

Influence of BI Rate, FED Rate, and Inflation on Composite Stock Price Index (JCI)

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Abstract— This study aims to explain the impact of BI Rate, FED Rate, and Inflation simultaneously, partially, and potentially dominant variable influence on the Composite Stock Price Index by conducting a multiple linear regression analysis. The data is collected monthly from January 2013 to December 2020 with 96-time series data for each free and bound variable. The analysis shows that BI Rate, FED Rate, and Inflation simultaneously significantly affect the Composite Stock Price Index. As the analysis results describe, BI Rate partially negatively influences the Composite Stock Price Index; second, the FED Rate does not affect the Composite Stock Price Index; third, inflation represents a negative influence on the Composite Stock Price Index. In the end, variables that affect the dominant potential of the Composite Stock Price Index are the Rupiah Exchange Rate variables. The results in this study explain the diversity of news on changes in the FED Rate so that investors are confident in their self-assessment to provide results in investing in stocks.

Keywords: BI Rate, Composite Stock Price Index, FED Rate, Inflation.

1. INTRODUCTION

The capital market has two tasks, namely economic strength and financial strength. The strength of the capital market illustrates that the capital market rose to become a leader for the economy of a country. The mirroring of the capital market cannot be separated from the overall depiction of economic conditions nationally. In theory, the capital market situation is very impactful by the overall economic appearance, the relationship between the capital market and the national economy explains the positive relationship (in a sense, economic conditions have such a large impact on the capital market) [1].

Economic conditions that have a clear reason on the capital market can be referred to as monetary policy in a nation. According to Rahardja and Manurung (2008:437) monetary policy is an effort to monitor and control or show the economy in a macro manner to the situation needed (better) by managing the amount of money in circulation. So that a capital owner (investor) as sure as possible explains the economic situation before investing in the capital market. Capital owners can invest in the capital market that is authorized by the Indonesia Stock Exchange (IDX) by carrying out securities (securities) business. Securities (securities) are one of the most widely owned investments are shares, because a stock can explain the inclusion of a company with a large return on price increases and dividends.

The capital further considers the economic situation before implementing to conduct investment in the form of shares or other securities. The news is that interest rates and

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exchange rates are one of the mechanisms of transmission of monetary policy. Interest rates are one of the tools in taking on a monetary policy directed by the central bank. Interest rates implemented by the central bank as one of the economic variables that are in demand by various institutions in the implementation of the economy because of its large and wide influence. Interest rates that can be a concern of investors in investing in the form of shares in IDX is Indonesia's interest rate or often said BI Rate and American interest rate which is often called FED Rate. The BI Rate increase will influence the increasing transaction costs of an institution in investment projects, appointing parties who have most of the funds in this case, namely investors to run funds to other more safety investors such as sukuk, SBSN, Government bonds (SUN), bonds, mutual funds and so on.

Furthermore, if the BI Rate increases and some investors invest in other tools, then the share price in IDX weakens as described through the Composite Stock Price Index which states the volatility of the overall share price of the institutions listed in IDX. Fed Rate is also news that can be considered by the owner of capital because the FED Rate can analyze the amount of money in circulation (in this case the U.S. dollar global currency) and loans in the direction of economic stability that can be weighed through the international balance of payments, price stability, and the provision of employment opportunities. Meanwhile, when the BI Rate increases from the FED Rate, it will bring the calculation of rupiah depreciation and dollar appreciation to cause domestic capital owners (domestic) and overseas capital owners will be aroused to purchase domestic assets and vice versa.

Knowledge of BI Rate and FED Rate news can create attention that automatically news that can be had attention in deciding in investing in stocks. Meanwhile, investors should also consider an exchange rate, namely the exchange rate of the US dollar against the Indonesian rupiah (Rupiah Exchange Rate). The exchange rate should be considered because the exchange rate indicates the price of goods produced in the country which are then sold abroad, and the cost of goods produced abroad that will be directly purchased in the domestic country. Meanwhile, when the value of the U.S. dollar rises and the rupiah declines, the owner of the capital will love investing more in the form of U.S. dollars than investing in securities that are as long-term investments. Furthermore, if the U.S. dollar weakens and the rupiah raises then the owner of the capital will love stock investment more. Meanwhile, in raising capital in the form of shares will issue changes in the share price in IDX which is in the Composite Stock Price Index.

While the decision of the owner of the capital before carrying out the investment in the form of shares by referring interest rates and exchange rates or exchange rates becomes very potential, because by paying attention to the news, the owner of the capital will analyze the condition of the issuer in IDX so that the decision of the owner of the capital to make a purchase of a stock is at risk of a change in the share price. The stock price volatility will greatly affect the shift of the Composite Stock Price Index, because the Composite Stock Price Index describes criteria that explain the shift in the overall share price of issuers listed in IDX. The weakening of the Composite Stock Price Index in 2015 began in mid-August 2015 in IDX to have the lowest point. Furthermore, in the range of September 2015, the Composite Stock Price Index had weakened to 4033.587 in IDX. The weakening of the Composite Stock Price Index makes investors carry out stock release actions.

The weakening of the Composite Stock Price Index is due to the calculation of a policy that will be implemented by the U.S. Central Bank or the FED in 2015 that is related to rising interest rates and rising U.S. dollars so that capital owners begin to designate the U.S. dollar as one of the physical capitals that can be utilized in the situation. This condition caused a weakening of the Indonesian economy in the second quarter. According to The Monetary Policy Report of Bank Indonesia in the second quarter of 2015, Indonesia's economic slowdown is due to slowing growth in investment and the use of government

spending, fiber is still decreasing export business. The slowdown was caused by the uncertainty of the ongoing increase in the US FED Rate and the weaker Chinese economy which eventually contributed to the rupiah's depreciation (Bank Indonesia:2015c).

2. THEORITICAL REVIEW

In English Composite Stock Price Index or IHSG is also called Jakarta Composite Index or JSX Composite is one type of index that is on the Indonesia Stock Exchange. IHSG is to measure the performance value of all stocks listed on a stock exchange by using all stocks listed on the stock exchange as a component of index calculation. This index is the price movement of all common and preferred stocks listed in IDX. IHSG is used to know the development and general situation of the capital market instead of a particular corporate situation.

The Composite Stock Price Index or JCI according to Anoraga and Pakarti (2001: 101) index that shows the general stock price movement listed on the stock exchange and become a reference about the development of activities in the capital market. The IHSG shows all stocks listed on the exchange. This IHSG can be used to assess the general market situation or measure whether the share price has increased or decreased. In JCI can show a reasonable market situation, then the Indonesia Stock Exchange has the authority to issue or not include one or more Listed Companies from the calculation of IHSG. The basis of the calculation is, if the number of shares of the Listed Company owned by the public (freefloat) is relatively small while the market capitalization is large enough, so that the change in the share price of the Listed Company has the potential to affect the fairness of the IHSG movement.

The Composite Stock Price Index or JCI according to Samsul (2006: 185), JCI changes daily due to (1) changes in market prices that occur every day and (2) the presence of additional stocks. The increase in the number of shares outstanding comes from new emissions, namely the entry of new issuers listed on the Stock Exchange, or corporate action in the form of splits, rights, warrants, stock dividends, bonus shares, and convertible shares. Meanwhile, changes in individual stock prices in the market are due to demand factors and stock player offerings. The existence of various variables that analyze demand and supply, both rational and irrational. Furthermore, rational influences include the company's performance, interest rate, inflation rate, growth rate, foreign exchange rate, or stock price index from other countries. Irrational impacts include rumors in the market, following a dream, a friend's whisper, or a price game. Price increases or price drops can occur collectively. If the price continues to rise, it will be followed by a decrease in the price in the next period.

Another interpretation of the Composite Stock Price Index or JCI was said by Theresia Puji Rahayu (2002) in her research on The Analysis of the Influence of Exchange Rates and Interest Rates on IHSG in IDX. As a result, variable exchange rates and SBI interest rates have a negative influence on the variables of the Composite Stock Price Index (JCI). Other interpretations according to Rumiris L. Tobing (2009) in his research entitled analysis of the influence of Exchange Rate, Inflation and Interest Rate certificate of Bank Indonesia on the movement of the Composite Stock Price Index on the Indonesia Stock Exchange mentioned that the partial exchange rate of rupiah and BI Rate has a negative and significant effect on a movement of JCI, but mentioned that inflation has a positive but very insignificant influence on a growth rate of IHSG. Simultaneously, rupiah exchange rate, inflation, and BI Rate SBI are very influential on the movement of JCI.

BI Rate according to Bank Indonesia (2015a) is an interest rate that explains the character or stance of monetary policy desired by Bank Indonesia (BI) and published to the public. BI Rate desired by the Board of Governors of Bank Indonesia by paying attention

to the appointment of BI Rate utilized by the function of policy reaction in an economic model to increase an inflation target. Moreover, bi rate is also explained to show all other information such as leading indicators, offers, anecdotal information, economic variables, expert opinion, assessment of the impact of risk and obscurity as well as the results of economic research and monetary policy (Bank Indonesia, 2015b).

There is a difference in the BI Rate application which is currently the BI 7-days Reverse Repo Rate. Bi Rate is used by conventional banks that purchase Bank Indonesia Certificate (SBI) to store their funds in Bank Indonesia for a period of 12 months. These conventional banks will receive annual interest income from the BI Rate set by Bank Indonesia in accordance with the prevailing maturity. Withdrawal of money deposited by banks in Bank Indonesia through the purchase of Bank Indonesia Certificate (SBI) can only be made after 12 months. Meanwhile, in BI7-days Reverse Repo Rate, withdrawals held in Bank Indonesia by conventional banks can be withdrawn within 7 (seven) days and multiples. This means that conventional banks do not have to wait up to 12 months to disburse their loans at Bank Indonesia, Bank Indonesia will make a repayment after 7 days, 14 days, 21 days, and so on (Faculty of Economics and Business UGM, 2017).

Furthermore, BI 7-days Reverse Repo Rate has a lower rate when compared to BI rate, this is because the tenor of 7-days rate is shorter than the tenor of BI Rate which is 12 months. This is also in accordance with the theory that the shorter the period of deposit of funds, the lower the interest rate will be obtained, and the investment risk is also less (because it is more flexible). As originally intended, Bank Indonesia's benchmark interest rate is to control the amount of money in circulation (JUB) in the community. When jub in society is high it will cause inflation to rise, so Bank Indonesia will raise its interest rate to attract JUB in the community to return to normal and inflation can be reduced.

By using the 7-days rate, Bank Indonesia will be more agile in overcoming JUB and controlling the inflation rate in the community so that indonesia's economy is more stable. Furthermore, the discussion is the relationship of BI rate to the Composite Stock Price Index (JCI), according to the interpretation of Samsul (2006: 210) if the BI Rate rises, then the share price will fall, and vice versa if the BI Rate falls, then the share price will rise. However, the magnitude of the increase and decrease in the BI rate on the share price depends on how much the interest changes. The increase in interest rate can increase the problem of companies (issuers) which can further lower the share price. Furthermore, the increase has the potential to encourage investors to move their funds to the money market or other securities such as bonds, deposits and so on so that investments on the exchange floor fall and can further lower the share price. Meanwhile, the condition of the decline in the share price will be reflected in the stock price index. Thus, the interest rate negatively affects the Composite Stock Price Index (JCI).

Fed Rate is the amount of interest announced by the Central Bank of the United States (Fed) is the benchmark interest rate used between shelter institutions overnight or in Indonesia is a PUAB O /N authorized by the FED. The FED has an interest rate that the Central Bank of the United States describes to credit funds to conventional banks owned in the United States (The FED:2015). Furthermore, the Fed Rate's relationship with JCI. That the United States, as a developed country, has the largest economic system in the world. By having the largest economy in the world, so many investors see the United States as the basis for the decision to invest in them.

The Federal Reserve is the Central Bank of the United States responsible for implementing banking and managing the amount of money in circulation in the economy. One of the measures to make investments is a movement in the interest rate of the Central Bank of the United States (The Fed Rate). The Fed Rate, or Federal Reserve interest rate, is an interest rate set by the Fed as the standard for credit and savings rates for banks and or financial institutions throughout the U.S. When the Fed Rate rises, interest rates on loans

and savings at banks and other financial institutions may also rise. If the interest rate on savings at banks in America rises, then it will attract capital owners from all over the world to transfer their funds in the form of savings / deposits in America.

Inflation is the main problem of many developing countries because the fluctuating inflation rate in the form of high low inflation will have an impact on the economy of a country and can cause a large and very difficult to overcome. Inflation according to Putong (2003: 254) the process of increasing general prices in constantly. This does not mean that the prices of various kinds of goods go up by the same percentage. Most importantly there is a continuous increase in the general price of the item over a period of time. Inflation according to Nopirin (2000: 174) is a price increase that occurs only once even though in a large enough percentage is not inflation. Inflation according to Fahmi (2012: 67) is an event that shows the situation and conditions in which goods have increased and the value of the currency has weakened. If this happens continuously it will result in a comprehensive economic hunt and be able to provide a change in the order of political stability of a country. So, Sapat concluded that inflation is a condition or circumstance of increasing the prices of the entire product, either in the form of goods or services continuously for a certain period. The increase in the price of goods and services means a decrease in the value of money to goods and services at that time.

Consequently, seasonal price increases, such as ahead of Eid al-Fitr or other big days, cannot be considered inflation because the increase occurs only once and has no further influence. The general effect of inflation is the decrease in purchasing power of the people because in real terms the income level is reduced as well, this can affect the country's economy. Another interpretation of inflation was said by Aditya Novianto (2011) in a study conducted on The Analysis of the Influence of Exchange Rate (Exchange Rate) US Dollar /Rupiah (US\$/Rp, SBI Interest Rate, Inflation, and Total Money Supply (M2) to Composite Stock Price Index (JCI) on the Indonesia Stock Exchange (IDX) Period 1999.1-2010 and has the result that an independent variable jointly affects significantly, but partially only variable exchange rates and the amount of money in circulation (M2) that has a significant effect on IHSG.

3. RESEARCH METHODS

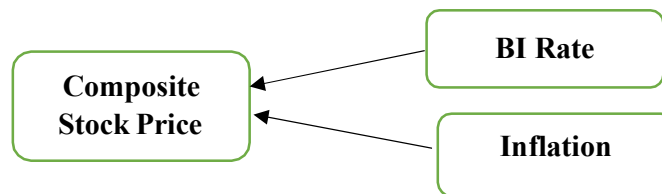


Figure 1. Conceptual Models

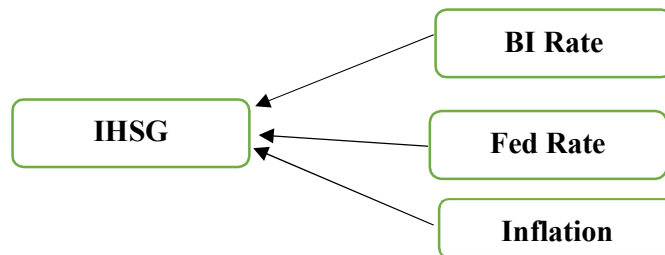


Figure 2. Hypothesis Framework

The kind of research conducted is a kind of explanative research by conducting a quantitative approach to analyze the influence of variable BI Rate, FED Rate, and Inflation on the Composite Stock Price Index in the manager of the Indonesia Stock Exchange. The sample design system in this study uses a saturated sample system or census. Meanwhile, the sample in this study is time series data with monthly data as for the number of samples as many as 96 from January 2013 to December 2020.

The data collection system in this study is a documentary by studying historical data from the implementing authorities, namely Bank Indonesia, the Federal Reserve, and the Indonesia Stock Exchange. The influence system in this study performs descriptive statistical analysis and inferential statistical analysis (classical assumption test, multiple linear regression analysis, F test, t test, and determination coefficient analysis).

4. RESULTS AND DISCUSSION

Table 1. ANOVA Composite Stock Price Index Model

Model	Sum of Squares	df	Mean Square	F
Regression	.218	4	.074	
I Residual	.195			
Total	.45			
a. Dependent Var				
b. Predicto				
Sum				

Furthermore, based on F test results and significance values, variable BI Rate, FED Rate, and Inflation simultaneously have a significant effect on the Composite Stock Price Index in IDX. This condition explains that H0 is rejected and H1 is accepted so investors should consider BI rate, FED rate, and inflation before investing in IDX. Meanwhile, in accordance with the classic theory in Nopirin (2012:167) explains that if interest rates are increasing then the need for owners of capital to save will increase, because the need for people to invest is getting weaker. Meanwhile, it can be conclusive if interest rates increase many capital owners who invest in the banking sectors so that stock trading in IDX is quiet and weak which results in the weakening of the Composite Stock Price Index in IDX. Furthermore, if the interest rate is low there is the inevitability of the owner of the capital to save funds to be smaller, the owner of the fund is more confident to invest in IDX because it is more promising so that the demand for shares in IDX is high which will increase the Composite Stock Price Index in IDX.

News about Rupiah exchange rate should also be considered by the owner of the capital because when the Rupiah exchange rate runs appreciation, the owner of the capital will be aroused to invest in securities. Furthermore, when the Rupiah depreciates, the US dollar will be the choice of promising capital owners so as to influence the weakening of investment in the Indonesia Stock Exchange. The end of this study provides the results of research from Saputra (2011) which is simultaneously recorded a significant influence between the exchange rate of the US dollar (USD) and the interest rate of Indonesia to the Composite Stock Price Index. Meanwhile, for the results of the United States interest rate refers to the results of Suyanto research (2009) namely the United States interest rate or known AS FED Rate has a dominant impact on the Composite Stock Price Index at the time of the global crisis in 2007-2008, although the United States interest rate has an indirect impact.

Table 2. Composite Stock Price Index Regression Coefficient

Model	Unstandardized Coefficient		Standardized Coefficient	t	Sig.
	B	Std. Error			
(Constant)	.015	.005		2.874	.005
BI RATE	-.647	.215	-.218	-2.846	.007
FED RATE	.004	.025	.024	.134	.078
INFLASI	-1.367	.145	.145	.145	.000

a. Dependent Variable: IHSG

Sumber : Output SPSS diolah, 2020

Based on the Ttest results and significance value, partially the BI Rate variable has a significant effect on the Composite Stock Price Index in IDX. The results partially show that the BI Rate negatively or inversely affects the Composite Stock Price Index in IDX. This means that when the BI Rate rises, the Composite Stock Price Index decreases and vice versa. This is in accordance with the classic theory in Nopirin (2012:167) states that if the interest rate is higher than the investor's desire to save will be higher, so that the public's desire to invest is lower. So, it can be concluded that the higher the BI Rate makes people's desire to save higher, but as low as the public's desire to invest that will result in a decrease in the general share price that can be seen in the Composite Stock Price Index in IDX.

Furthermore, the T test result and significance value, the fed rate variable partially has no significant effect on the Composite Stock Price Index. As for the effect of the FED Rate because there is similar news that gives rise to comparisons of decision-givers made by the owner of the fund. The difference in this news is due to the existence of capital owners who not only have changes in the FED Rate, but also have differences between BI Rate and FED Rate in accordance with the theory of interest rate parity. Furthermore, if the BI Rate is higher than the FED Rate, there will be a calculation of rupiah depreciation and dollar appreciation that will affect both domestic capital owners and overseas capital owners will be interested in owning domestic assets. Increasing the difference between BI Rate and FED Rate will help capital owners to invest in financial markets in Indonesia because capital owners will generate higher returns. The insignificant variable FED Rate on the Composite Stock Price Index was also conducted by Suyanto research (2009), namely the impact of changes in the United States interest rate on the movement of the Composite Stock Price Index is more described by indirect influence.

Meanwhile, pointing to the results of Noerdiasyah research (2009) has no effect on the Fed Rate on the Composite Stock Price Index because the FED Rate affects through export activities, therefore even though the FED Rate does not have a significant influence but still has a positive interaction with the capital fund. Furthermore, based on the results of the t test and the value of significance, partially variable Rupiah Exchange Rate has a significant effect on the Composite Stock Price Index in IDX. The results showed the Rupiah exchange rate partially negatively or inversely affected the Composite Stock Price Index in IDX. This means that when the US dollar appreciates and the rupiah depreciates, the Composite Stock Price Index in IDX rises, but on the contrary when the US dollar depreciates and the rupiah appreciates, the Stock Price Index in IDX weakens. This is because if the value of the U.S. dollar is high or the rupiah weakens then the owner of the capital will be more interested in investing in the U.S. dollar than investing in securities that are long-term investments.

According to Thobarry (2009) the exchange rate of a currency or often referred to as an exchange rate is a comparison of the value of a country's currency against another foreign country's currency. Furthermore, the exchange rate often changes, the change can be either depreciation or appreciation. The results of the research became the basis of the research results of Dyani (2009) and Saputra (2011) which provide an explanation that the rupiah exchange rate has a significant impact on the Composite Stock Price Index in IDX. Variables That Have a Dominant Effect on the Composite Stock Price Index. Based on the results of multiple linear regression variables BI Rate, FED Rate, and Inflation as seen from the value of Standardized Coefficient Beta, the dominant variable affects the Composite Stock Price Index, namely the variable Rupiah Exchange Rate. Furthermore, because the owner of the stock capital always sees the news about the Rupiah Exchange Rate, because according to Sitinjak and Kurniasari (2003) this exchange rate as one of the criteria that indicate activities in the stock market and the money market because the owner of the capital will be very careful to do the investment of capital. The weakening of rupiah exchange rate against foreign currencies, especially the US dollar, has a negative impact on the economy and capital market.

Furthermore, when the country's currency depreciates, the country's overseas production becomes cheaper and foreign goods in the country become higher. Because that makes the rupiah exchange rate has a dominant impact on the Composite Stock Price Index in IDX. The results of this research also follow the research of Dyani (2009) which is the dominant variable has the influence of the Composite Stock Price Index, namely the variable rupiah exchange rate. Meanwhile, referring to the results of Saputra's research (2011) that Indonesia's interest rate has a dominant influence on the Composite Stock Price Index. Meanwhile, capital owners should consider monetary policy related to interest rates and exchange rates, as the two policies are interconnected to maintain the stability of the country's economy based on the central bank.

5. CONCLUSIONS

The conclusions of the research, looking at the data combined and processed by Kendall's relationship experiments, show how strong the bond from the dimensions that are the measuring equipment to the quality of the website platform services in a global way. From the results obtained BI Rate, FED Rate, and Inflation simultaneously significantly affect the Composite Stock Price Index in IDX. The BI Rate partially affects the Composite Stock Price Index in IDX, while the FED Rate partially has no significant effect on the Composite Stock Price Index in IDX, and subsequently inflation partially affects the Composite Stock Price Index in IDX. The dominant variable affecting the Composite Stock Price Index in IDX is the inflation variable.

Recommendations, make further research recommended: 1) increase macroeconomic variables such as the amount of money in circulation and GDP, perform other analytical techniques to explain the influence and interaction of FED Rate variables on the Stock Price Index in IDX in order to produce a good analysis; 2) provide a view of domestic macroeconomic variables with the international world to point to their influence on trade and finance in Indonesia. Meanwhile, investors should consider BI Rate, FED Rate, and Inflation before giving the result in the form of a decision to invest in IDX. Meanwhile, capital owners should also consider the volatility of the BI Rate and FED Rate in relation to monetary policy and the transmission of monetary policy that will take place so that there

will be no differences in news and do not give decisions based on personal thinking, and consider the impact before making a final decision.

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