

The Movement of IDX Agriculture (JKAGRI) During the Covid-19 Pandemic in 2020

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Abstract

The grand theory based on Blanchard said that some factors influenced stock prices, such as the global economy, world energy price level, and political stability of a country. This study analyzes the factors that influenced the movement of IDX Agriculture (JKAGRI) during the pandemic in 2020. The study used secondary data (time series) obtained from the sites Investing.com. Then it was analyzed using multiple linear regression. The results showed that simultaneously the independent variables GOLD, NYSE, FCPO₃, and USD/IDR significantly influence the JKAGRI. While partially the variable gold price (GOLD), New York Stock Exchange (NYSE), and crude palm oil price index (FCPO₃) have a significant effect on the movement of IDX Agriculture (JKAGRI). However, the dollar exchange rate (USD/IDR) does not significantly influence the movement of IDX Agriculture (JKAGRI). Thus, Traders are advised to closely monitor their portfolios while maintaining a stop loss at a certain percentage based on their risk profile. In contrast, investors are expected to wait patiently for an increase or buyback to lower the average price (average down) when technically indicating a price reversal signal.

Keywords: Indonesian Stock Exchange, Agriculture, Regression, Investors

JEL: G11, O24, Q14

A. INTRODUCTION

The Covid-19 pandemic that has occurred since the beginning of 2020 has shocked stock exchanges around the world. Major countries in the world, such as America, have also been affected and have

experienced drastic corrections after the outbreak (H. Liu et al., 2020). Ngwakwe (2020) said that the American Dow Jones Industrial (DJI) stock index saw a significant decline due to the Covid-19 pandemic. In addition, Sansa (2020) states that there is a

significant relationship between confirmed cases of Covid-19 with the Dow Jones Index (DJI) and the Shanghai Stock Exchange (SSE).

Stock exchanges in ASEAN countries such as KLCI (Malaysia), STI (Singapore), and IHSG (Indonesia) also impacted negative sentiment due to the outbreak. All sectors on the KLCI index were significantly affected by negative sentiment due to the pandemic, except for property (REIT) (Lee et al., 2020). The profits of both the STI and KLCI stock markets during the pandemic have decreased (Yong et al., 2021). Moreover, it also occurred in the JCI where several factors influenced the movement of the JCI during the pandemic, namely the price of gold, the Dow Jones Index (DJIA), the dollar exchange rate against the Rupiah (Khoiri & Arghawaty, 2020).

There are eight out of ten listed sector indexes on the Indonesia Stock Exchange (IDX), one of which is the agricultural sector (JKAGRI) which responded negatively before and after the announcement of the Covid-19 case for the first time in Indonesia (Trisnowati & Muditomo, 2021). Likewise (Rifa'i et al., 2020) agree that there are significant changes before and after the pandemic. This is due to a decline in investor perceptions of the capital market, which has triggered a massive sell-off (Selasi, 2020). So it needs accurate forecasting to predict the JCI through the non-seasonal ARIMA model with a MAPE value of 0.150964105 (Rakhmawati et al., 2020).

The JKAGRI index contains a group of companies engaged in agriculture. Based on

the Investing.com website, the number of issuers who have joined is 25. Some of these indices are also included in the highest liquidity index (LQ45), including AALI, BISI, UNSP, SGRO, and TBLA. According to Rukman et al. (2019), in the long-term, there is no significant effect on the exchange rate. According to Febriyanti (2020), the cause of the drastic correction in the LQ45 Index was due to a significant increase in sales volume as a result of the reporting of the first case of Covid-19 in Indonesia.

This study analyzes the factors that influence the movement of the JKAGRI index from the beginning of January 2020 to the end of December 2020. During that time, there was a Covid-19 outbreak which made the stock market drop significantly. However, in fundamental analysis, investors can still invest in a tight and disciplined capital market and collect stocks in various sectors in an effort to minimize the risk of loss (Tambunan, 2020).

This research collected data from investing.com, an international site that displays time-series data of market indexes around the world. Then it also used multiple linear regression to know how deep the influence of Gold, NYSE, FCPO3, and USD/IDR on JKAGRI. These variables have been chosen because local and foreign investors consider some factors which influence stock prices, such as the global economy, world energy price level, and political stability of a country.

B. LITERATURE REVIEW

Jakarta Composite Index (JCI)

Jakarta Composite Index (JCI) has 55 newly listed companies, so it has 668 total listed companies, which have a market capitalization of 7,265.02 trillion in 2019 (Indonesia Stock Exchange, 2019a). If we saw at the past, JCI arose on April 1, 1983, as the parameter of the price movement of all stocks, the regular and preferred stocks listed in the IDX. Then, August 10, 1982, was the base date of the JCI's calculation which is a base index value of 100 which was only 13 stocks that were listed (PT Bursa Efek Indonesia, 2018).

Index classification in IDX is divided into headline, sector, thematic, and factor. Each classification has varieties that are collected based on the similarity of characteristics. In IDX, there are the composite sector (JASICA) and the investable sector. Then JASICA has 10 sectoral such as agriculture (JKAGRI); mining (JKMING); basic industry and chemical (JKBIND); miscellaneous industry (JKMISC); consumer goods Industry (JKCONS); property, real estate, and building construction (JKPROP); infrastructure, utility, and transportation (JKINFA); finance (JKFINA); trade (JKTRAD); service, and investment, and manufacturing (JKMNFG) (Indonesia Stock Exchange, 2019b).

Agriculture Index (JKAGRI)

As a part of JCI, JKAGRI is an agriculture sector index created on January

2, 1996, to measure the performance of all stocks on the mainboard, and the development board in the agricultural sector refers to Jakarta Stock Industrial Classification (JASICA) (Indonesian Stock Exchange, 2019).

Based on the Investing.com website, most members of JKAGRI focus on the plantation and processing of crude palm oil and derivatives, while the other small part is fisheries. Below are the companies listed in JKAGRI:

Table 1. List of companies of JKAGRI Indexed

No	List of Companies	Code	Commodity
1	PT Astra Agro Lestari Tbk	AALI	Palm oil
2	PT Bisi International Tbk	BISI	Corn, rice, and horticulture,
3	PT Austindo Nusantara Jaya Tbk	ANJT	Palm oil and sago
4	PT Eagle High Plantations Tbk	BWPT	Palm oil
5	PT Dharma Satya Nusantara Tbk	DSNG	CPO and wood
6	PT Golden Plantation Tbk	GOLL	Crude palm oil (CPO), fresh fruit bunches (FFB), and palm kernel and its derivatives
7	PT Gozco Plantations Tbk	GZCO	Palm trees, fresh fruit bunches (FFB), CPO, and palm kernel

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No	List of Companies	Code	Commodity	No	List of Companies	Code	Commodity
8	PT Jaya Agra Wattie Tbk	JAWA	Rubber, palm oil, and coffee plantation.	16	PT Tunas Baru Lampung Tbk	TBLA	Vegetable cooking oil.
9	PT Perusahaan Perkebunan London Sumatra Indonesia Tbk	LSIP	Palm oil, rubber, tea, and cocoa.	17	PT Bakrie Sumatera Plantations Tbk	UNSP	Oil palm and rubber
10	PT Multi Agro Gemilang Plantation Tbk	MAGP	Palm cultivation, fresh fruit bunches (FFB), and palm oil and palm kernel	18	PT Central Proteinaprima Tbk	CPRO	Shrimp
11	PT Provident Agro Tbk	PALM	Palm oil plantations	19	PT Dharma Samudera Fishing Industries Tbk	DSFI	Seafood
12	PT Sampoerna Agro Tbk	SGRO	Palm products, palm kernel products, germinated oil palm seed, and non-palm oil products consisting of slab rubber and sago products.	20	PT Inti Agri Resources Tbk	IIKP	Fish breeding
13	PT Salim Ivomas Pratama Tbk	SIMP	Oil, fats, rubber, and sugar cane	21	PT Bumi Teknokultura Unggul Tbk	BTEK	Agricultural biotechnology
14	PT Sinar Mas Agro Resources and Technology Tbk	SMAR	Oil palm trees, processing fresh fruit bunches (FFB) into crude palm oil (CPO) and palm kernel (PK)	22	PT ANDIRA AGRO Tbk	ANDI	CPO and Kernel
15	PT Sawit Sumbermas Sarana Tbk	SSMS	Crude palm oil (CPO), palm kernel (PK), and palm kernel oil (PKO)	23	PT Cisadane Sawit Raya Tbk	CSRA	CPO
				24	PT Estika Tata Tiara Tbk	BEEF	Beef carcass, meat, offal, skin, and other cow-derivative products
				25	PT FAP Agri Tbk	FAPA	CPO
				26	PT Mahkota Group Tbk	MGRO	CPO
				27	PT Multi Agro Gemilang Plantation Tbk	MAGP	Palm plantation
				28	PT Palma Serasih Tbk	PSGO	CPO
				29	PT Pinago Utama Tbk	PNGO	CPO and Rubber
				30	PT Pradiksi Gunatama Tbk	PGUN	Palm oil and palm kernel oil

Source: <https://www.indonesia-investments.com/>

GOLD

During the COVID-19 pandemic in 2020, gold has increased significantly because it has a positive impact on an investment decisions but a negative impact on gold buying behavior (D & DV, 2020). Another reason why that happened is, as Satyatama & Sumantyo (2017) said, the global price of gold is negative and significantly affects the stock price Index. In conclusion, gold was heaven during the COVID-19 pandemic in 2020 cause demand was higher than supply while stock exchanges decreased drastically.



Source: <https://goldprice.org/id>

Indonesia Composite Index is also influenced by gold price (Kusumawati & Asandimitra, 2017). In the same way, Tjandrasa & Sutjiati (2016) also said that the JCI was partially influenced significantly by world gold prices. In contrast, there is the negative impact of gold prices on the stock market performance daily (Ali et al., 2020)

Most people still would rather have gold coins, jewelry, and gold bullion bars as forms of speculation and prefer to fund in ETF and Futures and options that give more capital gain and an easy form of investment (Nawaz & V. R., 2013).

Gold is increasingly considered a safe haven that has appreciated over the years and provides a hedge against inflation and also a medium that can be pledged easily during difficult times for securing financial accommodation (Benny & John. M, 2014).

New York Stock Exchange (NYSE)

Beginning in 1790, the bonds were issued by the federal government to reimburse the debt of the revolutionary war. In western Pennsylvania, Petroleum was discovered, and on the curb market, oil stocks were soon traded in 1859. Then the curb market moves to Broad Street near Exchange Place. Then in 2008, the member of the NYSE increased by an additional member called AMEX (NYSE, 2018).

However, there are consequences when people decide to invest in the capital market. They must understand the concept of "high risk high return". Habegger & Pace (2008) said that the capital gain in the Wall Street Journal for the short positions is large (up to -7.18%) relative to the long positions (up to 1.17%).

On the other side, stock prices on the publication day are impacted by the HOTS column appears. The higher trading volume associated with significant abnormal returns on these days is. The buy and sell recommendations are symmetric with respect to the reaction of stock prices, and the impact of the multi-company recommendations is smaller than the impact of single-company recommendations (P. Liu et al., 1990).

When the Consolidated began to trade NYSE stocks, NYSE bid-ask spreads fell by more than 10%, subsequently increasing when the Consolidated ceased operations. The empirical analysis suggests that consumer welfare is improved by an amount equivalent to US\$9.6 billion today. Therefore, this historical episode of stock market competition improved (Brown et al., 2008)

Crude Palm Oil (FCPO₃)

Almost entirely, companies in the agriculture sector used or produced crude palm oil as the main product. So there is a close relationship between CPO and corporate finance. Khalid et al. (2018) said that the stock of palm oil, crude petroleum oil price, and the soybean oil price had significantly influenced the spot price of palm oil.

In the Indian market and in the United States, Indonesian RPO prices are more elastic. In contrast, Malaysia's RPO price is more elastic in the Russian market (Aulia et al., 2019). A negative trend showed by the value of RCA of Indonesian CPO, although still superior to Malaysia, though with a positive trend. However, compared to Malaysia, Indonesian RBD palm Olein and PFAD have a positive trend (Arsyad et al., 2020).

US\$ Exchange Rate to Indonesian Rupiah (USD/IDR)

US\$ is the most currency which almost used entirely in the world, not except for Indonesian. But, there are many factors that

influence the rupiah exchange rate. Simultaneously, money supply, interest rates, inflation, and imports have a real impact on the rupiah exchange rate. While segmentally, the variable of money supply, interest rates, and imports has a positive and real impact on the rupiah exchange rate (Carissa & Khoirudin, 2020). Besides, there is cointegration between a foreign exchange reserve, money supply, and interest rate as the independent variables, with the exchange rate as a dependent variable. The short-term analysis of foreign exchange reserves has a significant and negative impact, the money supply has a significant and positive impact, and interest rates have a significant and positive effect on the value of the rupiah exchange rate in Indonesia (Murtala et al., 2017).

Pandemic Covid-19

A global response and there is a need for global collaboration not just on health but also on finance, trade, and macroeconomic policies to face a global crisis. Therefore, global institutions are beginning to coordinate and catalyze global efforts, as well as to give financial and technical support to countries coping with the health and economic consequences of the outbreak (Maliszewska et al., 2020).

The role of top management is required to manage compliance with stay-at-home policy management and give incentives to the public. Support and valid information and also required to keep

society's mental health and well-being (Setyawan & Lestari, 2020).

If we see close to the world of education significantly impacted by Covid-19, including the educational system in Indonesia. Traditional learning that emphasizes the interaction of both students and teachers inside and outside the classroom move to distance learning (Abidah et al., 2020).

The impact In the economic field, Jakarta Composite Index (JCI) is either simultaneously or partially influenced by the number of cases of Covid-19 in Indonesia, the rupiah exchange rate, SSE, NYSE (NYA) composite index (Halisa & Annisa, 2020). Likewise, every 1% increase in the Covid-19 case resulted in a 0.02% depreciation of the Rupiah against the US Dollar (Haryanto, 2020).

C. RESEARCH METHODS

This study uses secondary data collected by the investing.com website. The data taken is the average daily closing price in one week (weekly), starting from January 1, 2020, to December 31, 2020, with a total sample of 52 (weeks). The analysis technique uses multiple linear regression by SPSS 26 to determine the factors that affect the movement of the JKAGRI index. So that the hope can determine the following formula:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e$$

..... (1)

Y= Jakarta Composite Agriculture Index (JKAGRI)

a = Constant value

X1 = Gold price (GOLD)

X2 = New York Stock Exchange (NYSE)

X3 = Crude Palm Oil (FCPO₃)

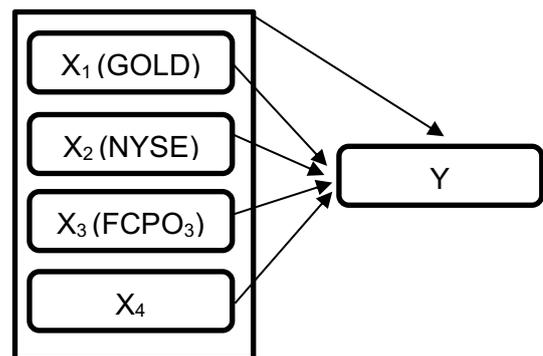
X4 = Exchange rate US Dollar to Indonesian Rupiah (USD/IDR)

b1, b2, b3, b4 = Coefficients

e = error term

Before the multiple linear regression test was performed, its needed classical assumption tests included normality, linearity, Multicollinearity, heteroscedasticity, and autocorrelation. This aims to anticipate the existence of incompatible data. So how the relationship between each data is shown below:

The conceptual framework regarding the factors that influence JKAGRI is outlined below :



Source: Secondary Data, Processed

Figure 1. Conceptual framework

This variable above has been chosen based on Blanchard said that some factors which influence stock price, such as the

global economy, world energy price level, political stability of a country (Blanchard & Johnson, 2013). Then, the figure explains the hypothesis of the relationship between the influence of the independent variable X and the dependent variable Y, either simultaneously or partially, as follows:

1. The hypothesis of the simultaneous influence between variables

H₀: There is no significant influence between variable X on variable Y.

H₁: There is a significant influence between variable X on variable Y

2. The hypothesis of the influence between variables partially

H₀: There is no significant effect between the variable X_{1/2/3/4} on variable Y

H₁: There is a significant effect between variable X₁ and variable Y

H₂: There is a significant effect between variable X₂ and variable Y

H₃: There is a significant effect between variable X₃ and variable Y

H₄: There is a significant effect between variable X₄ and variable Y

To complete the specification of the model, a number of assumptions are added. Below it contains some of the classic assumption tests:

- Normality test
- Linearity Test
- Multicollinearity test
- Heteroscedasticity test
- Autocorrelation test

D. RESULTS AND DISCUSSION

Descriptive Statistic

The summary of data is 52 weeks; it contains the average closing price every week. Then each variable has the lowest

point (minimum) and also the highest point (maximum) during 2020.

Table 2. Descriptive statistic result

	N	Min	Max	Mean	S.D
JKAGRI	52	847.85	1497.94	1159.647	164.366
GOLD	52	1495.1	2028.00	1792.073	136.199
NYSE	52	0	14524.80	12624.69	1283.923
FCPO3	52	9133.1	3600	5	424.321
USD_ID	52	6	16425	2705.27	628.685
R	52	2020		14530.62	
Valid N (listwise)		13573			

Source: secondary data, processed

JKAGRI has a minimum value of 847.85 and a maximum value 1497.94; GOLD has a minimum value of 1,495.10 and a maximum value of 2028; NYSE has a minimum value of 9,133.16 and a maximum value of 14,524.80; FCPO₃ has a minimum value of 2020 and a maximum value of 3600; USD/IDR has a minimum value of 13,573 and a maximum value of 16,425.

Besides, there is a mean taken by the sum of all data for each variable, divided by N (52). The mean of each variable consists of JKAGRI (1159.6469), GOLD (1792.0731), NYSE (1264.6954), FCPO₃ (2705.27), and USD/IDR (14530.62). Standard deviation measures the variation in a number of data. The value of the Standard deviation of each variable consists of JKAGRI (164.36595), GOLD (136.19943), NYSE (1283.92255), FCPO₃ (424.321), and USD/IDR (628.685). The amount of data inputted (N) is 52 for each variable (JKAGRI, GOLD, NYSE, FCPO₃, and USD/IDR), and the processed ones are also 52 so that there is no missing data.

Classic Assumption Test Results

1. Normality

Based on the results of the normality test table above, the significance value of Asymp. Sig (2-tailed), which is 0.200 more than the sig value of 0.05. So that from these results, it can be decided that the data is normally distributed.

Table 3. Normality test result

		Unstandardized Residual
N		52
Normal Parameter	Mean	.0000000
	Std Dev	47.28819608
	Absolute	.075
Most Extreme Differences	Positive	.062
	Negative	-.075
Test Statistic		.075
Asymp. Sig. (2-tailed)		.200

2. Linearity Test

The results of the linearity test showed that the Deviation of Linearity was 0.538 more than the Sig value of 0.05. Then when we saw from the comparison between the calculated F-value and the F-table, the results show that the calculated F value of 1.027 is smaller than the F-table of 2.25, which means that there is a linear relationship between the dependent variable JKAGRI and the independent GOLD, NYSE, FCPO₃, USD/IDR.

Table 4. Linearity test result

			F	Sig
AGRI*	Between	(Combined)	2.222	1.35
USD_IDR	Groups	Linearity	53.641	.000
		Dev. Fr	1.027	.538
	Within	Linearity		
	Groups			
	Total			

Source: secondary data, processed

3. Multicollinearity test

The multicollinearity test results show that the VIF value of each variable is GOLD (1.505), NYSE (9,652), FCPO₃ (3,822), and USD/IDR (4,828) where the value is less than 10. When viewed based on the Collinearity Tolerance value (CT) for each variable, such as GOLD (0.664), NYSE (0.104), FCPO₃ (0.262), and US /IDR (0.207) were greater than 0.10. From the results of the analysis of the VIF and CT values, it can be concluded that there are no symptoms of multicollinearity in the data.

Table 5. Linearity test result

Model	Collinearity Tolerance	Statistics VIF
(Constans)		
GOLD	.664	1.505
FCPO3	.262	3
USD_IDR	.207	4.828
Ln_NYSE	.104	9.652

Source: secondary data, processed

4. Heteroscedasticity test

The results of the heteroscedasticity test showed that the Sig value of each

variable, namely GOLD (0.657), NYSE (0.938), FCPO3 (0.271), and USD / IDR (0.214), was more than 0.05. So based on the results of the Glacier test, it can be concluded that there are no symptoms of heteroscedasticity.

Table 6. Heteroscedasticity test result

Model	Sig
(Constant)	.318
GOLD	.657
NYSE	.938
FCPO3	.271
USD_IDR	.214

Source: secondary data, processed

5. Autocorrelation test

Based on the output of the test runs table, the value of Asymp. Sig. (2-tailed) shows a value of 0.093 > 0.05. So it can be decided that there are no autocorrelation symptoms.

Table 7. Autocorrelation test result

	Unstandardized Residual
Test value	-4.71642
Cases < Test Value	26
Cases > = test Value	26
Total cases	52
Number of Runs	21
Z	-1.681
Asymp. Sig (2-tailed)	.093

Source: secondary data, processed

Regression Test Results

Based on the R² value in the summary model table, which is equal to

0.917 or 91.7%, it explains the effect of variables X₁, X₂, X₃, and X₄ simultaneously on variable Y.

Table 8. Summary model result

R	R Square	Adjust R Square	Std Error of Estimate
.958	.917	.910	49.25938

Source: secondary data, processed

While the remaining 8.3% is explained by other variables outside the model.

Table 9. F test (simultaneously) result

Model	F	Sig
Regression	130.207	.000
Residual		
Total		

Source: secondary data, processed

Based on the results of the F test output table, it is known that the sig value is 0.00 < 0.05. So it can be stated that the hypothesis accepts H₁ and rejects H₀, which means that simultaneously there is an influence between independent variables (X₁, X₂, X₃, and X₄) and dependent variables.

Table 10. T-test (partially) result

Model	Unstandardized B	t	Sig
(Constant)	-452.098	-.994	.325
GOLD	-.265	-	.000
NYSE	.108	4.426	.000
FCPO3	.111	6.360	.002
USD_IDR	.029	3.211	.025
		1.229	

Source: secondary data, processed

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e$$

$$Y = -452.098 - 0,265 + 0,108 + 0,111 + 0,029 + e$$

Decision making based on the value of Sig:

1. The significance value of the variable X_1 (GOLD) is $0.00 < 0.05$; accepting H_1 rejects H_0 , which means there is a significant influence between the X_1 variable (GOLD) on the Y variable (JKAGRI).
2. The significance value of the variable X_2 (NYSE) is $0.00 < 0.05$; accept H_2 rejects H_0 , which means there is a significant influence between the X_2 variable (NYSE) on the Y variable (JKAGRI).
3. The significance value of the variable X_3 (FCPO₃) is $0.02 < 0.05$; accept H_3 rejects H_0 , its means there is a significant influence between the X_3 variable (FCPO₃) on the Y variable (JKAGRI).
4. The significance value of the variable X_4 (USD/IDR) is $0.225 > 0.05$; accept H_0 rejects H_4 , which means there is no significant influence between the X_4 variable (USD/IDR) on the Y variable (JKAGRI).

Influence Simultaneously Independent Variable to Dependent Variable

Based on the simultaneous test result above, we know how important the role of the influence of independent variables (Gold, NYSE, FCPO₃, USD/IDR) is for the movement of JKAGRI because the majority of Indonesian agriculture companies engaged in the field of producing and processing palm and derivatives. Tjandrasa

& Sutjiati (2016) said that simultaneously JCI is influenced by world gold price, crude oil price, and interest rate significantly. If we talk more closely, we can divide two roles of independent variables, such as an investment and a real sector.

The independent variable (Gold, NYSE, FCPO₃, USD/IDR) as an investment is how people in the world take part as investors/traders. If one of the technical analyses of Gold/NYSE/FCPO₃ or USD/IDR looks good to invest/trade, they will decide to invest their money in each commodity.

In cases when JCI fell down in the first quartile because of Covid-19, most people shifted to gold as a safe haven for investment, so gold prices increased significantly from January until got their peak in July, although thereafter decreased slowly.

In contrast, USD / IDR has risen sharply since the first covid-19 cases in Indonesia were announced. Most people lose faith, perhaps JCI, so they have withdrawn their investment from Indonesia. It causes the demand for the IDR to decrease and the demand for USD to increase dramatically.

If we look at the real sector, all the independent variables are related to each other. Most agriculture companies use crude palm oil as the main ingredient to make their derivative products. So, the price of CPO in the world is related to the selling price of the product, USD/IDR related to export products, and import raw materials.

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B_71 dipublikasikan di TradingView.com, Maret 31, 2021 08:56:31 WIB

FX_IDC:USDIDR, 1D 14443.0000 0.0000 (0%) O:14443.0000 H:14475.0000 L:14443.0000 C:14443.0000



TradingView

Source: Investing.com, 2021

Influence Partially Independent Variable to Dependent Variable

Gold against JKAGRI

The significance value of the variable X_1 (GOLD) is $0.00 < 0.05$, accept H_1 rejects H_0 , which means there is a significant influence between the X_1 variable (GOLD) on the Y variable (JKAGRI). Based on the regression above, GOLD always looks increasingly during the COVID-19 pandemic, while JKAGRI fell sharply, then increased slowly because of the same cases. There is a significant influence of gold on JKAGRI while investors in the stock exchange shift to gold as a safe haven.

Stock price volatility was influenced by changes in gold prices, caused by the presence of a positive dynamic correlation between CSPI and gold (Syahri & Robiyanto, 2020), then gold did have a role as the safe haven for the Malaysian capital market in contrast, did not have a role as a safe haven for the Indonesian capital market (Robiyanto, 2018a). Partially there is a correlation detected between gold prices and oil prices (Toraman et al., 2011). However, JKAGRI always depends on its material, like oil prices, therefore, the correlation between both of them is closely related.

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Published on Investing.com, 31/Mar/2021 - 3:31:50 GMT, Powered by TradingView.
Gold Futures, (CFD):ZG, W
JKAGRI, JAKARTA



Source: Investing.com, 2021

— GOLD
— JKAGRI

NYSE against JKAGRI

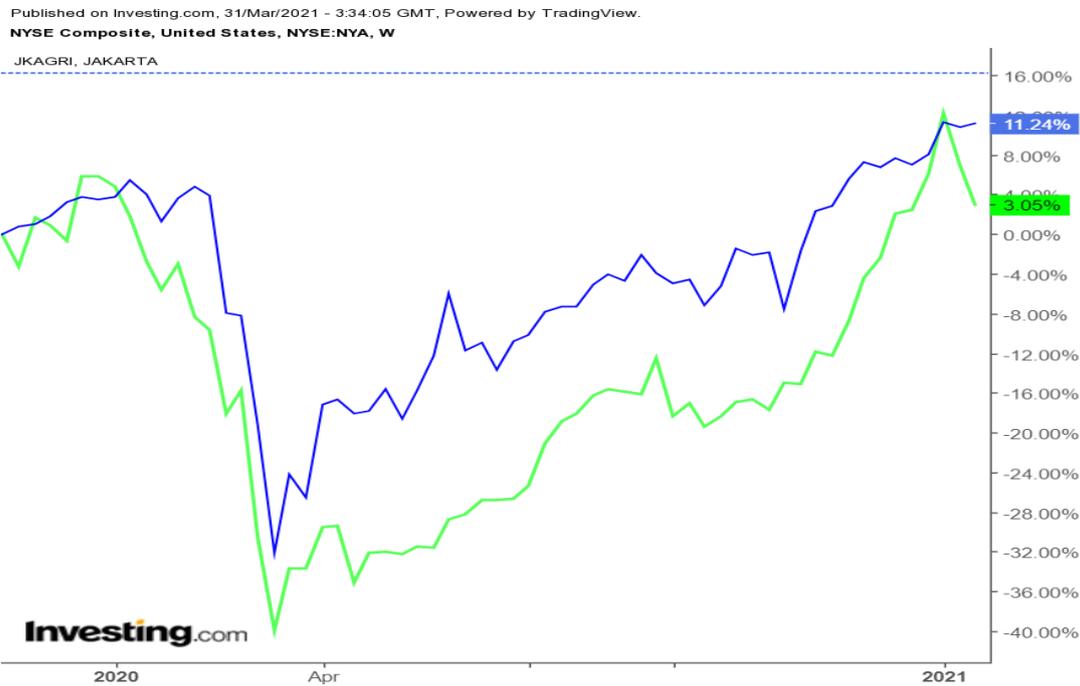
The significance value of the variable X_2 (NYSE) is $0.00 < 0.05$; accepting H_2 rejects H_0 , which means there is a significant influence between the X_2 variable (NYSE) on the Y variable (JKAGRI). Based on the line chart comparison above, the pattern of the NYSE line and JKAGRI looks similar. It means when NYSE dropped sharply in March 2020, followed by JKAGRI even the deepest.

A reversal signal appeared in both NYSE and JKAGRI since the beginning of April smoothly. During the period of increase, there were some insignificant fluctuations. It causes fundamental conditions in the world because several countries enforce a lockdown policy.

If we look forward base on history, in 2008 the capital market in Indonesia affected by the US crisis where the Dow Jones Industrial Average plays a great role in explaining the IHSG, compared to the Rupiah rate, production index, and the trade income tax (Nezky, 2013).

The global economic crisis that impacted Latin America will be severe, it probably follows the pandemic because of declines in the majority of economic activity with principal trading partners, such as China, decreasing commodity prices, hindrance of regional and global value chains, a sharp drop in the demand for tourism, and increased capital outflows from the region due to risk aversion in financial markets (Garcia et al., 2020)

The Movement of IDX Agriculture (JKAGRI) During the Covid-19 Pandemic in 2020



Source: Investing.com, 2021

— NYSE
— JKAGRI

FCPO₃ against JKAGRI

At the beginning of 2020, FCPO₃ and JKAGRI simultaneously collectively dropped sharply. But there was a gap in the support point from March till the end of 2020, which was FCPO₃ still has a higher point than JKAGRI.

Statistically, the significance value of the variable X_3 (FCPO₃) is $0.02 < 0.05$; accept H_3 rejects H_0 , its means there is a significant influence between the X_3 variable (FCPO₃) on the Y variable (JKAGRI).

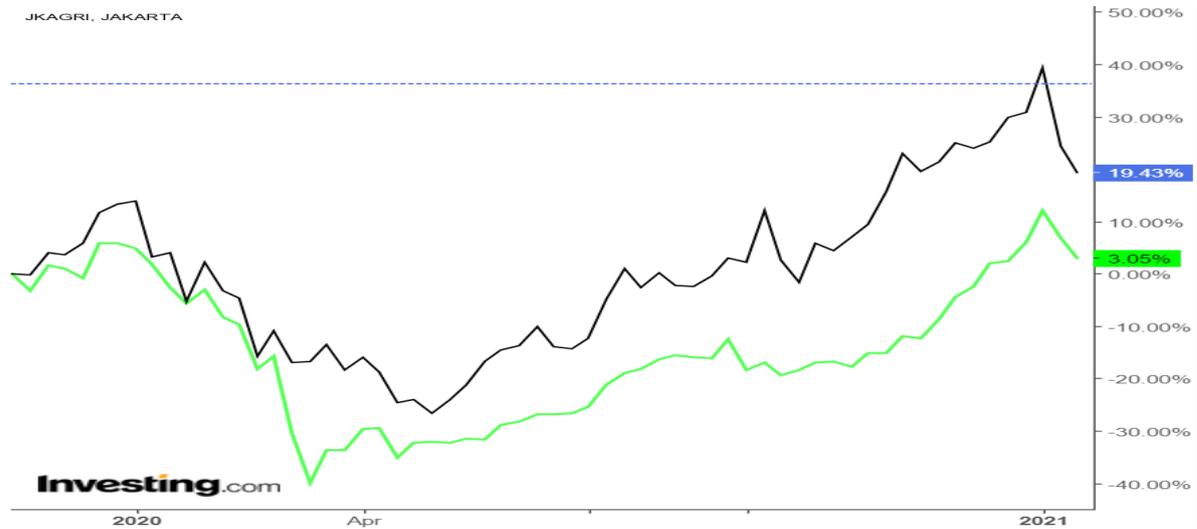
Fundamentally, crude palm oil has a significant influence on JKAGRI caused of the close relationship between raw materials

and products. These are some of the companies such as Astra Agro Lestari, New Britain Palm Oil Limited, Sime Darby, Golden Agri-Resources Limited, IOI Corporation Berhad, Cargill, and Kuala Lumpur Kepong Berhad that became key brokers in the global Sustainable Palm Oil market (Global Sustainable Palm Oil Market, 2020).

In the past, JKAGRI's movements are positively influenced by the Rupiah exchange rate variable against the US Dollar and the price of palm oil (Andiantyo et al., 2018).

The Movement of IDX Agriculture (JKAGRI) During the Covid-19 Pandemic in 2020

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Palm Oil Futures, Malaysia, KualaLumpur:FCPOc3, W
 JKAGRI, JAKARTA



Source: Investing.com, 2021

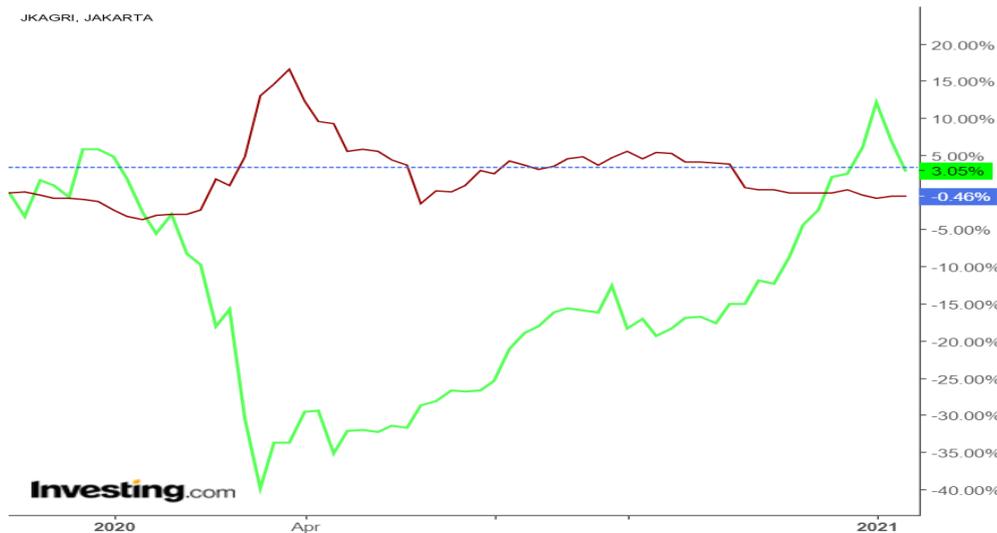
— FCPO₃
 — JKAGRI

USD/IDR against JKAGRI

The line chart above showed that USD/IDR to JKAGRI, like the mountains and troughs. USD/IDR moved more stable than during the beginning of 2020 and then went to the moon around April.

It is different from JKAGRI, which rose to a little peak and then fell sharply. The reversal signal appears in April and keeps going up despite the fluctuations. At the end of 2020, the intersection line USD/ID and JKAGRI is formed.

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USD/IDR, Real-timeFX:USD/IDR, W
 JKAGRI, JAKARTA



Source: Investing.com, 2021

— USD/IDR
 — JKAGRI

Based on fact, in 2019, the agriculture sector has to decrease significantly to 13.82% from two years ago (Gumilar, 2019).

Statistics describe that the significance value of the variable X_4 (USD/IDR) is $0.225 > 0.05$; accepting H_0 rejects H_4 , which means there is no significant influence between the X_4 variable (USD/IDR) on the Y variable (JKAGRI). In the same way, the exchange rate of USD/IDR movement has a significant negative effect on JCI return (Robiyanto, 2018b). Similarly, stock returns are not influenced by USD/IDR exchange rate (Utama & Puryandani, 2020).

E. CONCLUSION

Simultaneously the independent variables GOLD (X_1), NYSE (X_2), FCPO3 (X_3), and USD/IDR (X_4) significantly influence the JKAGRI with the sig value is $0.00 < 0.05$.

On the other hand, partially the variable gold price (GOLD) ($0.00 < 0.05$), New York Stock Exchange (NYSE) ($0.00 < 0.05$), crude palm oil price index (FCPO3) ($0.02 < 0.05$) have a significant effect on the movement of IDX Agriculture (JKAGRI).

In contrast, the dollar exchange rate (USD/IDR) ($0.225 > 0.05$) does not significantly influence the movement of IDX Agriculture (JKAGRI).

Thus, investors are advised before deciding to buy stocks of the agriculture index (JKAGRI), it is advisable to pay attention to the movement of the gold price

index, NYSE, and crude oil prices both technically and fundamentally.

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