THE STOCK MARKET CHANNEL OF MONETARY POLICY IN EMERGING MARKETS: EVIDENCE FROM THE JAKARTA STOCK EXCHANGE

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ABSTRACT

Studies are scant of the stock market channel of monetary policy in emerging markets. I examine the effect of monetary policy on stock returns in the Composite Stock Price Index (IHSG) from 2000Q1 to 2009Q4. This study used the vector autoregression method based on impulse response analysis. The results indicate that the response of the IHSG to growth returns, which are defined by a change in growth of real (M2) money supply and a change of real interest rate of SBI over one month, are negative. Besides that, the change of the IHSG returns respond negatively to changes in inflation. Other results from this study show that changes in the SBI rate over one month are not influential in affecting the stock market sufficiently to enable it to be an instrument of monetary policy.

Keywords: *Impulse response, Composite Stock Price Index, Transmission mechanism, VAR method*

INTRODUCTION

Monetary policy plays a significant role in setting the financial conditions in an economy through its influence on the cost of borrowing and the availability of credit, as well as the effect it has on expectations of economic activity by different economic agents (BI, 2003). Its role exceeds what average economic agents would think because it is significant in affecting prices of goods, investment, exchange rates, asset prices and, ultimately, consumption. Identifying the link between monetary policy and financial asset prices is highly important to gain a better insight to the transmission mechanism of monetary policy.

As a monetary transmission mechanism, the stock market channel passes through the stock market rather than through the bond market. The role of equity markets in the transmission of monetary policy is established through the imposition of key conditions within any general equilibrium model of the economy with money.

Many structural economics models include asset prices as a part of a monetary policy transmission mechanism. For example, Mishkin (2001) discusses channels through which monetary policy affects output via changes in stock prices. Mishkin argues that asset prices are a channel that monetary authorities could give attention to in monetary policy application. Gilchrist and Leahy (2002) argue that changes in asset prices can affect policymakers' views on the outlook for the economy and, hence, require a policy stance. These studies indicate that the effect of monetary policy on asset prices has significant implications for portfolio managers, investors and the central bank. Meanwhile, another study of how stocks react to monetary policy in emerging markets was by Shubita (2011), who used simple regression models to investigate the relations between monetary policy measured as the change in interest rates on three and six-month certificates of deposit and the bank stock returns. The results show significant negative relations between monetary policy and bank stock returns. They also show that there is no significant difference between the effect of shorter and longer term monetary policy instruments (three and six-month certificates of deposit, respectively) on bank stock returns.

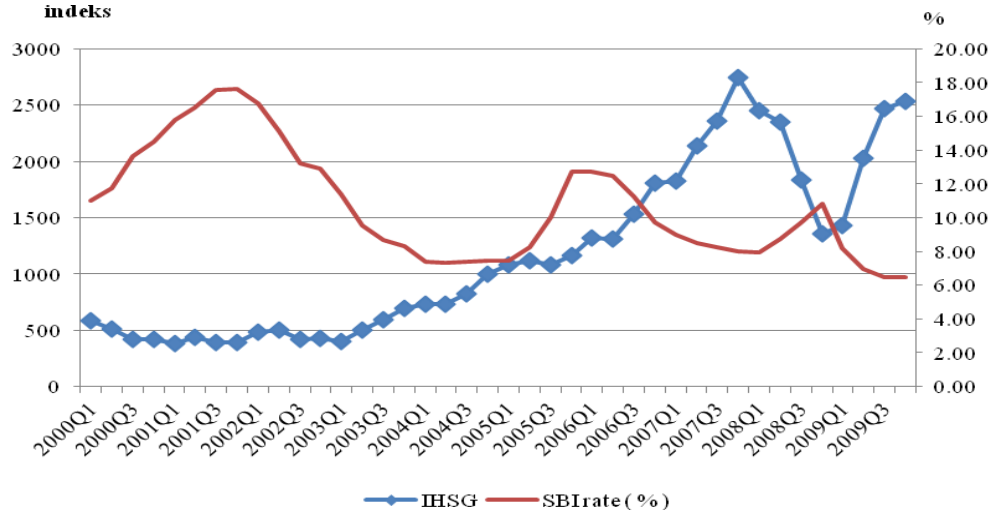
Meanwhile in Indonesia, there are few studies of monetary policy through the asset price channel. Such studies are important because they measure how far monetary policy has affected the Indonesian stock market since the regulation of the stock market went into effect in 1998. The number of listed companies jumped from three in 1998 to 288 in 2000.

The indicator in the Indonesian stock market over all listed stock is the Composite Stock Price Index (Indeks Harga Saham Gabungan [IHSG]) (Ang, 1997). The IHSG has developed since 2000; at that time the stock price index stood at 583.28 but the index has risen since then and by 2012 it stood at 4159.29. Overall, from 2000 until 2012, the IHSG has enjoyed a growth of 713 per cent. The expansion of the Composite Stock Price Index is my focus in this study, and how the central bank of Indonesia, the monetary authority, influences stock markets, especially the IHSG.

An increase or decrease of the IHSG, shown by a change of the SBI rate, is an indication of the stability of the monetary system. The Sertifikat

Bank Indonesia (SBI) is one of the monetary policy instruments that regulate the money supply through the open market operation monetary instrument (BI, 2011)The development of the IHSG and the changes in the SBI rate can be seen in Figure 1.

Figure 1. The development of the SBI rate and the IHSG, 2000Q1–2009Q4



Sources: Central Bank of Indonesia, Yahoo Finance

Figure 1 shows the movement of the IHSG and changes in the SBI rate from 2000Q1 to 2009Q4. Since 2000, the IHSG has been rising on average, but when the global crisis happened in 2008, the IHSG declined by over 50 per cent. Meanwhile, the SBI rate has been declining since 2001. Although the SBI rate increased in 2005, triggered by the increase in inflation caused by the rise in oil prices, but after that period the SBI rate declined until 2009.

Factors other than monetary policy that effect changes to the IHSG are money supply and inflation. Regarding money supply and inflation, there are two points of view of the correlation between monetary policy and stock prices. The first is based on the economic theory that an expansionary or contractionary monetary policy can cause stock prices to increase or decrease. The second is that expansionary or contractionary monetary policy can cause money

supply increases or decreases, and then there will be adjustments to the interest rates that will lead to interest rate decreases or increases, and in turn the demand for stocks will increase or decrease and cause the stock prices that are listed on IHSG to rise or fall. (Mishkin, 2010).

According to Chami et al. (1999), an increase in money supply, which will give rise to an increase in inflation, will cause the real value of dividends to decrease. Consequently, the stocks will be less attractive and prices will fall. Meanwhile, an increase in the inflation rate will decrease the real value of dividends from stocks. When the real value of dividends decreases, the investor would reconsider investing in stocks, again the demand for stocks will decrease and affect the stock prices and, finally, the Jakarta Composite Index (IHSG) will fall.

This paper is organised as follows. In the next section, there is a discussion of the literature. The data and time period of the study are treated in the following section, and the empirical method is in Section IV. Section V describes the results of the study. Finally, Section VI elaborates the conclusion and has some recommendation for policy makers.

LITERATURE REVIEW

To investigate the reaction of stock prices to changes in the US federal funds rate for the period 1989 to 2002, Bernanke and Kuttner (2005) analyse the effect of changes in monetary policy on equity prices. This study indicates a strong, statistically significant, negative response to increases in the federal funds rate. They also found that reactions to monetary policy surprises tend to differ across industry-based portfolios. The researchers conclude that the effect of monetary policy surprises on stock prices comes through its effect on expected future excess returns. Guo (2002) also found that, in two periods, 1974 to 1979 and 1988 to 2002, stock prices reacted negatively and significantly to unexpected changes in the federal funds rate. And he also found that the effect of monetary shocks (unexpected changes in the federal funds rate) is significantly larger for small firms than large firms and on portfolios of high book-to-market ratio than portfolios of low book-to-market ratio.

Thorbecke (1997) in the study, ‘On stock market returns and monetary policy’ examined how stock returns data respond to monetary policy shocks

in the USA. Monetary policy measures included innovations in the federal funds rate and non-borrowed reserves, narative indicators, and by an event study of Federal Reserve policy changes. In every case, the evidence indicated that expansionary policy increases ex-post stock returns. The result from estimating a multi-factor model also indicated that exposure to monetary policy increases an asset's ex-ante return.

In another study, Berument and Kutan (2007) examine the effect of monetary policy on stock returns in Turkey's emerging economy during the post-1980 liberalisation period. Evidence indicates that monetary policy affects returns, with the strongest influence being on the financial and services sectors. However, the effect is short lived, ranging between nine and 24 months, depending on the index used, suggesting that monetary policy is neutral. Overall, the results indicate that asset prices may provide an additional channel through which monetary policy affects short-run economic activity and hence business cycles. Given the increasing role of the stock market in emerging economies and the increased globalisation of financial markets in general, central banks in these countries are well advised to pay close attention to the effect of stock market developments on economic activity as well as maintaining their traditional focus on the bond and foreign exchange markets.

Christiano et al. (1994) assessed the effect of monetary policy shock on borrowing and lending activities in different sectors of the economy. The finding of the study (regarding the borrowing activities of different sectors) is that contractionary shocks to monetary policy cause net funds raised by the business sector to increase for roughly a year. Thereafter, as the recession induced by the policy shock gains momentum, and net funds raised by the business sector begin to fall.

Meanwhile, Rigobon and Sack (2002) estimated the response of asset prices to changes in monetary policy. They showed that the response of asset prices to changes in monetary policy can be identified based on the increase in the variance of policy shocks that occur on the day of the US Federal Open Market Committee meetings and of the chairman's half-yearly monetary policy testimony to Congress. The results from the study indicate that an

increase in short-term interest rates results in a decline in stock prices and in an upward shift in the yield curve that becomes smaller with longer maturity times.

In an attempt to find whether the effect of monetary policy on stock differs among countries, Loannidis and Kontonikas (2007) examined the relations between stock returns and monetary policy as conducted by three-month treasury bills in a sample of 13 countries over the period 1972 to 2002. Their results indicate that there is a strong negative relation between interest rates and stock returns in four of the 13 sampled countries, namely Belgium, Canada, France and the UK. Given the monthly horizon of the data, the proportion of stock variation that is explained is relatively high.

Recently, Daisy et al. (2010) investigated whether the sensitivity of stock returns to unexpected changes in monetary policy varies across different economies. Daisy et al. (2010) empirically examined the relations between monetary policy shocks and stock prices using multivariate structural vector autoregression (VAR) models for the Canadian and the US economies from 1988. They found that monetary policy shocks lead to a fall in stock prices in the United States and in Canada, but their results show that stock prices in the USA fall more than Canadian stock prices; these differences are attributed to the differences in financial market openness between the two countries.

DATA AND THE TIME PERIOD OF THE STUDY

The data used in this study are adapted from a paper by Berument and Kutan (2007) with some adjustment data that are available in Indonesia. The data comprise the growth of the Composite Stock Price Index (IHSG), the growth of M2, the consumer price index and real SBI rate per month. The growth of M2 and the real SBI rate are used as a monetary policy indicator. M2 is used as a measure of extended money supply from M1. The consumer price index is used to eliminate price puzzle phenomenon. The price puzzle phenomenon is the condition in which there is a contraction of monetary policy but inflation is rising. In the paper from Berument and Kutan (2007), inflation is used as a proxy to eliminate the price puzzle phenomenon in the producer price index; in this study the consumer price index is used as a proxy for inflation.

The data used in this study are quarterly data from 2000 to 2009, because in that period, the IHSG index has increased since the recession in 1997 and then declined when the global recession occurred in 2008. Furthermore, in that period, the Indonesian economy was stable so that this study could be expected to capture the relation between monetary policy and the IHSG and to see how by how much the shock from monetary policy affects the IHSG.

METHODS AND RESEARCH MODEL

Asset prices in the monetary transmission mechanism

In the literature on monetary transmission mechanisms, there are three categories of asset prices besides those on debt instruments that are viewed as providing important channels through which monetary policy affects the economy: stock market prices, real estate prices and exchange rates (Mishkin, 2010).

Stock market prices

Fluctuations in the stock market, which are influenced by monetary policy, have important effects on the aggregate economy. Transmission mechanisms involving the stock market are of four types: stock market effects on investment, firm balance-sheet effects, household wealth effects, and household liquidity effects (BI, 2003).

Stock market effects on investment.

Tobin's q-theory (Tobin, 1969) provides an important mechanism for how movements in stock prices can affect the economy. Tobin's q is defined as the market value of firms divided by the replacement cost of capital. If q is high, the market price of firms is high relative to the replacement cost of capital, and new plant and equipment capital is cheap relative to the market value of firms. Companies can then issue stock and get a high price for it relative to the cost of the facilities and equipment they are buying. Investment spending will rise because firms can now buy a lot of new investment goods with only a small issue of stock.

The crux of the Tobin q model is that there is a link between stock prices and investment spending. But how might monetary policy affect stock prices? Expansionary monetary policy, which lowers interest rates, make bonds less attractive relative to stocks and results in increased demand for

stocks,which bids up their price. Combining this with the fact that higher stock prices will lead to higher investment spending, leads to the following transmission mechanism of monetary policy that can be described by the following formula:

$$\mathbf{M} \uparrow => \mathbf{P_S} \uparrow => q \uparrow => I \uparrow => Y \uparrow$$

(1)

Where $\mathbf{M} \uparrow$ indicates expansionary monetary policy, leading to a rise in stock prices ($\mathbf{P_S} \uparrow$), which raises q ($\mathbf{q} \uparrow$), which raises investment ($\mathbf{I} \uparrow$), thereby leading to an increase in aggregate demand and a rise in output ($\mathbf{Y} \uparrow$).

Vector autoregression

The vector autoregression (VAR) method has proven useful for investigating the relation between stock returns and other variables (see, for example, Lee [1992]). This involves regressing an *n* by one vector of endogenous variables, $\mathbf{y_t}$, on lagged values of itself:

$$y_t = A_1 y_{t-1} + \cdots + A_p y_{t-p} + e_t, \quad E(\varepsilon_t \varepsilon_t') = \Omega$$

(2)

Assuming that y_t is covariance stationary, equation (1) can be inverted and represented as an infinite vector moving average process:

$$y_t = \epsilon_t \ \Pi_1 \epsilon_{t-1} + \Pi_2 \epsilon_{t-2} + \Pi_3 \epsilon_{t-3} + \cdots$$

(3)

Because the variance–covariance matrix of ϵ_t (Ω) is symmetric and positive definite, the Cholesky factorisation implies that there is a lower triangular matrix **P** such that $\mathbf{\Omega}$ = **PP**'. Using **P,** equation (2) can be rewritten as:

$$y_t = PP^{-1}\epsilon_t + \Pi_1 PP^{-1}\epsilon_{t-1} + \Pi_2 PP^{-1}\epsilon_{t-2} + \cdots$$
$$= \Gamma_0 v_t + \Gamma_1 v_{t-1} + \Gamma_2 v_{t-2} + \cdots$$

(4)

Where $\Gamma_1 = \Pi_i P, v_t = P^{-1}\epsilon_t$, and $E[v_t v_t'] = I$.

Equation (4) represents the endogenous variables (y_t) as functions of the orthogonalised innovations (v_{t-i}). One can also determine the percentage of each variable's forecast error variance that is attributable to innovations in each of the endogenous variables.

To estimate the data, some tests will be to prove how monetary policy affects the stock market in Indonesia. In this case, the tests to use are the stationary test, Granger causality test, lag length criteria test and T-test (Gujarati, 2009). Meanwhile, for economic analysis, we can conduct impulse response analysis and variance decomposition that resulted from a VAR estimate.

Stationary test

There are important differences between stationary and non-stationary time series. Shocks to a stationary time series are necessarily temporary; over time, the effects of the shocks will dissipate and the series will revert to its long-run mean. As such, a long-term forecast of a stationary series will converge to the unconditional mean of the series. On the other hand, a non-stationary series necessarily has permanent components. The mean or variance (or both) of a non-stationary series are time-dependent. In time series data, one problem is the data are not stationary. When we use a VAR model, the data should be stationary. It means that the mean, variance and autovariance should be the same over time whenever the data are used.

Table 1 are the stationary tests of the variables that we use in the model.

Table 1. Unit root test

Variable	Level		
	None	Intercept	Level + intercept
G	-4.097566***	-4.402287***	-4.403624***
Cpi	-2.838577***	-5.402187***	-5.469683***
Sbi	-3.27313***	-3.385742**	-2.773914
M2	-8.3051***	-9.206426***	-9.902534***

Source: Estimate result
*** indicates significant at 1% critical level
** indicates significant at 5% critical level

The estimation shows that the variables in the model are stationary at the level.

Granger causality test

With the condition that the variables are stationary, then the next step is a Granger causality test. A Granger causality test can determine the causality between the fourth variables.

The Granger causality test (see Table 2) shows that the causality in this VAR model contains two Granger causalities, feedback/bilateral causality and independence.

Table 2. Granger causality test

Null hypothesis:	Obs	F-statistic	Prob.	Causality
CPI does not Granger cause GIHSG	38	1.25101	0.2994	Independence
GIHSG does not Granger cause CPI		0.28264	0.7556	
M2 does not Granger cause GIHSG	38	1.54224	0.2289	Independence
GIHSG does not Granger cause M2		1.39721	0.2615	
SBI1 does not Granger cause GIHSG	38	0.27223	0.7634	Independence
GIHSG does not Granger cause SBI1		1.14416	0.3308	
M2 does not Granger cause CPI	38	3.2754	0.0504	feedback/bilateral
CPI does not Granger cause M2		4.87646	0.0139	causality
SBI1 does not Granger cause CPI	38	0.37651	0.6892	Independence
CPI does not Granger cause SBI1		0.87282	0.4272	
SBI1 does not Granger cause M2	38	0.81264	0.4524	Independence
M2 does not Granger cause SBI1		0.97522	0.3877	

Source: Estimate result

Lag length criteria

This study chose the lag length criteria by comparing Akaike Information (AIC) or Schwartz Information Criterion (SIC) from every lag test. The best VAR model is the model which has the smallest value of AIC or SIC.

Table 3. Lag length criteria

	Lag 1	**Lag 2**	**Lag 3**
AIC	20.75380*	20.83462	21.17326
SIC	21.62456*	22.402	23.43726

* indicates significant at 10% critical level
Source: Estimate result

In this study, to find out how the growth of the IHSG responds to changes in monetary policy over the period 2000Q1 to 2009Q4, I used a

vector autoregression (VAR) model, to enable an impulse response analysis and variance decomposition. The impulse response functions indicate how stock returns are affected by unanticipated monetary policy changes; the forecast error variance decomposition shows the proportion of variations in returns explained by innovation in monetary policy.

The equation of the model is:

$$GIHSG_t = \alpha_1 + \sum_{j=1}^{k} \beta_{1j} GIHSG_{t-j} + \sum_{j=1}^{k} \gamma_{1j} SBI_{t-j} + \sum_{j=1}^{k} \delta_{1j} M2_{t-j} + \sum_{j=1}^{k} \theta_{1j} IHK_{t-j} + U_{1t} \quad (5)$$

$$IHK_t = \alpha_2 + \sum_{j=1}^{k} \beta_{2j} GIHSG_{t-j} + \sum_{j=1}^{k} \gamma_{2j} SBI_{t-j} + \sum_{j=1}^{k} \delta_{2j} M2_{t-j} + \sum_{j=1}^{k} \theta_{2j} IHK_{t-j} + U_{2t} \quad (6)$$

$$SBI_t = \alpha_3 + \sum_{j=1}^{k} \beta_{3j} GIHSG_{t-j} + \sum_{j=1}^{k} \gamma_{3j} SBI_{t-j} + \sum_{j=1}^{k} \delta_{3j} M2_{t-j} + \sum_{j=1}^{k} \theta_{3j} IHK_{t-j} + U_{3t} \quad (7)$$

$$M2_t = \alpha_4 + \sum_{j=1}^{k} \beta_{4j} GIHSG_{t-j} + \sum_{j=1}^{k} \gamma_{4j} SBI_{t-j} + \sum_{j=1}^{k} \delta_{4j} M2_{t-j} + \sum_{j=1}^{k} \theta_{4j} IHK_{t-j} + U_{4t} \quad (8)$$

Where GIHSG is growth of the IHSG; IHK is consumer price index; SBI is the real interest rate of SBI; and M2 is growth of real money supply.

THE RESULT

Estimate model using vector autoregression

The VAR method superficially resembles simultaneous-equation modelling in that we consider several endogenous variables together. But each endogenous variable is explained by its lagged, or past, values and the lagged values of all other endogenous variables in the model; usually there are no exogenous variables in the model.

Table 4. Estimation results using VAR model

	GIHSG	CPI	M2	SBI1
GIHSG(-1)	[1.80264]	[-0.46997]	[-1.92539]	[0.65492]
CPI(-1)	[-1.15365]	[1.91408]	[-3.94532]**	[-0.58098]
M2(-1)	[-0.86301]	[2.61938]**	[-4.57996]**	[-1.33043]
SBI1(-1)	[-0.96406]	[0.60253]	[-1.90817]	[8.46294]**
C	[1.85743]	[1.82557]	[5.03133]	[1.04287]
R-squared	0.164194	0.188764	0.450019	0.702024
Adj. R-squared	0.065864	0.093324	0.385315	0.666968
Sum sq. resids	6635.14	88.40841	267.7106	99.22819
S E equation	13.96965	1.612528	2.806037	1.708355
F-statistic	1.669827	1.977835	6.95507	20.02576
Log likelihood	-155.5018	-71.29751	-92.90233	-73.54888

Akaike AIC	8.230861	3.912693	5.020632	4.028148
Schwarz SC	8.444138	4.12597	5.233909	4.241425
Mean dependent	4.831355	2.11521	1.018552	1.902821
S D dependent	14.45375	1.693485	3.579044	2.960294

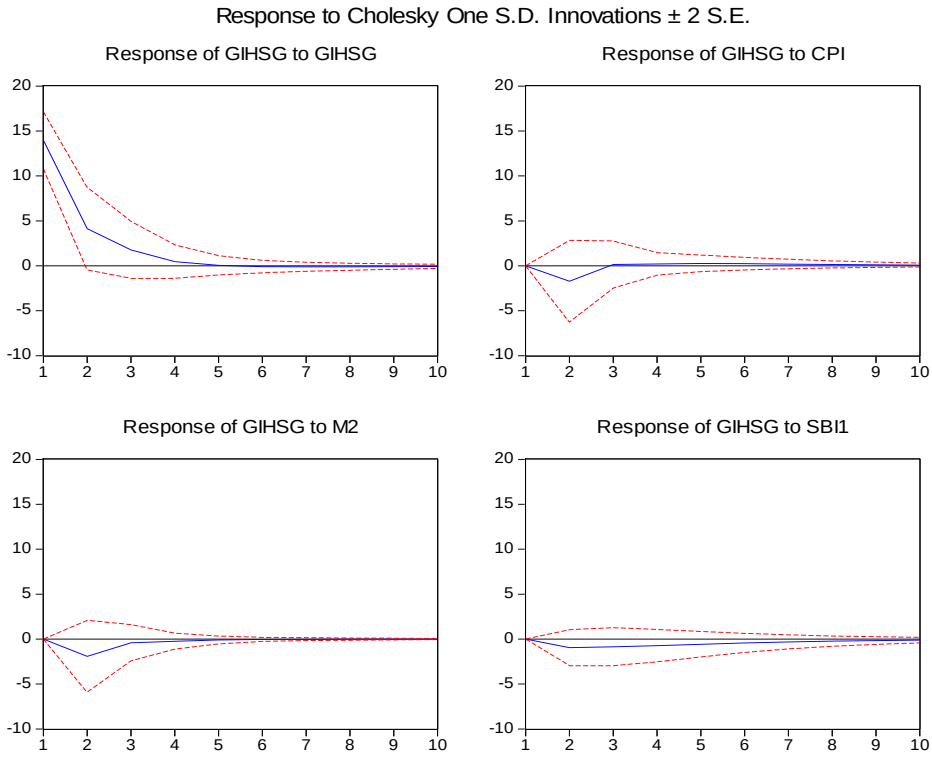
Source: Estimation result using Eviews 6 ** indicates significant at 5% critical level

Table 4 reports a set of vector autoregression (VAR) estimates. From the results of estimates using VAR, if we compare the t-statistic value we find that not all the variables are significant at lagged 1. Table 5 shows that the return growth of IHSG does not depend on other variables. Inflation significantly depends on the growth of real money supply, M2, at lagged 1. Growth of real money supply, M2, significantly depends on inflation at lagged 1 and real SBI rate significantly depends on the variable itself at lagged 1.

The results from F-statistic values in Table 4 indicate that all variables in this regression model of the growth in returns of IHSG, that is, inflation, growth of real money supply M2 and real SBI rate, are not significant. Compare the F-table value at the 5 per cent significance level, only the growth of real money supply M2 and the SBI rate are significant and have an effect in this model.

Impulse response

Figure 2 reports a set of impulse response functions. The impulse response function of growth returns of IHSG to inflation shows that a shock of about 1 standard deviation will response negatively until the third period and then, in the seventh period, the response becomes positive. At the end, the response disappears in the eighth period. Generally, the response of growth returns of IHSG to inflation is negative because when inflation increases, the real value of dividends of stocks will decrease, which will lower the demand for the stock and the price will decrease, so that it responds to the decrease of IHSG.



Source: Estimation result using Eviews 6

Figure 2. Impulse response function of IHSG

The response of IHSG to a shock of about 1 standard deviation to the growth of real money supply M2 will be negative until the fourth period. Then the response disappears in the fifth period. Generally, the response of the growth returns of IHSG to the growth of real money supply M2 is negative. This is because M2 has a broader definition of money than M1; it includes assets that are highly liquid but not cash, so investors did not just allocate their funds to stocks but also to bonds, resulting in a lowering of IHSG stocks.

The response of IHSG to a shock of about 1 standard deviation to the real SBI rate will be negative until the seventh period but disappears in the eighth period. Generally, the response of growth returns of IHSG to the real SBI rate is negative. The negative

response to a shock from the real SBI rate increase causes the demand for stocks to decrease because society tends to be risk averse and to choose Sertifikat Bank Indonesia (SBI) as an investment option and this causes the IHSG value index to decline.

According to result of the impulse response function in Figure 2, it could be concluded that IHSG shows the biggest response to changes in inflation and the growth of real money supply, M2.

Variance decomposition

Variance decomposition or forecast error variance decomposition is a tool for a VAR model that puts aside the variations of some estimated variables from a shock or to become an innovation variable, with assumption that the innovation variables have no correlates. The variance decomposition indicates the amount of information each variable contributes to the other variables in the autoregression. It determines how much of the forecast error variance of each of the variables can be explained by shocks to the other variables.

The impulse response functions indicate how stock returns are affected by unexpected monetary policy changes; the variance decomposition shows the proportion of variations in returns that can be explained by innovations in monetary policy.

Table 5. Variance decomposition of IHSG

Period	S E	GIHSG	CPI	M2	SBI1
1	13.96965	100	0	0	0
2	14.82601	96.57823	1.329144	1.673457	0.419165
3	14.96188	96.22687	1.313849	1.721401	0.737879
4	14.99044	95.95791	1.325559	1.740546	0.975986
5	15.00423	95.78255	1.354738	1.742163	1.12055
6	15.0127	95.6784	1.378294	1.741018	1.202288
7	15.01782	95.61983	1.393163	1.740039	1.246969
8	15.02076	95.58782	1.401936	1.7394	1.270843
9	15.02239	95.57071	1.406782	1.739036	1.283474
10	15.02327	95.56165	1.409404	1.738837	1.290112

Source: Estimation result

The results of variance decomposition in Table 5 show that, in the first period, the growth returns of IHSG depend on the variable itself by about 100 per cent. In the second period, the biggest contribution of variables to growth returns of IHSG is the growth of real money supply, M2, of about 1.74 per cent. Inflation has contributed about 1.40 per cent at the tenth period. The smallest variable contribution to growth returns of IHSG is the SBI rate of about 0.41 per cent.

Turning to the results in Table 5, we observe that growth returns of money supply M2 and inflation have the biggest effect on growth of IHSG, but the SBI rate has little effect.

The results from this study show that the correlation between inflation and the Jakarta Composite Index (IHSG) is negative. The negative result was caused by an increase in inflation: this in turn was caused when the real interest rate of dividends that are paid to stockholders are decreased. The demand for stocks will be affected and result in a decrease in the IHSG index.

Another result from this study shows that, in the case of Indonesia, an increase in real money supply, M2, has a negative correlation with the IHSG and a negative response in the growth returns of IHSG to the real money supply, M2. When stock is less attractive, people will invest in other assets that will bring higher returns.

CONCLUSION AND RECOMMENDATION

In this study, I examine the effect of monetary policy on stock returns in Indonesia's emerging economy. According to the impulse response function analysis, the response to the growth of IHSG returns by a change of monetary policy, that is, the change of money supply M2 and the SBI rate, is negative.

The returns growth of IHSG responds negatively to change in inflation. This is because when inflation increases, for those who have an asset in the stock market, it is as though they have a decrease in their real dividends, which will decrease the value of all the stock listed on the IHSG.

An increase in money supply, M2, can lower the growth of IHSG. This effect seems to be short-lived, however, ranging from one to five quarters. This finding suggests that monetary shocks have short-lived effects.

Based on this study, the Central Bank of Indonesia as a monetary policy maker is advised to pay close attention to stock market developments, and on how the stock market could a economy activity. Another finding in this study is that the SBI rate has no effective influence on the stock market.

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