International Journal of Research and Review
DOI: https://doi.org/10.52403/ijrr.20210735
Vol.8; Issue: 7; July 2021
Website: www.ijrrjournal.com
Research Paper E-ISSN: 2349-9788; P-ISSN: 2454-2237

The Effect of the Fed Rate, Exchange Rate and Economic Growth on the IHSG with Inflation as a Moderating Variable

Tohap Parulian[1], A. Mahendra[2]

[1]Faculty of Economics and Business at Universitas Medan Area, Indonesia
[2]Faculty of Economics at Universitas Katolik Santo Thomas, Indonesia

Corresponding Author: Tohap Parulian

ABSTRACT

This research is intended to know the influence of The Fed Rate, Exchange Rate, and Economic Growth on the IHSG, with Inflation as a moderating variable in Indonesia. The population in this research is from Indonesia. The multiple regression analysis conducted estimates. The data used in this study were secondary, consisting of the fed rate, exchange rate, and economic growth on the IHSG for the year 2000-2019. This research shows that the Fed Rate variable has no significant effect based on the partial test (t-test). In contrast, the Exchange Rate and Economic Growth variables have a significant effect on the variables of the IHSG in Indonesia, the simultaneous test (F test), the fed rate, exchange rate, and economic growth have a significant effect on the variables of the IHSG. Inflation can moderate the relationship between the fed rate, exchange rate, and economic growth on the IHSG.

Keywords: The Fed Rate, Exchange Rate, Economic Growth, Inflation, IHSG

INTRODUCTION

The capital market in Indonesia is a developing market and is very vulnerable to general macroeconomic conditions. The capital market is one of the drivers of a country's economy because the capital market is a means of forming capital, accumulating long and short-term funds directed at increasing public participation in fundraising to support national development financing (Jannata, 2018). The capital market is seen as one of the most effective means of raising long-term funds. The rate of return that will be obtained is directly proportional to the risk that must be faced, meaning that the higher the rate of return, the higher the level of risk and vice versa. Before investing in the capital market, an investor must understand and seek considerations in deciding on stock price movements in the capital market.

Investors need complete, relevant, accurate, and timely information to conduct capital market analysis. One indicator of stock price movements is the stock price index. The index that investors often pay attention to when they want to invest in the Indonesia Stock Exchange is the Composite Stock Price Index (IHSG). This stock price index becomes an indicator of market trends, meaning that the movement of the index describes market conditions, whether the market is active or sluggish (Gom, 2014). If a macroeconomic indicator is terrible, it will have a bad impact on the development of the capital market. However, if an economic indicator is good, it will also influence capital market conditions (Sunariyah, 2006). IHSG movements constantly fluctuate from time to time. The capital market in an uptrend or a downtrend can be seen from the volatility of recorded stock prices. Changes or developments that occur in various economic variables of a country will influence the capital market. The following is the IHSG movement that occurred in 2000-2019.

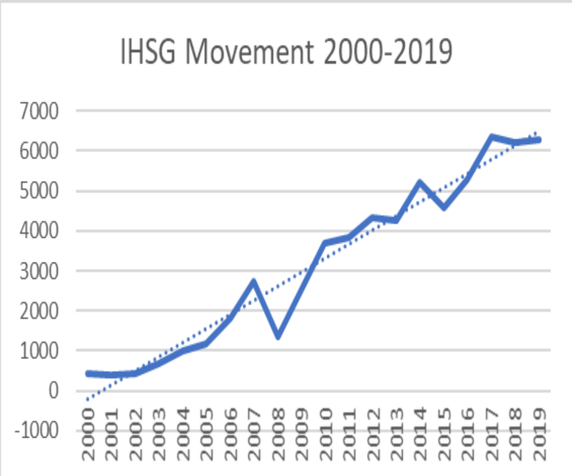


Figure 1:IHSG Movement Perio 2000-2019
Source: IDX

Based on the table above, it can be seen that over the last 20 years, the IHSG has experienced a significant increase (bullish) and a decrease (bearish). In 2007-2008, the IHSG experienced a very sharp decline of 49%. It was triggered by the subprime mortgage crisis in the United States, which caused most world stock price indices to decline, and countries in the world experienced price increases in general or Inflation. In 2012-2013 the IHSG again recorded a decline of 3.4%. This condition was caused by data on the domestic economy that did not meet the target, particularly the current account and trade balance deficits. In 2015, the IHSG fell again by 12.1%. This phenomenon is caused by the policy of the US central bank (The Federal Reserve) in raising its interest rate (Fed Rate). IHSG recorded another decline in 2018 of -2.54%. The decline in this index was due to several negative catalysts both from within the country. Indonesia's economic growth has not moved from 5%, the depreciation of the rupiah exchange rate, the trade balance deficit, foreign sentiments such as the trade war, and the increase in the US Fed Funds Rate (FFR) central bank.

Two main factors influence the IHSG movement, namely: internal factors and external factors. Internal factors are announcements about marketing, production, sales, funding, investment, labor, announcements from the management board of directors, and announcements of financial statements from the company. In contrast, external factors include announcements from the government, legal announcements, securities industry announcements, domestic political turmoil, exchange rate fluctuations, and various issues both from within the country and from abroad (Gom, 2014). In this study, the authors are interested in examining external factors, namely Fed Rate (X1) and Exchange Rate (X2)) and internal factors, namely Economic Growth (X3) and Inflation (Z), as moderating variables on the Composite Stock Price Index (Y).

The Fed is the central bank in the United States responsible for monitoring and responding to developments in the economy. The Fed (Federal Reserve) oversees the stock market and can influence Indonesia's interest rates and economic activity. All stock markets, including those in the region, are closely watching the development of stocks in the United States. What the Fed says will be closely followed by the market. The market will react quickly to the Fed's policy plans (Misgiyanti & Zuhroh, 2009). The Fed Rate is the interest rate set by the Fed as a benchmark for interest rates on loans and deposits for banks and institutions of 2017 (Department of the United States of America). When the Fed increases interest rates, much money is absorbed so that the money supply will decrease. First, saving funds in a bank is a better alternative because high-interest rates can provide higher returns. Second, tightening monetary policy by the Fed risks pushing the economy into a recession, which could reduce profits. As a result, stock prices often experience a decline when the Fed increases interest rates. However, the Fed Rate is not the only factor determining the rise or fall of the IHSG. Nevertheless, many other factors affect the rise or fall of the IHSG.

The study's results by Manihuruk & Darmawan (2017) suggest that the Fed has no significant effect on the IHSG. The results of this study correspond with Nellawati & Isbanah (2019) and Syarif & Asandimitra (2015). Misgiyanti & Zuhroh (2009) found that the Fed had a negative and significant effect on the IHSG. The results of this study are convenient with Gom (2014) and Jannata (2018). It is different from Miyanti and Wiagustini's (2018) research which suggests that the Fed has a significant positive effect on the IHSG. The results of this study are in line with Murtiningtyas (2019).

In the exchange between two different currencies, there will be a comparison of the value/price between the two currencies. This comparison of values is often referred to as the exchange rate (Nopirin, 1988). Determination of foreign exchange rates is essential for forex market players because the foreign exchange rate dramatically affects the number of costs incurred and benefits (profits). It will be obtained in goods, services, and securities on the foreign exchange (Khalwaty, 2003). 2000). The exchange rate is one of the tools for economic policy for a country. The decline and increase in the Indonesian economy can be seen from the movement of the Rupiah currency value (Juita et al., 2013). Indonesia currently uses a floating exchange rate with a free and stable exchange rate. The appreciation and depreciation of the Rupiah exchange rate can lead to fluctuations in stock prices. Due to the issuer's policy of whether to export raw materials or finished goods to or from abroad. The rupiah exchange rate will make the cost of production using imported raw materials increase, which impacts decreasing profits. The decline in the profit level makes investors less interested in investing in these shares to decrease the stock price (Syarif and Asandimitra, 2015).

Astuti et al. (2013) show that the exchange rate has a negative and significant effect on the IHSG. The results of this study are in line with Syarif & Asandimitra (2015), Prahesti & Paramita (2020), and Nellawati & Isbanah (2019). Meanwhile, Juita et al. (2013) suggested that the exchange rate positively and significantly affected the IHSG. The results of this study are in line with Nurwani (2016) and Sutriyadi (2019). In contrast to research results (Misgiyanti & Zuhroh, 2009), the exchange rate did not affect the IHSG. The results of this study are in line with Setiawan & Mulyani (2020) and Oktavia & Handayani (2018).

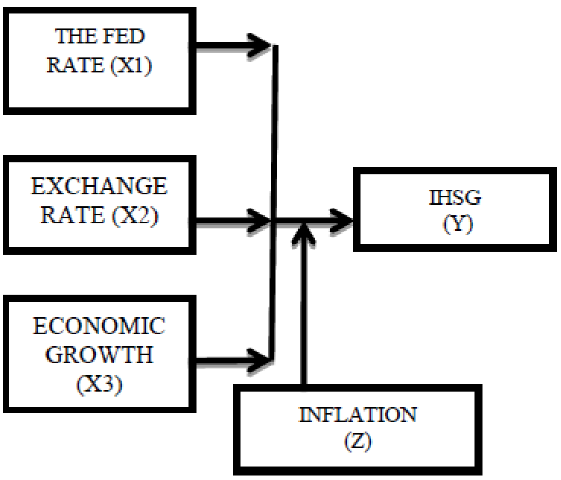
Gross Domestic Product (GDP) is the market value of all goods and services produced in a certain period. GDP growth indicates economic growth (Suarjaya & Asmara, 2018). Improving economic growth is tantamount to an increase in people's purchasing power. It can create opportunities for the company to increase sales. The company's profits will also increase when the company's income increases, so that the company's share price will increase, which is accompanied by a strengthening of the IHSG (Tandelilin, 2010:342).

The research results conducted by Mahendra (2020) suggest that economic growth has a negative and significant effect on the IHSG. The results of this study are in line with Oktavia & Handayani (2018). Meanwhile, Juita et al. (2013) suggested that economic growth positively and significantly affected the IHSG. The results of this study are in line with Sutriyadi (2019). In contrast to the research results by Suarjaya & Asmara (2018), which revealed that economic growth did not affect the IHSG. Inflation is one of the events that describe a situation and condition where the price of goods has increased and the currency's value has weakened. If it occurs continuously, it will result in poor overall economic conditions and shake political stability (Fahmi, 2011). Inflation has a positive impact and a negative impact depending on the severity of Inflation. If Inflation is light, it has a positive effect because it can encourage a better economy, namely increasing national income and making people excited to work, save and invest. On the other hand, in times of severe

Inflation, when Inflation is out of control (hyperinflation), the economy becomes chaotic, and the economy feels sluggish. People become discouraged from working, saving, or investing and producing because prices are rising rapidly (Kefi & Sutopo, 2020). Inflation is closely related to a decrease in the purchasing power of both individuals and companies. Research studies on the relationship between Inflation and stock returns are carried out in Widjojo's research (in Mahendra, 2020), which states that the higher the inflation variable, the lower the profitability/company profits. The decline in company profits was due to bad information for traders on the stock exchange, causing a decline in the company's stock price and the impact affected the Composite Stock Price Index (Mahendra, 2020).

Framework

Following the description of the background of the problem, literature review, and previous research, a conceptual research framework prepares as follows:



H1: The Fed Rate has a negative and significant effect on the IHSG.
H2: Exchange Rate has a negative and significant effect on the IHSG.
H3: Economic Growth has a positive and significant effect on the IHSG.
H4: The Fed Rate, Exchange Rate, and Economic Growth simultaneously positively and significantly affect the IHSG.
H5: Inflation can moderate The Fed Rate, Exchange Rate, and Economic Growth on IHSG.

RESEARCH METHODS

This type of research includes the kind of quantitative research. The approach used is causality and inferential. This study uses statistical analysis, which aims to test the hypothesis (Sugiyono, 2017). Research is conducted with a causal research approach to investigate cause-and-effect relationships by observing the effects that occur and the possible factors (causes) that cause these effects.

The populations in this study are The Fed Rate, Exchange Rate, Economic Growth, and IHSG. The sample is part or representative of the population that is the object of research. The sample in this study is The Fed Rate, Exchange Rate, Economic Growth, and IHSG in Indonesia from 2000 to 2019.

RESULT AND DISCUSSION

Normality test

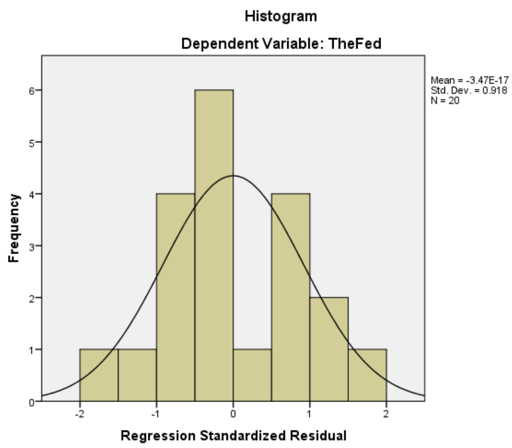


Figure 2 Histogram Graph Normality Test Results
Source: Calculation Results of SPSS

Based on Figure 2 above, it can be seen that the data distribution is normal and meets the normality assumption. It can be seen from the formed line, which looks to have a bell shape.

Linear regression of The Fed Rate, Exchange Rate, and Economic Growth on IHSG in Indonesia

Table 1: Regression Results
Coefficients

Model		Unstandardized Coefficients		t	Sig.
		B	Std. Error		
1	(Constant)	-9829.047	1957.694	-5.021	.000
	TheFed	-158.213	110.921	-1.426	.173
	ExcRate	-.807	.104	-7.760	.000
	EcoGrowth	889.129	236.248	3.764	.002

a. Dependent Variable: IHSG
Source: Calculation Results of SPSS

Individual Regression Coefficient Testing (Statistical t-Test)

1. The Fed Rate

For The Fed Rate variable, the t-count value is -1.426 with a probability (significance) value of 0.173. Thus Ha is rejected, because the probability value is bigger than the value of 0.05 (0.173>0.05) and t-count> - t-table (-1.426>-2.119). It means that it can be concluded that The Fed Rate variable has no significant effect on the variable of IHSG in Indonesia by testing at the 95% (= 5%) confidence level.

2. Exchange Rate

For the Exchange Rate variable, the t-value is -7.760 with a probability (significance) value of 0.000. Thus, Ha is accepted, because the probability value is smaller than the value 0.05 (0.000 <0.05) and the t-count< t-table (-7.760<-2.119). It means that it can be concluded that the Exchange Rate variable has a significant effect on the variable of IHSG in Indonesia by testing at the 95% confidence level (= 5%).

3. Economic Growth

For Economic Growth, the t-count value is 3.764 with a probability (significance) value of 0.002. Thus Ha is accepted because the probability value is smaller than the value 0.05 (0.000<0.05) and the t-count <t-table (3.764>2.119). It means that it can be concluded that the Economic Growth variable has a significant effect on the variable of IHSG in Indonesia by testing it at the 95% confidence level (= 5%).

Simultaneous Testing of Regression Coefficients (Statistical F Test)

Table 2: ANOVA test

Model		F	Sig.
1	Regression	33.823	.000[b]
	Residual		
	Total		

Source: Calculation Results of SPSS

Based on the output of the SPSS program, the F-count value is 33.823 with a probability (significance) value of 0.000. Thus Ha is accepted, because the value of F-count> F-table (33.823> 3.24) and the probability value (significance) is greater than the value of 0.05 (0.000 <0.05). It means that it can be concluded that the variable X1 (The Fed Rate), variable X2 (Exchange Rate), and variable X3 (Economic Growth) have a significant simultaneous effect on IHSG (Y) at the 95% confidence level (= 5%).

Coefficients Determinations

Table 3: Coefficients Determinations

Model Summary			
Model	**R**	**R Square**	**Durbin-Watson**
1	.929[a]	.864	2.078

Source: Calculation Results of SPSS

Based on Table 3, the coefficient of determination (R) is 0.864, which means that the variables X1 (The Fed Rate), X2 (Exchange Rate), and X3 (Economic Growth) together can explain variations in IHSG in Indonesia of 86.4%. In comparison, the remaining 13.6% is explained by new variables that are not included in the model estimation.

Moderating Test Results (Residual Test)

Table 4
Coefficients

Model		Unstandardized Coefficients		t	Sig.
		B	Std. Error		
1	(Constant)	3.228	.399	8.098	.000
	IHSG	-.028	.000	-3.219	.005

Source: Calculation Results of SPSS

Based on the results of the residual test in table 4, the moderation regression equation is obtained as follows:

|e| = 3.228 + -.028 Y

A variable is moderating if the P-Value (Sig) <0.05 and the parameter coefficient value are unfavorable. Based on Table 3, the results of the residual test show that the significant value of 0.005 is as an α = 0.05 (0.005 α = 0.05) and the negative coefficient value is (-0.028), it can be concluded that the Inflation can moderate the relationship between The Fed Rate, Exchange Rate, and Economic Growth on IHSG. In other words, the Inflation variable is a moderating variable in this study (H5 is acceptable).

CONCLUSION

Based on the results of data analysis and research discussion, the following conclusions can be drawn:

1. From the results of the F test, it is concluded that The Fed Rate, Exchange Rate, and Economic Growth during the period 2000 to 2019 have a significant simultaneous effect on IHSG in Indonesia at a 5% significance level. Thus the research hypothesis is accepted.
2. Based on the partial test (t-test), the variables of Exchange Rate and Economic Growth have a partially significant effect. In contrast, The Fed Rate variable has no significant effect on the variable of IHSG in Indonesia by testing at the 95% confidence level (= 5%).
3. The Inflation variable can moderate the relationship between The Fed Rate, Exchange Rate, and Economic Growth to IHSG in Indonesia
4. The coefficient of determination (R) is 0.864, which means that the variables X1 (The Fed Rate), X2 (Exchange Rate), and X3 (Economic Growth) together can explain variations in IHSG in Indonesia of 86.4%. In comparison, the remaining 13.6% is explained by new variables that are not included in the model estimation.

Acknowledgement: None

Conflict of Interest: None

Source of Funding: None

REFERENCES

1. Asmara,I Putu Wahyu & Suarjaya,Anak Agung Gede. (2018). Pengaruh Variabel Makro Ekonomi Terhadap Indeks Harga Saham Gabungan. E-Jurnal Manajemen UNUD Vol.7 No.3
2. Astuti,Ria, (2013). Analisis Pengaruh Tingkat Suku Bunga (SBI), Nilai Tukar, Inflasi dan Indeks Bursa Internasional Terhadap IHSG (Studi Pada IHSG Di BEI Periode 2008-2012). Diponegoro Journal of Social And Politic of Science Hal 1-8.
3. Fahmi, Idris. 2013. *Pengantar pasar modal*. Alfabeta. Bandung
4. Gom, Hotneri. (2014). Analisis Pengaruh The Fed Rate, Indeks Dow Jones dan Indeks Nikkei Terhadap Indeks Harga Saham Gabungan Di Bursa Efek Indonesia Periode 2008-2013.
5. Jannata. (2018). Pengaruh Fed Rates, BI Rates dan Eido Terhadap Indeks Harga Saham Gabungan di Bursa Efek Indonesia. Universitas Islam Indonesia
6. Juita,Popy Citra, Wardi,Yunia, Aimon,Hasdi. (2013). Analisis Pertumbuhan Ekonomi dan Indeks Harga Saham Gabungan Di Indonesia.
7. Kefi,Batista Sufa & Sutopo. (2020). Inflasi Memoderasi Pengaruh Kurs Terhadap Indeks Harga Saham Gabungan Pada Bursa Efek Indonesia. Jurnal Ekonomi Manajemen dan Akuntansi STIE Dharmaputra Semarang.
8. Manihuruk, Orintasi Peratun & Darmawan, Ari. (2017). Pengaruh BI Rate, Fed Rate, Indeks Dow Jones dan Indeks Shanghai Terhadap Indeks Harga Saham Gabungan (Studi Pada Bursa Efek Indonesia Periode 2009-2016). Jurnal Administrasi Bisnis Vol.52 No.1 November 2017.
9. Misgiyanti & Zuhroh, Idah. (2018). Pengaruh Suku Bunga Luar Negeri Federal Reserve (The Fed), Nilai Tukar Rupiah/US Dan Inflasi Terhadap Indeks Harga Saham Gabungan Di Bursa Efek Indonesia Periode

2006-2008. Universitas Muhammadiyah Malang.
10. Miyanti, Gusti Ayu Diah & Wiagustini, Luh Putu. 2018. Pengaruh Suku Bunga The Fed, Harga Minyak dan Inflasi Terhadap Indeks Harga Saham Gabungan (IHSG) Di Bursa Efek Indonesia. E-Jurnal Ekonomi dan Bisnis Universitas Udayana.
11. Murtiningtyas, Juwita Anggita. (2019). Kebijakan the Fed, Perang Dagang AS-Cina, dan Dampak terhadap IHSG Indonesia pada tahun 2018. Universitas Katolik Parahyangan.
12. Nellawati, Syantia Olivia. (2019). Analisis Pengaruh Faktor Internal dan Faktor Eksternal Terhadap Pergerakan Indeks Harga Saham Gabungan (IHSG) Di Bursa Efek Indonesia. Jurnal Ilmu Manajemen Vol 7 No.1 Universitas Negeri Surabaya.
13. Nopirin. 1988. Ekonomi Moneter Buku II. BPFE: Yogyakarta
14. Nurwani. (2016). Analisis Pengaruh Inflasi, Nilai Tukar Rupiah dan Suku Bunga SBI Terhadap Indeks Harga Saham Gabungan Di Bursa Efek Indonesia. Universitas Muhammadiyah Sumatera Utara.
15. Oktavia, Safitri & Handayani,Wiwik. (2018). Effect of Rupiah Exchange Rate, GDP Growth, And Dow Jones Index On Composite Stock Price Index In Indonesia Stock Exchange. Journal of Accounting and Strategic Finance Vol.1 No. 1
16. Prahesti,Sebtian Dwi & Paramita,RA Sista. (2020). Pengaruh Indeks SSEC, N225, STI, dan Faktor Makroekonomi Terhadap IHSG. Jurnal Ilmu Manajemen Vol 8 No.3 Universitas Negeri Surabaya.
17. Setiawan,Keken & Mulyani,Erly. (2020). Pengaruh Perubahan Nilai Tukar Rupiah, Tingkat Inflasi dan Indeks Bursa Internasional Terhadap Indeks Harga Saham Gabungan Di Bursa Efek Indonesia. Ejournal Universitas Negeri Padang.
18. Sugiyono. (2017). *Metode Penelitian Kuantitatif, Kualitatif,* dan R&D. Bandung : Alfabeta, CV
19. Sunariyah. (2006). Pengantar Pengetahuan Pasar Modal Edisi ke 5. Yogyakarta: ANDI
20. Sutriyadi, Riko. (2019). Pengaruh Inflasi, Indonesian Government Bond/SUN Yield, Kurs Dollar, Pertumbuhan GDP Terhadap Indeks LQ45 Dengan Indeks IHSG Sebagai Variabel Intervening Di Bursa Efek Indonesia (Study Empiris Di Bursa Efek Indonesia Tahun 2011-2016). Jurnal Lentera Akuntansi Vol. 4 No.2
21. Syarif, M., & Asandimitra, N. (2015). Pengaruh Indikator Makro Ekonomi dan Faktor Global terhadap Indeks Harga Saham Gabungan (IHSG). *Jurnal Studi Manajemen*, *9*(2), 142–156.
22. Syarif,Moh Maulidi & Asandimitra,Nadia. (2015). Pengaruh Indikator Makro Ekonomi dan Faktor Global Terhadap Indeks Harga Saham Gabungan (IHSG). Universitas Negeri Surabaya.
23. Tajul Khalwaty. (2000). Inflasi dan Solusinya. Jakarta: PT. Gramedia Pustaka Utama
24. Tandelilin, E. (2010). Portofolio dan Investasi Teori dan Aplikasi. Edisi pertama. Yogyakarta : Kanisius.

How to cite this article: Parulian T, A. Mahendra. The effect of the fed rate, exchange rate and economic growth on the IHSG with inflation as a moderating variable. *International Journal of Research and Review*. 2021; 8(7): 251-257. DOI: *https://doi.org/10.52403/ijrr.20210735*

******