ANALYSIS OF THE EFFECTS OF INFLATION, INTEREST RATES, AND THE EXCHANGE RATE OF THE DOLLAR ON THE RETURN OF COMPOSITE STOCK PRICE INDEX IN INDONESIA STOCK EXCHANGE

Ita Mayasari[1]*, Dwi Saraswati[2]
[1,2] Accounting Department, Universitas Pembangunan Panca Budi – Indonesia

*Corresponding author: ita.mayasari@gmail.com

ARTICLE INFO

Date received : 28 Oct 2022
Revision date : 19 Nov 2022
Date received : 25 Nov 2022

Keywords:
Inflation, interest rates, exchange rates, and stock price index

ABSTRACT

This study analyzes the influence of inflation, interest rates, and exchange rates on the return of the Composite Stock Price Index (CSPI) in the Indonesia Stock Exchange (ISE). The study utilizes a quantitative research method and secondary data from reports on inflation, interest rates, and the dollar exchange rate from the period of 2015-2018, obtained from the website www.bi.go.id. The data is analyzed using unit root tests, multiple linear regression, and hypothesis testing. The results indicate that the variables of inflation, interest rates, and exchange rates are not stationary at the level. The regression analysis shows that inflation has a negative influence on the CSPI, interest rates have a negative influence on the CSPI, and exchange rates have a positive influence on the CSPI. The classical assumption tests reveal no issues of multicollinearity and heteroscedasticity, but there is a problem of autocorrelation. These findings support previous research that demonstrates the influence of inflation, interest rates, and exchange rates on the CSPI. The study also supports previous research that shows a negative impact of exchange rates on the property sector stock prices. This can be explained by the appreciation of the rupiah against the dollar, which affects the marketing of Indonesian products abroad, particularly in terms of price competition. The study concludes that inflation has a negative and insignificant influence on stock prices, interest rates have a negative and insignificant influence on stock prices, and exchange rates have a positive and significant influence on economic growth. Future research is recommended to include other independent variables such as money supply or trade balance to further analyze the impact on the stock market.

INTRODUCTION

Investment is one of the means to increase the ability to accumulate and preserve wealth. Investment can be defined as a commitment to invest a certain amount of funds at present with the aim of obtaining a certain amount of profit in the future. The parties involved in investment are called investors.

One of the investment options can be done through the capital market. Tandelilin (2010:26) explains that the capital market is a place where parties with excess funds meet with those who need funds to trade securities, which generally have a lifespan of more than one year, such as stocks. In addition to becoming a partial owner of a company, investors expect the stocks they invest in to provide a certain level of return.

For investors, the capital market allows them to choose investment objects with various levels of return and risk. Meanwhile, for issuers (emitters), the capital market allows them to raise long-term funds to support

their business sustainability. In Indonesia, investors interested in investing in the capital market invest their capital in the Indonesia Stock Exchange (ISE).

One of the indices that investors pay attention to when investing in the Indonesia Stock Exchange is the Composite Stock Price Index. This index represents all the stocks listed on the Indonesia Stock Exchange. Therefore, through the movement of the Composite Stock Price Index, an investor can assess the market conditions, whether it is healthy or not. Different market conditions require different investment strategies from investors. There are many factors that can influence the stock index, such as changes in central bank interest rates, global economic conditions, global energy prices, political stability in a country, and more. In addition to these factors, the actions of investors themselves also influence the movement of the stock index. As mentioned earlier, there are many factors that affect the capital market. Generally, when interest rates and oil prices decrease, the stock index tends to rise.

With low interest rates and low commodity prices, companies can freely expand their activities, which ultimately leads to increased profits. When a company's profits increase, investors are likely to be interested in buying shares of that company, which in turn drives up the stock index. In an unstable economic condition, inflation can occur at any time. As an investor, one must anticipate such conditions when making investments. Inflation is a situation where prices generally increase or the value of money decreases due to an increase in the money supply that is not accompanied by an increase in the supply of goods.

The inflation rate can have both positive and negative effects depending on the degree of inflation. Excessive inflation can cause harm to the overall economy, leading to many companies experiencing bankruptcy. High inflation will cause stock prices to fall in the market, while very low inflation rates will result in sluggish economic growth, ultimately causing stock prices to move slowly (Samsul, 2011: 201)

The development of the exchange rate of a country's currency with other countries (e.g. US/Rupiah) reflects the value of a country's currency against foreign currencies. The magnitude of the exchange rate is determined by the exchange rate system adopted by a country. According to Bodie et al. (2010: 175), "The exchange rate represents the value of a currency where the domestic currency is converted into foreign currency." According to Samsul (2011: 202), "The depreciation of the domestic currency against foreign currency can increase export volume." This can enhance the profitability of companies, which in turn increases the stock prices of the company if the demand in the international market is sufficiently elastic and affects the returns received by investors.

Figure 1. Inflation, Interest Rates, Exchange Rates and SPI 2015-2018
Source: ISE, 2019

Based on the graph above, fluctuations can be observed in the average return with macroeconomic (Rangkuty, et al., 2020) variables such as inflation, interest rates, and the exchange rate of the Dollar from 2015 to 2018. From the data, it can be seen that in 2015, when the average inflation rate was 6.38%, it decreased to 3.53% in 2016. The average return of the composite stock price index (CSPI) in 2015 was 4,593.01 and increased to 5,296.71 in 2016. Meanwhile, the average inflation rate in 2016 was 3.53% and increased to 3.81% in 2017. The average return of the composite stock price index (CSPI) in 2016 was 5,296.71 and showed an increase to 6,355.65 in 2017.

When the average exchange rate of the Dollar was Rp 10,081 in 2015, it decreased to Rp 9,957. The average return of the composite stock price index (CSPI) showed an increase. In 2015, the average return of the composite stock price index (CSPI) was 4,593.01 and increased to 5,296.71 in 2016. In contrast, the exchange rate of the Dollar in 2017 was Rp 13,431 and increased to Rp 14,339 in 2018. The average return of the composite stock price index (CSPI) decreased from 6,355.65 in 2017 to 6,194.50 in 2018. In 2017,

when the exchange rate of the Dollar was Rp 13,431 and increased to Rp 14,339 in 2018, the average return of the composite stock price index (CSPI) decreased from 6,355.65 to 6,194.50.

Based on the above description, the researcher is interested in conducting a study entitled "Analysis of the Effects of Inflation, Interest Rates, and the Exchange Rate of the Dollar on the Return of the Composite Stock Price Index (CSPI) in the Indonesia Stock Exchange (IDX)"

METHOD

This research is a quantitative study because it involves the calculation of numerical data. Additionally, it adopts an ex post facto approach, which examines past events and traces back to identify the factors that may have caused those events (Sugiyono, 2013: 147). The study utilizes secondary data obtained from the official websites of Bank Indonesia (www.bi.go.id) and the Indonesia Stock Exchange (www.idx.co.id). The data includes inflation, interest rates, the exchange rate of the Rupiah/US dollar, and the return of the Composite Stock Price Index (CSPI) from 2015 to 2018.

The data collection process involves the use of quantitative data, specifically inflation, interest rates, the exchange rate of the Rupiah/US dollar, and the return of the Composite Stock Price Index (CSPI). These data are obtained from the official website of Bank Indonesia (www.bi.go.id). The research period spans four years, from January 2014 to December 2018.

The data analysis techniques employed in this study include unit root tests, multiple linear regression using the Ordinary Least Squares method, integration degree tests, and hypothesis testing. The Augmented Dickey-Fuller Test is used for the unit root tests. The data processing is conducted using EViews 10 software.

RESULT AND DISCUSSION

Stationarity Test of Data

The first step in this study is to conduct a unit root test to determine the degree of stationarity of the data used. Time series data is considered stationary if it exhibits a constant pattern over time. The unit root test used in this study is the Augmented Dickey Fuller Test (ADF).

The unit root test is conducted individually for each variable, both dependent and independent variables. The results of the data processing using EViews 10 software are shown in Table 1.

Table 1. The results of the unit root test

Variable	ADF t-statistik	Critic Mc Kinnon			Description
		1%	5%	10%	
Inflation	-1.881412	-3.577723	-2.925169	-2.600658	Non-stationary
Interest rates	-1.771215	-3.596616	-2.933158	-2.604867	Non-stationary
Exchange rates	-0.843535	-3.577723	-2.925169	-2.600658	Non-stationary

Source: data processed, 2021

Based on Table 1, the results of the unit root test using the ADF test indicate that none of the variables are stationary at the 1%, 5%, or 10%

Integration Degree Test

Since the unit root test at the Level level indicates that the observed data is not stationary, it is necessary to proceed with the integration degree test. This test aims to determine the degree to which the observed data is stationary. The integration degree test is a continuation of the unit root test, and the steps are identical to the unit root test, with the only difference ISEng the level (first difference) and the assumption of the hypothesis used.

Table 2. The result of Integration Degree Test First Difference with Augmented Dickey Fuller Test

Variable	ADF t-statistik	Critic Mc Kinnon			Desciption
		1%	5%	10%	
Inflation	-5.602237	-3.584743	-2.928142	-2.602225	Non-stationary
Interest rates	-3.411273	-3.596616	-2.933158	-2.604867	Non-stationary

Exchange rates	-7.983098	-3.581152	2.926622	-2.601424	Non-stationary

Source: data processed, 2021

Based on Table 2, the results of the unit root test at the first difference level using the ADF test indicate that all variables are stationary at the first difference level. This means that all variables can be used in this study and are integrated at the first degree (first difference).

Multiple Linear Regression (Time Series)

This study utilizes three dependent variables and one independent variable. The data processing is conducted using Eviews 10, and the results of the multiple regression are obtained as follows:

Table 3. Multiple Linear Regression

Dependent Variable: CSPI__Y_
Method: Least Squares
Date: 03/26/20 Time: 18:19
Sample: 2015M01 2018M12
Included observations: 48

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Inflation_X1_	6.983273	48.08197	0.145237	0.8852
Interest_rates_X2_	-1.5196	63.45704	-2.104094	0.0411
Exchange_rates_X3_	-0.201303	0.029370	-6.853937	0.0000
C	3813.190	564.7032	6.752556	0.0000

R-squared	0.721526	Mean dependent var	5451.346
Adjusted R-squared	0.702539	S.D. dependent var	597.9227
S.E. of regression	326.1069	Akaike info criterion	14.49198
Sum squared resid	4679210.	Schwarz criterion	14.64792
Log likelihood	-343.8076	Hannan-Quinn criter.	14.55091
F-statistic	38.00134	Durbin-Watson stat	0.567757
Prob(F-statistic)	0.000000		

Source: data processed, 2021

Based on the coefficients above, the multiple linear regression model can be developed as follows:

$$CSPI = \alpha + \beta 1INFLATIONt + \beta 2Interest\_ratest + \beta 3EXCHANGE\_RATESt + \mu t$$

If the values in Table 3 above are substituted, the following values will be obtained:

CSPI = 3813,190 – 6,983273 INFLATIONt – 1,5196 INTEREST_RATESt + 0,201303 EXCHANGE_RATESt

The constant value of 3813.190 means that if there is no inflation, interest rate, and exchange rate, the

growth of CSPI will be 3813.190.
The coefficient of the variable (INFLATION) has a negative effect on CSPI, with a coefficient of -6.983273. This means that if inflation increases by 1%, it will decrease CSPI by 6.98%.
The coefficient of the variable (INTEREST RATES) has a negative effect on CSPI, with a coefficient of -133.5196. This means that if the interest rate increases by 1%, it will decrease CSPI by 1.51%.
The coefficient of the variable (EXCHANGE RATES) has a positive effect on CSPI, with a coefficient of 0.201303. This means that if the exchange rate increases by Rp 100, it will increase CSPI by 0.2%.

Classical Assumptions Test

Multicollinearity Test

The multicollinearity test is conducted to examine whether there is correlation among independent variables in the regression model. The multicollinearity test needs to be performed when linear regression involves more than one independent variable. The results of the multicollinearity test can be seen in the table below.

Table 4. The Results of VIF test

Variance Inflation Factors Included observations: 48			
Variable	Coefficient Variance	Uncentered VIF	Centered VIF
INFLATION__X1_	2311.876	20.92878	2.073450
INTEREST_RATES__X2_	4026.796	57.97240	2.160192
EXCHANGE_RATES__X3_	0.000863	57.23900	1.538627
C	318889.7	143.9335	NA

Source: data processed, 2021

The results above show that the value of Centered VIF Inflation is 2.07, Interest rates is 2.16, and Exchange rates is 1.5. Since these values are less than 10, it can be concluded that there is no multicollinearity issue in the model.

Heteroskedasticity Test

The heteroskedasticity test is conducted to examine whether the residuals of the formed model have constant variance. If the chi-square value is less than 0.05, then H0 is rejected, indicating no heteroskedasticity in the model. The results of the heteroskedasticity test can be seen in Table 5.

Table 5. The Result of White Heteroskedasticity Test

Heteroskedasticity Test: White			
F-statistic	1.859665	Prob. F(3,44)	0.1504
Obs*R-squared	5.401314	Prob. Chi-Square(3)	0.1447
Scaled explained SS	4.542092	Prob. Chi-Square(3)	0.2086

Source: data processed, 2021

Based on the White heteroskedasticity test, with a chi-square probability value of 0.1447, which is greater than the significance level α of 5%, it can be concluded that there is no significant heteroskedasticity issue. Therefore, the null hypothesis (H0) is accepted, indicating no heteroskedasticity problem.

Autocorrelation Test

The model experiences autocorrelation, as evidenced by the Durbin-Watson (D-W) value of 0.567757. The condition for ISEng free from autocorrelation is 1.54 < DW < 2.46. From Table 4.2, the Multiple Regression Model of CSPI above shows that the resulting Durbin-Watson value is 0.567757, indicating that the model used in this study suffers from autocorrelation and requires an autoregressive test.

Table 6. The Result of Autoregressive Test

Dependent Variable: CSPI__Y_
Method: ARMA Maximum Likelihood (OPG - BHHH)
Date: 03/28/20 Time: 01:01
Sample: 2015M01 2018M12
Included observations: 48
Convergence achieved after 8 iterations
Coefficient covariance computed using outer product of gradients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5581.271	495.4082	11.26600	0.0000
AR(1)	0.950996	0.041001	23.19438	0.0000
SIGMASQ	31397.49	6773.528	4.635323	0.0000

R-squared	0.910309	Mean dependent var	5451.346
Adjusted R-squared	0.906323	S.D. dependent var	597.9227
S.E. of regression	183.0045	Akaike info criterion	13.36627
Sum squared resid	1507080.	Schwarz criterion	13.48322
Log likelihood	-317.7904	Hannan-Quinn criter.	13.41046
F-statistic	228.3617	Durbin-Watson stat	1.771844
Prob(F-statistic)	0.000000		

Inverted AR Roots	.95

Source: data processed, 2021

From the autoregressive results, it is found that the dependent variable in the previous year (CSPIt-1) has a positive and significant influence on the dependent variable in the current year. Therefore, in the model, an additional independent variable or the dependent variable in the previous year will be added as an independent variable that significantly affects the dependent variable, with a Durbin-Watson value of 1.771844 after autoregressive transformation.

DISCUSSION

The Influence of Inflation on the Composite Stock Price Index (CSPI) in the Indonesia Stock Exchange

Based on the calculation of inflation in this study, it has a positive influence on the CSPI. This is because inflation is generally understood as an increase in overall prices of goods, resulting in a decrease in the purchasing power of money or, in other words, money becomes less valuable. As a result, people prefer to invest their funds in the stock market by buying stocks, which leads to an increase in the composite stock price index (CSPI).

This finding is in line with the theory proposed by Samsul (2006:201) that the level of inflation can have both positive and negative effects depending on the degree of inflation itself. Inflation has a positive effect or can be considered as having no effect when the nominal value is below 10%, and it has a negative effect when it exceeds 10%. Excessive inflation can harm the overall economy, leading to many companies experiencing bankruptcy. Therefore, it can be concluded that high inflation will cause stock prices to fall in the market, while very low inflation will result in sluggish economic growth, ultimately causing stock prices to move slowly. It is difficult to achieve an ideal level of inflation that can stimulate business activities, where economic growth can overcome unemployment, companies can achieve adequate profits, and stock prices in the market can move normally.

This research supports the findings of Inayatul (2011), which indicate that inflation has a positive influence on the composite stock price index in Indonesia.

The Influence of Interest Rates on the Composite Stock Price Index (CSPI) in the Indonesia Stock Exchange

Based on the calculation of inflation in this study, it has a negative influence on the CSPI. The SBI interest rate has a significant and negative influence on the movement of the composite stock price index. This is in line with the theory proposed by Sunariyah (2006) that generally, when interest rates and world energy prices decrease, the stock price index in a country will increase. A decrease in interest rates will result in cheaper energy prices, allowing companies to expand their activities and increase their profits. When company profits increase, investors will be interested in buying shares of the company, thus driving up the stock price index. This theory is supported by the decrease in interest rates from 7.42% at the beginning of 2005 to 6.00% in December 2011 in Indonesia, which caused the CSPI to rise from Rp 1,045.44 to Rp 3,821.99 at the end of 2011 (www.bi.go.id). This research supports the findings of Inayatul (2011), which indicate that interest rates have a positive influence on the composite stock price index in Indonesia.

The Influence of Exchange Rates on the Composite Stock Price Index (CSPI) in the Indonesia Stock Exchange

Based on the calculation in this study, exchange rates have a negative influence on the CSPI. When the dollar exchange rate weakens, investors tend to buy stocks, leading to an increase in the composite stock price index. Conversely, when the exchange rate strengthens, investors may sell their stocks, causing the index to decline. This is because investors with large and strong funds engage in buying and selling actions, which trigger movements in the composite stock price index. This research supports the findings of Ismayati (2012), which indicate that exchange rates have a negative influence on the stock prices of the property sector. This can be explained by the appreciation of the rupiah exchange rate against the dollar, which affects the marketing of Indonesian products abroad, especially in terms of price competition. This indirectly affects trading activities, which in turn affects Indonesia's income.

CONCLUSION

Based on the research results and discussions presented in the previous chapter, the following conclusions can be drawn:

1. The regression/estimation results of the model show that the influence of INFLATION, INTEREST RATES, and EXCHANGE RATES on the CSPI is 72.15%, while the remaining 27.85% is explained by other variables not included in the estimation model or is part of the disturbance error term.
2. Partially, inflation has a negative and insignificant effect on the CSPI, interest rates have a negative and insignificant effect on the CSPI, and the exchange rate has a positive and significant effect on economic growth.
3. Simultaneously, the independent variables of INFLATION, INTEREST RATES, and EXCHANGE RATES have a positive effect on the CSPI.
4. The stationarity test results show that there is no stationary data in the unit root test at the level with the augmented Dickey-Fuller test method.

5. The degree of integration test results show that all data is stationary in the first difference integration test with the augmented Dickey-Fuller test method.
6. The Classical Assumption test results show that there is no multicollinearity problem in the regression model.
7. The Classical Assumption test results show that the chi-square probability value of 0.1447 is greater than the 5% significance level α, which means accepting H0 or rejecting Ha, indicating no heteroscedasticity problem.
8. The Classical Assumption test results show that there is an autocorrelation problem in the regression model, which requires an autoregressive test to be conducted.
9. After conducting the autoregressive test on the regression model, there is no longer an autocorrelation problem.
10. All regression results from this study support previous research

REFERENCES

Anoraga, Pandji dan Pakarti, Piji. (2011). Pengantar Pasar Modal. Edisi Revisi, Cetakan III. Rineka Cipta. Jakarta.

Akbar Faoriko,. (2013). Pengaruh Inflasi, Suku Bunga dan Nilai Tukar Rupiah Terhadap Return Saham Di Bursa Efek Indonesia. Jurnal Ekonomi.

Bodie, et al. (2010). Investment. Edisi enam Jakarta: Salemba Empat.

Cahyono, J. E. (2010). Menjadi Manajer Inventasi Bagi Diri Sendiri. Jakarta: Gramedia Pustaka Utama.

Darliansyah. 2022. Public Service Digital Transformation Model In Supporting The Development Of A New Suro Village, Suro Makmur District. International Journal of Science, Technology & Management Vol. 3(6) pp. 1573-1583.

Dedy, Pratikno. (2009). Analisis Pengaruh Nilai Tukar Rupiah, Inflasi, SBI, dan Indeks Dow Jones Terhadap Pergerakkan Indeks Harga Saham Gabungan (CSPI) Di Bursa Efek Indonesia (ISE). Skripsi. Universitas Sumatera Utara Medan.

Dheny Wahyu Fuadi,. (2009). Analisis Pengaruh Suku Bunga, Volume Perdagangan dan Kurs Terhadap Return Saham Sektor Properti Yang Listed Di ISE. Jurnal Manajemen.

Fahmi, I. (2013). Pengantar Pasar Modal. Yogyakarta. Penerbit Alfabeta.

Faoriko, Akbar. (2013). Pengaruh Inflasi, Suku Bunga dan Nilai Tukar Rupiah Terhadap Return Saham di Bursa Efek Indonesia. Skripsi. Universitas Negeri Yogyakarta.

Hakim, A. (2010). Ekonomi Pembangunan. Yogyakarta: Gramedia.

Hariyani, I. (2010). Buku Pintar Hukum Bisnis Pasar Modal. Jakarta. Penerbit Transmedia

Harianja, Pantun et al. 2022. The Role Of Brand Image In Mediated Amenities In Increasing Tourist Satisfaction. Proceeding of the International Conference on Economics and Business Vol. 1(1) pp. 58-64.

Harianja, Pantun. 2022. Halal Tourism Model Based on Local Wisdom In Bukit Lawang As One Of The Branding Efforts Towards Excellent Primadona North Sumatra. International Journal of Science, Technology & Management Vol. 3(6) pp. 1676-1887.

Hasoloan,J. (2014). Ekonomi Moneter. Yogyakarta: Penerbit Deepublish.

Ignatius Christian Pradhypta, et al. (2018). Analisis Faktor-faktor yang mempengaruhi Indeks Harga Saham Gabungan Di Bursa Efek Indonesia. Jurnal Manajemen Bisnis. Vol.13.No.1 periode Januari-Juni.

I Made Bayu Terayana dan Nyoman Triaryati (2019). Pengaruh nilai tukar rill dan tingkat suku bunga rill terhadap indeks harga saham gabungan. Jurnal Manajemen. Vol.8.No.2.

Jogiyanto, H. (2010). Teori Portofolio dan Analisis Investasi. Edisi Keenam Yogyakarta: BPFE.

Kristanto,. (2016). Analisis Pengaruh Inflasi, Kurs, dan Suku Bunga Terhadap Pergerakan Bersama Return Saham CSPI Dan Volume Perdagangan Periode Januari 2006 – Desember 2015. Jurnal Ekonomi dan Bisnis.

Khalwaty, T. (2010). Inflasi dan Solusinya. Jakarta: PT Gramedia Pustaka Utama.

Krisna, Anak Agung Gde Aditya dan Ni Gusti Putu Wirawatin. (2013). Pengaruh inflasi, tingkat suku bunga SBI, dan nilai tukar rupiah terhadap CSPI di ISE periode 2008 – 2012. Universitas Udayana. Bali.

Kuncoro, M. (2013). Metode Riset Untuk Bisnis & Ekonomi. Jakarta: Penerbit Erlangga.

Ni Kadek Suriyani dan Gede Mertha Sudiartha. (2018). Pengaruh Tingkat Suku Bunga, Inflasi Dan Tukar Terhadap Return Saham di bursa Efek Indonesia. Jurnal Manajemen Unud.Vol.7. No.6.

Rangkuty, D.M. et al. 2020. How do the Causality of Inflation and Government Expenditure in Indonesia? SSRG-IJEMS Journal Vol. 7(5) pp. 28-36.
Rosliana. 2022. Post-Covid-19 Disposible Income Resistance Against Community Welfare In Regency Aceh Singkil. International Journal of Science, Technology & Management Vol. 3(6) pp. 1695-1702.
Rosliana. 2022. Quality Based Productivity of Fertilizer, Technology And Capital. Proceeding of The International Conference on Economics and Business Vol. 1(1) pp. 65-71.
Samsul, M. (2011). Pasar Modal & Manajemen Portofolio. Jakarta: Erlangga.
Sugiyono, 2014. Metode Penelitian Kuantitatif, Kualitatif Dan R&D. Cetakan ke 13. Bandung: Penerbit Alfabeta.
Sukirno, S. (2012). Makro Ekonomi Teori Pengantar. Jakarta: PT Rajagrafindo Persada.
Sunariyah. (2012). Pengantar Pengetahuan Pasar Modal. Edisi Ketiga. UPP AMP YKPN. Yogyakarta.
Tandelilin, Eduardus. 2010. Portofolio dan Investasi (Teori dan Aplikasi). Edisi Pertama. Kanisius: Yogyakarta
www.idx.co.id
https://bolasalju.com/artikel/sejarah-kinerja-CSPI-10-tahun/(diakses 2 Januari 2020)
https://www.bi.go.id/id/moneter/inflasi/data/Default.aspx (diakses 2 Januari 2020).
https://www.bi.go.id/id/moneter/informasi-kurs/transaksi-bi/Default.aspx (diakses 2 Januari 2020).