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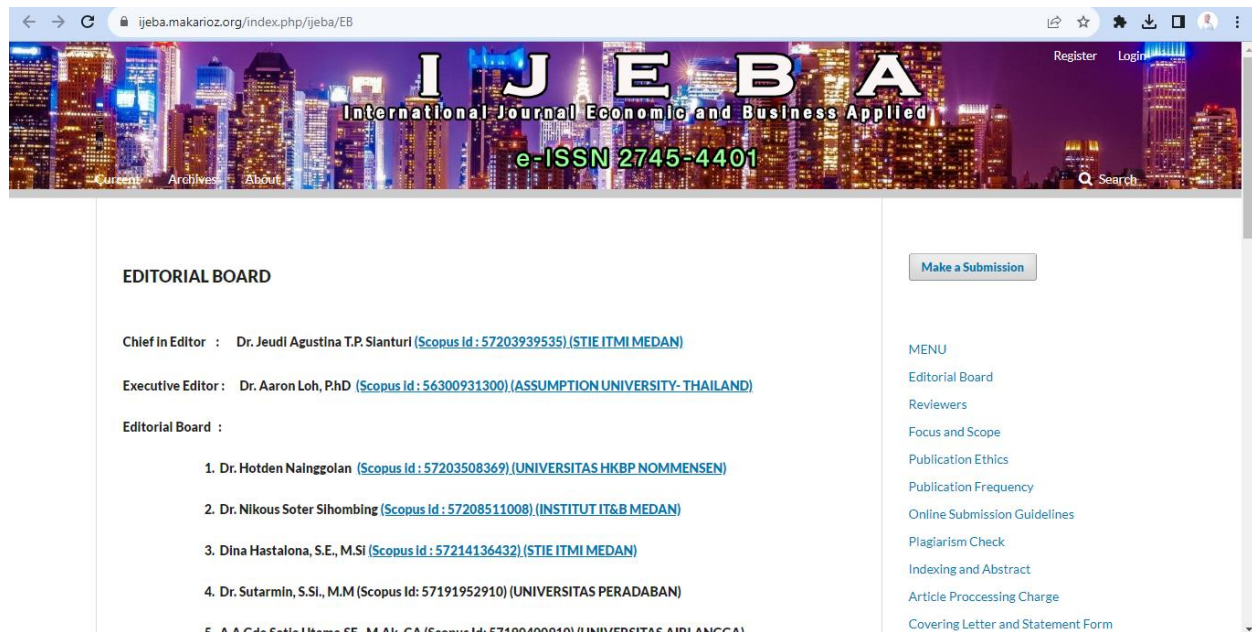
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THE EFFECT OF EXCHANGE RATE AND INTEREST RATE ON THE JAKARTA COMPOSITE INDEX DURING THE COVID-19 PANDEMIC

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Abstract

This study aims to determine the effect of selected macroeconomic variables, i.e., the USD / IDR exchange rate and interest rates on the composite stock price index during the Covid-19 pandemic in Indonesia. This paper examines the direct effect of selected macroeconomic variables on the Jakarta Composite Index. This study used time series data from February-July 2020. By using regression technique analysis, the result of the study showed that simultaneously the exchange rate and interest rates have a significant effect on Jakarta Composite Index. Partially, only interest rate have a significant effect on the Jakarta Composite Index, and exchange rates have no significant effect on the Jakarta Composite Index. The amount of influence caused by the two variables is 73% and the rest is explained by other variables.

Key words : Capital Market, Jakarta Composite Index (JCI), Exchange Rate, Interest Rate

INTRODUCTION

The phenomenon of the Covid-19 pandemic that attacks various countries around the world, namely the corona virus which was first in China, to be precise in the city of Wuhan at the end of December 2019. The Covid 19 virus spreads and worsens disruption of the human respiratory system that causes the Kotadi area Wuhan, where this virus first appeared on the surface of the earth and eventually spread to almost the entire world, finally the city decided on a policy for lockdown aimed at slowing the speed of the spread of the Covid-19 virus.

The emergence of the Covid-19 Virus pandemic phenomenon not only threatens health but can also threaten economic growth in a country around the world. The impact of the spread of the Covid-19 Virus cannot be calculated with certainty. But the deceleration of the economic system has begun to be felt, the first impact being felt on the sectors of investment, transportation, trade, tourism and industry. This can no longer be avoided by the Indonesian state, the increasing number of positive cases of the Covid-19 virus will have effects on the stock market.

The spread of the Covid-19 Virus can also affect the Composite Stock Price Index (JCI), this happens because stock prices are getting weaker along with market concerns about the impact of the Covid-19 Virus pandemic on the Indonesian economy. Before the Covid-19 pandemic that attacked various countries, the world economic situation still showed positive growth. Not only the world economy, even before the pandemic the Indonesian economy was still quite safe from the IHSG at the beginning of January 2020. The Covid-19 outbreak in Indonesia first appeared around March, namely at the beginning or the middle of the month. After this viral pandemic emerged and spread in Indonesia, there were findings that the JCI trend was decreasing. The decline that occurred was of course inseparable from investor sentiment who saw that the Indonesian government had not been serious in dealing with Covid-19 so that when the virus became more crisis, investors preferred to allocate their funds from the capital market so that this resulted in a decline in share prices.

New Normal made the mood of capital market investors improve, the Composite Stock Price Index (IHSG) jumped nearly 5% throughout July 2020. The improvement in the Composite Stock Price Index (IHSG) has excited investors in the global financial market to attract high-risk assets. During the month of July, the JCI rose 4.98% point-to-point. JCI managed to end July above 5,100. Even though the JCI's strengthening looked great, it turned out that there were Asian stock indices that rose sharply. Even the Shanghai Composite could skyrocket in the 10% range (cnbc.com).

The capital market is under pressure amidst the struggle of the Indonesian State in dealing with the Covid-19 virus pandemic. The Composite Stock Price Index (JCI) until the end of August 2020 was observed to have decreased by 2.03% since the closing of trading session I at the level of 5,234.58. Then at the end of the first session the parking index was at the level of 5,342.86. Foreign net sells also recorded an increase reaching Rp 1.71 trillion in all markets. Until the end of trading, the action by foreign investors was recorded at IDR 1.79 trillion (cnbc.com).

LITERATURE REVIEW

Research related to exchange rates has been carried out by many previous researchers. Some opinions from previous researchers related to Exchange Rate stated that the Exchange Rate Variable had a positive and significant effect on the Composite Stock Price Index (IHSG). The research was conducted by Kusuma & Badjra (2016), Sangga yoga Wismantara & Ni Putu Ayu Darmayanti (2017), Sukamto (2018).

The results of the research which show the opposite show that the Exchange Rate variable has a negative and significant effect on the Composite Stock Price Index (IHSG). The research was conducted by I Wayan Wahyu Nugraha & Made Rusmala Dewi (2015), Ni Wayan Sri Asih Masithah Akbar (2016), Putra (2016), Ilmi (2017), Harsono & Wonokinasih (2018).

In addition, research related to interest rates has also been carried out by many previous researchers who explain that the interest rate variable has a positive and significant effect on the Composite Stock Price Index (IHSG). The research was conducted by (Kusuma & Badjra, 2016), Sangga yoga Wismantara & Ni Putu Ayu Darmayanti (2017), and (Nugroho & Surya, 2018).

However, other research results show the opposite result which shows that the interest rate variable has a negative and significant effect on the Composite Stock Price Index (IHSG). The research was conducted by Ernayani (2015), I Wayan Wahyu Nugraha & Made Rusmala Dewi (2015), Sukamto (2018), Ni Wayan Sri Asih Masithah Akbar (2016), Putra (2016), Ilmi (2017), and Harsono & Wonokinasih. (2018).

Research on interest rates and exchange rates conducted by (Adebowale & Akosile, 2018) "Interest Rate, Foreign Exchange Rate, and Stock Market Development in Nigeria" This study aims to determine the negative and significant effects that occur between interest rates and exchange rates. foreign currencies on stock market developments in Nigeria.

Research conducted by (Al-Awadhi et al., 2020) "Death and Contagious Infectious Diseases: Impact of The COVID-19 Virus on Stock Market Returns" analyzed the Hang Seng Index and Shanghai stocks. Composite Index on stock exchanges during covid-19 in China. This study shows that the pandemic interacts negatively with stock market gains. The rate of return on shares is significantly negatively related to share prices. This study uses a panel regression approach. The results show evidence of a negative and significant effect on stock returns in all companies included in the Hang Seng Index and the Shanghai Composite Index on the Stock Exchange during the period January 10 to March 16, 2020 in China.

The return of the yen exchange rate with the US dollar has a high chance of losing money from exchange rate trading during the covid-19 virus outbreak when compared to before the covid-19 pandemic. This research was conducted to evaluate the effectiveness of the exchange rate (Yen-US Dollar) in the return of the Japanese market, and the results show that the exchange rate has an influence on stock returns for Japan, this shows in accordance with the previous literature. This research was conducted by (Narayan et al., 2020) "Japanese Currency and Stock Market - What Happened During the COVID-19 Pandemic?".

Research conducted by (Khan et al., 2020) "The Impact of Covid-19 Pandemic on Stock Markets: An Empirical Analysis of World Major Stock Indices" which aims to investigate the impact of the Covid-19 pandemic on the stock market. The methods used are OLS, T-test and Mann-Whitney test. The results of this study show evidence that the Covid-19 pandemic has a negative impact on the stock index.

RESEARCH METHODS

This research used a quantitative approach that connects two or more facts and properties of the object under study based on a certain framework by examining the relationship between the independent variable and the dependent variable. This research was conducted by taking data from the Indonesia Stock Exchange with researchers on the movement of the Jakarta Composite Index and taking data from Bank Indonesia by examining Exchange Rates and Interest Rates. With this method used to explain the effect of the independent variables, namely Exchange Rate, Interest Rate on the dependent variable, namely the Composite Stock Price Index.

The purpose of this study is to see the influence of Exchange Rates and Interest Rates on the Composite Stock Price Index during the Covid-19 pandemic in Indonesia. Regression method is used to measure how much influence the independent variable has on the dependent variable.

Operational Variables	
Exchange Rate	The ratio the end daily value of exchange rate
Interest Rate	The ratio the end daily value of interest rate
Jakarta Composite Index (JCI)	The ratio the end daily value of Jakarta Composite Index

The method used in this research is a descriptive statistics, multiple linear regression analysis, classical assumption test, hypothesis test, T-test, F-test, and determination coefficient analysis R2 by using E-Views 10.

RESULTS AND DISCUSSION

Based on table 1, the highest JCI value was 5999,610 on February 7, 2020, while the lowest JCI value was 3937,630 on March 24, 2020. Then the JCI average value was 4968,168 with a standard deviation of 511.6541 with a large standard deviation value, this indicates that the JCI value fluctuates sharply.

Table 1. Descriptive Statistics of JCI

Series: IHSG Sample 1 110 Observations 110	
Mean	4968.168
Median	4899.275
Maximum	5999.610
Minimum	3937.630
Std. Dev.	511.6541
Skewness	0.668620
Kurtosis	2.564022
Jarque-Bera	9.067152
Probability	0.010742
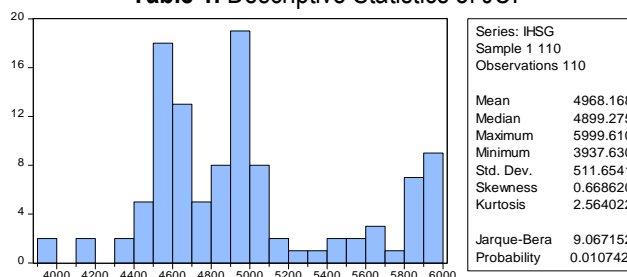
Based on table 2, the highest exchange rate was 16824.71 on April 2, 2020 US dollar, while the lowest exchange rate was 13703.31 on February 6, 2020. Then the average exchange rate during the study period was 14846 , 03 with a standard deviation value of the exchange rate of 855.9968, this indicates that during the study period, the exchange rate of the Rupiah against the US Dollar fluctuated sharply.

Table 2. Descriptive Statistics of Exchange Rate
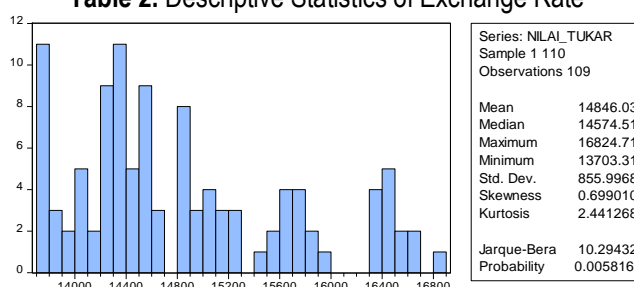
Based on table 3, the highest value of interest rates is 4.84% on February 14, 2020 while the lowest value is 3.75% on July 14, 2020. Then the average interest rate is 4.37% with a standard deviation amounting to 0.258031 which indicates that the interest rate is relatively stable.

Table 3. Descriptive Statistics of Interest Rate
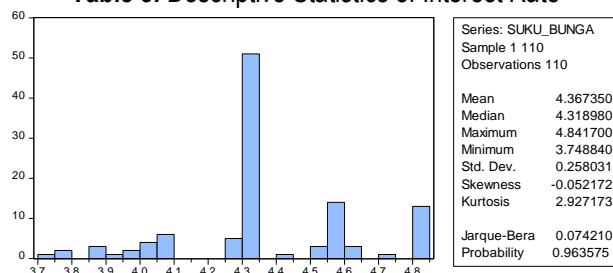
Based on table 4, this study shows that a normal distribution can be seen from the probability value (0.23 or 23%) that exceeds 0.05 or 5%. This regression model is suitable for use because it meets the normality assumption test.

Table 4. Normality Test
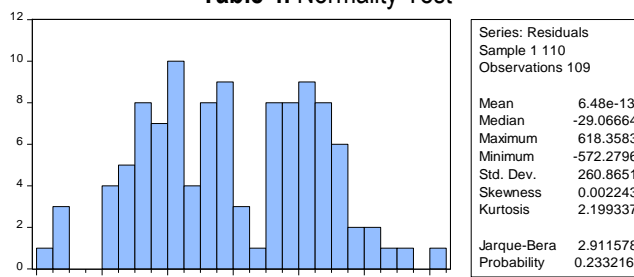
Based on table 5, it is known that there is no milticollinearity problem because the Variance Inflation Factor (VIF) value in all variables is below the maximum limit (<10). Overall, from testing the data above, it can be concluded that there is no multicollinearity problem in the regression model.

Table 5. Multicolinearity Test

Variance Inflation Factors

Date: 01/14/21   Time: 13:20

Sample: 1 110

Included observations: 109

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	535021.4	841.1004	NA
NILAI_TUKAR	0.000956	332.1855	1.090620
SUKU_BUNGA	10727.12	322.1364	1.090620

Based on table 6, it is known that the probability of each independent variable above is not significant or more than 5%, which means that there are no independent variables that affect the ARESID (Absolute Residual) variable so it can be concluded that in this study the regression model used does not experience heteroscedasticity problems.

Table 6. Heteroscedasticity Test : Glejser

Heteroskedasticity Test: Glejser

F-statistic	0.695691	Prob. F(2,106)	0.5010
Obs*R-squared	1.412223	Prob. Chi-Square(2)	0.4936
Scaled explained SS	1.006210	Prob. Chi-Square(2)	0.6047

Test Equation:

Dependent Variable: ARESID

Method: Least Squares

Date: 01/14/21   Time: 13:22

Sample: 1 110

Included observations: 109

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-214.8230	374.9622	-0.572919	0.5679
NILAI_TUKAR	0.016525	0.015846	1.042814	0.2994
SUKU_BUNGA	43.98736	53.09376	0.828485	0.4093
R-squared	0.012956	Mean dependent var		222.4297
Adjusted R-squared	-0.005667	S.D. dependent var		134.6014
S.E. of regression	134.9823	Akaike info criterion		12.67530
Sum squared resid	1931343.	Schwarz criterion		12.74938
Log likelihood	-687.8039	Hannan-Quinn criter.		12.70534
F-statistic	0.695691	Durbin-Watson stat		0.538237
Prob(F-statistic)	0.500992			

Based on table 7, it is known that the results of the above calculations, the value of Prob. Chi-Square is 0.82 or 82%, which means that there is no autocorrelation and the regression model is feasible to use.

Table 7. Autocorelation Test
Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.192712	Prob. F(2,102)	0.8250
Obs*R-squared	0.402796	Prob. Chi-Square(2)	0.8176

Based on table 8, the t test results show that the exchange rate has a significance value of 0.000 and the t-value (-13,20642) <t-table (1.98238) with a regression coefficient value (-0.408237) which shows a negative and no effect. significant. Meanwhile, interest rates have a positive and significant effect with t-value (6.655301)> t-table (1.98238) with a regression coefficient value (689.3017).

Based on table 8, the results of the F test show that the exchange rate and interest rates simultaneously have a significant effect on the Composite Stock Price Index with a probability value (0.00) <0.05 and the F-count value (146.891)> F-table (3, 08).

Based on table 8, the results of the analysis of the coefficient of determination (R^2) with the results of the adjusted R^2 value (0.729854) indicate that the exchange rate and interest rates are able to explain the dependent variable by 73% and the rest is explained by other variables.

Table 8. T-Test, F-Test, and Analysis of Coefficient of Determination (R^2)

Dependent Variable: IHSG
Method: Least Squares
Date: 01/14/21 Time: 14:18
Sample: 1 110
Included observations: 109

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8013.070	731.4516	10.95502	0.0000
NILAI_TUKAR	-0.408237	0.030912	-13.20642	0.0000
SUKU_BUNGA	689.3017	103.5718	6.655301	0.0000
R-squared	0.734857	Mean dependent var		4959.917
Adjusted R-squared	0.729854	S.D. dependent var		506.6122
S.E. of regression	263.3146	Akaike info criterion		14.01171
Sum squared resid	7349465.	Schwarz criterion		14.08579
Log likelihood	-760.6384	Hannan-Quinn criter.		14.04175
F-statistic	146.8919	Durbin-Watson stat		0.170812
Prob(F-statistic)	0.000000			

The exchange rate did not have a significant and negative effect on the composite stock price index in Indonesia during the Covid-19 pandemic. On the other hand, interest rates have a positive and significant effect on the composite stock price index in Indonesia during the Covid-19 pandemic. Simultaneously the exchange rate and interest rates have a significant effect on the composite stock price index in Indonesia during the Covid-19 pandemic. Fluctuations in exchange rates and interest rates affect the composite stock price index. When they go up or down, the composite stock price index will also like that.

CONCLUSION

The conclusions of this study are as follows: (1) Based on the research conducted, it was found that the exchange rate variable did not have a significant effect on the JCI in Indonesia during the Covid-19 pandemic in February-July 2020. (2) Based on the research carried out The results show that the interest rate variants have a negative and significant effect on the JCI, this means that an increase in interest rates will cause a decrease in the Composite Stock Price Index (IHSG) in Indonesia during the Covid-19 pandemic. (3) Based on this research,

the results show that simultaneously the exchange rate and interest rate variables have a significant effect on the Composite Stock Price Index (IHSG). This shows that the movement of these two variables can affect the Composite Stock Price Index (IHSG) even though the exchange rate variable does not partially affect the Composite Stock Price Index (IHSG). This research still has several limitations: (1) This research only uses exchange rate and interest rate variables which explain macroeconomic factors and requires more variables to make this research more accurate. (2) The data in this study are limited to daily data for February-July 2020 which are obtained in Indonesia and require more data to get better results from this study.

REFERENCES

Adebowale, E. A., & Akosile, A. I. (2018). Interest Rate, Foreign Exchange Rate, and Stock Market Development in Nigeria. Binus Business Review. https://doi.org/10.21512/bbr.v9i3.4941

Al-Awadhi, A. M., Alsaifi, K., Al-Awadhi, A., & Alhammadi, S. (2020). Death and contagious infectious diseases: Impact of the COVID-19 virus on stock market returns. Journal of Behavioral and Experimental Finance. https://doi.org/10.1016/j.jbef.2020.100326

Anwar, S. (2011). Metodelogi Penilaian Bisnis. Salemba Empat, Jakarta.

Ernayani, R. (2015). Pengaruh Kurs Dolar, Indeks Dow Jones Dan Tingkat Suku Bunga SBI Terhadap IHSG (Periode Januari 2005 – Januari 2015). JST (Jurnal Sains Terapan). https://doi.org/10.32487/jst.v1i2.98

Ghozali, I. (2012). Aplikasi Analisis Multivariat dengan Program IBM SPSS 20 (Edisi keenam). Semarang: Universitas Diponegoro. Metode Penelitian Bisnis.

Harga, I., Gabungan, S., Bursa, D. I., & Indonesia, E. (2017). Fakultas Ekonomi dan Bisnis Universitas Udayana , Bali , Indonesia Pasar modal memiliki peran penting dalam perekonomian seluruh negara . Pasar modal merupakan salah satu instrumen ekonomi dewasa ini yang mengalami perkembangan sangat pesat . Hal ini tida. 6(8), 4391–4421.

Harsono, A. R., & Wonokinasih, S. (2018). Pengaruh Inflasi, Suku Bunga, Dan Nilai Tukar Rupiah Terhadap INdeks Harga Saham Gabungan (Studi pada Bursa Efek Indonesia Periode 2009-2013). Jurnal Administrasi Bisnis, 60(2), 102–110.

Ilmi, M. F. (2017). Pengaruh Kurs/ Nilai Tukar Rupiah, Inflasi Dan Tingkat Suku Bunga Sbi Terhadap Indeks Harga Saham Gabungan Lq-45 Periode Tahun 2009-2013. Nominal, Barometer Riset Akuntansi Dan Manajemen. https://doi.org/10.21831/nominal.v6i1.14335

Khan, K., Zhao, H., Zhang, H., Yang, H., Shah, M. H., & Jahanger, A. (2020). The impact of COVID-19 pandemic on stock markets: An empirical analysis of world major stock indices. Journal of Asian Finance, Economics and Business. https://doi.org/10.13106/jafeb.2020.vol7.no7.463

Kusuma, I., & Badjra, I. (2016). Pengaruh Inflasi, Jub, Nilai Kurs Dollar Dan Pertumbuhan Gdp Terhadap Ihsg Di Bursa Efek Indonesia. E-Jurnal Manajemen Universitas Udayana, 5(3), 255199.

Narayan, P. K., Devpura, N., & Wang, H. (2020). Japanese currency and stock market—What happened during the COVID-19 pandemic? Economic Analysis and Policy. https://doi.org/10.1016/j.eap.2020.09.014

Ni Wayan Sri Asih Masithah Akbar. (2016). Analisis Pengaruh Inflasi, Suku Bunga, Nilai Tukar (Kurs) Dan Pertumbuhan Produk Domestik Bruto (Pdb) Terhadap Indeks Harga Saham Gabungan (Ihsg) Studi Kasus Pada Perusahaan Properti Yang Terdaftar Di Bursa Efek Indonesia. Jurnal Manajemen Dan Akuntansi, 17(1), 43–52.

Nugroho, Y. C., & Surya, A. (2018). Analisis Pengaruh Suku Bunga SBI, Nilai Kurs, Harga Emas Dunia, Indeks Dow Jones, dan Indeks Hang SengTerhadap IHSG (Studi Pada BEI Periode 2007-2016). 20, 67–81. https://doi.org/10.31219/osf.io/vbydj

Pengaruh Suku Bunga Sbi, Nilai Tukar, Dan Indeks Pasar Dunia Pada Ihsg Di Bei. (2015). Jurnal Manajemen, Strategi Bisnis Dan Kewirausahaan.

Priyatno, D. (2010). Teknik Mudah dan Cepat Melakukan Analisis Data Penelitian dengan SPSS. Yogyakarta: Gava Media.

Priyatno, D. (2016). SPSS Handbook. In Yogyakarta, Mediakom.

Putra, D. A. A. (2016). The Effect of Rupiah/US$ Exchange Rate, Inflation and SBI Interest Rate on Composite Stock Price Index (CSPI) in Indonesia Stock Exchange. International Conference on Education.

Sadono Sukirno. (2016). Teori Pengantar Makroekonomi. In Rajawali Press.

Sugiyono. (2015). Sugiyono, Metode Penelitian dan Pengembangan Pendekatan Kualitatif, Kuantitatif, dan R&D , (Bandung: Alfabeta, 2015), 407 1. Metode Penelitian Dan Pengembangan Pendekatan Kualitatif, Kuantitatif, Dan R&D.

Sukamto, S. W. (2018). Pengaruh Inflasi, Suku Bunga, Dan Nilai Tukar Rupiah Terhadap Indeks Harga Saham Gabungan (Ihsg) Di Bursa Efek Indonesia. Manajemen Bisnis. https://doi.org/10.22219/jmb.v6i2.5638

Sukirno, S. (2011). Teori Pengantar Makroekonomi. In Rajawali Press.

Sunariyah, U. G. M. (2003). Pengantar Pengetahuan Pasar Modal Edisi Ketiga. Yogyakarta: UPP AMP YKPN. Kas Dan Laba Akuntansi Terhadap Return Saham Pada Perusahaan Berkapitalisasi Besar. Akuntansi Dan Keuangan.

Tandelilin, E. (2010). portofolio dan investasi. In Kanisius.