.8260	83.80167	1.418062	11.14213	3.154065	0.484070
6	893.6774	83.33567	1.465142	11.30976	3.451942	0.437491
7	969.9653	83.25669	1.561397	11.38111	3.389834	0.410976
8	1039.396	82.94167	1.613360	11.55266	3.498956	0.393356
9	1105.222	82.79775	1.666718	11.66496	3.494372	0.376204
10	1166.678	82.67996	1.698131	11.71310	3.546156	0.362652

Table 9. Variance Decomposition of the INFLATION variable

Period	S.E.	ICI	BI Rate	Inflation	JUBM2	The Fed
1	0.324951	0.578560	9.537698	89.88374	0.000000	0.000000
2	0.389402	8.174520	6.655737	81.66950	1.230943	2.269304
3	0.439137	15.93451	9.696468	68.94239	1.982927	3.443706
4	0.455327	17.14091	9.754911	66.90345	2.838330	3.362395
5	0.475658	22.93226	9.819143	61.30639	2.746501	3.195702
6	0.492486	25.70813	10.06494	58.08834	2.642281	3.496303
7	0.509354	28.48760	10.26092	55.21088	2.473646	3.566959
8	0.523258	31.20029	10.28883	52.50878	2.372254	3.629843
9	0.539576	33.53017	10.44345	50.02496	2.233744	3.767677
10	0.553163	35.49877	10.49790	48.01049	2.143762	3.849082

Table 10. Variance Decomposition of the JUBM2 variable

Period	S.E.	ICI	BI Rate	Inflation	JUBM2	The Fed
1	79325.80	24.15325	2.044611	11.09894	62.70319	0.000000
2	84557.44	23.05043	2.081841	10.71867	63.64332	0.505735
3	100823.1	21.04709	2.460122	7.739772	68.35023	0.402783
4	109031.6	20.23334	2.158730	10.33549	66.92530	0.347143
5	120835.9	19.68040	2.424745	8.697985	68.79513	0.401736
6	127465.6	19.25016	2.301931	8.989100	69.08595	0.372855
7	136875.3	19.02717	2.319861	8.519250	69.77516	0.358560
8	143468.1	18.78412	2.275938	8.482295	70.10502	0.352625
9	151131.5	18.60848	2.277619	8.198070	70.57312	0.342705
10	157553.8	18.45239	2.243502	8.196149	70.77347	0.334491

Conclusions

Indonesia Composite Index (ICI) is a collection of shares traded in Indonesia. ICI can be influenced by domestic and global economic factors in its movements. Based on the literature, if the domestic economy is good, the ICI will be strengthen. In terms of global sector, the Fed monetary policy, according to some literature, will make Indonesia Composite Index experience shock.

Based on the tests that have been carried out, it can be concluded that based on the VECM test there are two significant negative variables at α 5%, namely INFLATION and JUBM2 which will experience the change in the current year. Based on Johansen cointegration test, the five variables are cointegrated. The IRF and FEVD analyses indicates that the variable that influences BI RATE is the BI RATE itself, the variable that influences ICI is the ICI itself, the variable that influences INFLATION is the INFLATION itself, the variable that influences JUBM2 is the JUBM2 itself and the variable that influences THE FED is THE FED itself.

In addition, With regard to the limitations in this study, further research is suggested to include countries in ASEAN and use other factors as dependent variables such as Gross Domestic Product, foreign-exchange reserves, trade balance, company financial statements, domestic interest rate, fiscal policy and monetary policy from developed countries.

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