

## ANALYSIS OF MARKET ANOMALIES FOR STOCK RETURNS AT LQ45 COMPANIES IN INDONESIA

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**Abstract:** This study examines the effects of the market anomaly on Indonesia's LQ45 companies' stock returns. This research uses descriptive and comparative methods with a quantitative approach. Data processing and analysis techniques include quantitative analysis in multiple linear regression analysis without interception (through multiple regression). The variables used in this study are dummy variables. The dependent variable of this study is daily stock returns. The results showed that The Day of The Week Effect affected stock returns. The Week Four Effect variable shows that the lowest return (negative) on Monday in LQ45 is not concentrated on Monday the last two weeks of each month. The Monday Effect variable indicates that it is not only negative Friday returns that drive negative Monday returns. The Rogalsky Effect variable indicates there was no Rogalsky Effect in April.

**Keywords:** The day of The Week Effect, Week Four Effect, Monday Effect, Rogalsky Effect, Return Stock.

**Abstrak:** Studi ini mengkaji pengaruh anomali pasar terhadap return saham perusahaan LQ45 Indonesia. Penelitian ini menggunakan metode deskriptif dan komparatif dengan pendekatan kuantitatif. Teknik pengolahan dan analisis data meliputi metode analisis kuantitatif dalam analisis regresi linier berganda tanpa intercept (melalui asal regresi berganda). Variabel yang digunakan dalam penelitian ini adalah variabel dummy. Variabel terikat penelitian ini adalah return saham harian. Hasil penelitian menunjukkan bahwa *The Day of The Week Effect* mempengaruhi return saham. Variabel *Week Four Effect* menunjukkan bahwa return terendah (negatif) pada hari Senin di LQ45 tidak terkonsentrasi pada hari Senin dua minggu terakhir setiap bulan. Variabel *Monday Effect* menunjukkan bahwa bukan hanya pengembalian hari Jumat negatif yang mendorong pengembalian negatif hari Senin. Variabel Efek Rogalsky menunjukkan tidak ada Efek Rogalsky di bulan April.

**Kata Kunci:** *The day of The Week Effect, Week Four Effect, Monday Effect, Rogalsky Effect, Return Saham.*

## INTRODUCTION

The basics of an investor conducting stock transactions can be seen from the movement of stock prices or stock returns in the past by using technical analysis. Along with the desires and needs of shareholders for high stock returns, market conditions will affect. The possibility of changes in stock prices every day of the week will be possible. This is due to differences in investor decisions within certain days. Differences in characteristics of the information obtained and the psychology of investors regarding stock trading days will affect the behavior of investors themselves in terms of making transactions or not. Even there are differences in investors who will make transactions to buy or sell on certain days.

Investors will get the maximum profit or maximum loss, depending on their ability and strategy to conduct transactions (Kasdjan, Allan Moechamad Zaennoer & Yusuf, 2017). Thus, the possibility of changes in stock prices every day in a week. This results in differences in stock investment decisions within certain days. This phenomenon is usually termed The Day of The Week Effect. There are five trading days on the Indonesia Stock Exchange (Monday, Tuesday, Wednesday, Thursday, Friday) and two days without trading (Saturday and Sunday). Specific patterns have an impact on stock returns on the trading day of the week. This situation is usually influenced by several factors, such as individual psychological, emotional factors, and activities carried out by investors.

There are several phenomena or commonly called anomalies, that often occur in the investment world. Every investor has many ways to develop trading strategies, one of which is by utilizing the anomalies that are happening in the market. In this situation, the results will usually be contrary to the results expected results to achieve efficient results. One reason is the market anomaly. In this condition, the market anomaly can be defined as a strategy contrary to an efficient capital market concept. There are four types of market anomalies: event anomalies, seasonal anomalies, accounting anomalies, and company anomalies. Of the four types, anomalies that often occur are seasonal. A seasonal anomaly is a market anomaly whose condition is very time-dependent. Market anomalies that are widely used as research are seasonal anomalies, where seasonal anomalies consist of January Effect, Monday effect, The Day of the Week Effect, Week Four Effect, Rogalsky Effect, The Month of the Year Effect, Turn of the Year Effect, Holiday Effect, Earning Management Effect. Of all the most popular seasonal anomaly phenomena made into research, they are The Day of The Week

Effect, Monday Effect, Week Four Effect, and Rogalsky Effect. These phenomena are closer to the financial statements to determine the desired return. For this reason, it is necessary to analyze returns on trading days, Monday, Friday, and the end of the month.

### **Stock returns**

Return is a return or an investment that is usually expressed as an annual percentage rate. Stock return is the expected return rate on investments made in shares or groups of shares through a portfolio. This stock return can be used as an indicator of trading activities in the capital market. In general, stock returns are profits derived from investor stock ownership on investments made consisting of dividends and capital gains.

### **Capital Market Efficiency**

In the financial sector, the concept of an efficient market is more emphasized on the information aspect. This means an efficient market is a market where all traded securities' prices reflect all available information. Forms of market efficiency in information are divided into three primary forms (Hartono, 2018), namely:

a) Weak form market efficiency

The market is efficient in the weak form if the securities' prices are fully reflected in the past information.

b) Semi-strong form market efficiency

The market is half-strong efficient if security prices fully reflect all published information (all publicly available information), including information in the issuer's company financial statements.

c) Strong form market efficiency

The market is efficient in a potent form if securities' prices fully reflect all available information, including private information.

### **Market Anomaly**

Market anomaly is a condition that deviates from a model or pattern contained in the capital market and is an event that cannot be anticipated and causes investors the opportunity to obtain abnormal returns. Market anomaly (market anomaly) is as techniques or strategies that are contrary to the concept of an efficient market (Hartono, 2018) because the results generated by market anomalies allow investors to get the opportunity to obtain abnormal profits by relying on various events (events) that occur in the capital market.

### **The day of the week effect**

Monday to Friday is the day on which stock trading is conducted. Seasonal anomaly phenomenon where there are differences in returns for each day and the effect of trading days in one week. Share prices will increase or decrease in different days in one week of trading days (Wulandari & Diana, 2018).

### **Monday effect**

The Monday effect is where Monday returns tend to produce negative returns. Monday effect is part of The Day of The Week Effect. The Monday effect phenomenon occurs because it is influenced by irrational investor behavior patterns when trading on Monday. Rogalski tested the Monday Effect by comparing Monday trading returns with non-trading weekend returns, i.e., returns on sessions that did not occur between Friday to Monday, where negative returns occurred during the non-trading period (Wulandari & Diana, 2018).

### **Week-Four effect**

Week four effect is a phenomenon that reveals that the Monday effect only occurs in the last weeks of each month, namely the fourth and fifth weeks. In contrast, Monday's return from the first week to the third week is considered not significantly negative or equal to zero. This means that the largest negative Monday return occurs in the fourth week (Fatimah et al., 2019). Investors' liquidation needs influence the tendency of negative stock returns on Monday the fourth and fifth week. The fourth and fifth week can be said with the end of the month to be a week where investors' needs will increase. However, the income of investors has not been able to increase. This is because most companies and other agencies distribute wages, salaries, and salaries at the beginning of the month.

### **Rogalsky effect**

The naming of the Rogalsky effect comes from a researcher named Rogalsky who discovered a relationship between the January Effect and The Day of The Week Effect. Rogalski states a relationship between the January Effect phenomenon and The Day of The Week Effect where returns tend to be negative on Monday, which will disappear in January (Bagaskara & Khairunnisa, 2019). This earnings management raises positive sentiment on the market because it is optimistic about public companies' performance that reports good public companies' performance. With this condition, it is estimated that stock returns in April will be higher than stock returns in other months (non-April), so the Monday Effect will disappear in

April because of the tendency of higher returns in April. The Rogalsky Effect that occurred in January in other countries' capital markets is believed to have occurred in April in Indonesia.

## **METHOD**

This study using descriptive and comparative research with quantitative approaches. According to Sukiati (2016: 52), the descriptive method is doing something to shows a problem or situation as it is and reveals the facts that are there, although sometimes given interpretation or analysis. According to Sukiati (2016: 60), the comparative method looks for possible causes by collecting data by comparing the data studied. Quantitative research methods, according to Sukiati (2016: 78), are science and art related to the procedures (methods) of data collection, data analysis, and interpretation of the results of the analysis to obtain information for drawing conclusions and decision making. The population used in the study are companies that are included in the L.Q. 45 index on the IDX, during the period February 2018 - July 2018. The sample in this study were three companies. Sampling technique with purposive sampling is needed to avoid specification errors in determining research samples, which will affect the research results. The samples are as follows:

**Table 1**  
**LQ45 shares for the February 2018-July 2018 period which are incorporated in state owned companies**

1	BBRI	Bank Rakyat Indonesia (Persero) Tbk
2	BMRI	Bank Mandiri (Persero) Tbk
3	TLKM	Telekomunikasi Indonesia (Persero) Tbk

Source: [www.idx.co.id](http://www.idx.co.id) (processed according to data)

## **Definition of Variable Operations**

### **Dependent Variable**

The dependent variable in this study is the daily stock return.

### **Independent Variable**

This study's independent variables are trading days on the Stock Exchange (Monday-Friday), Monday, and Friday. The dummy variable is an explanatory variable with a nominal scale of 0 or 1. DMON value = 1 for stock returns if day t falls on Monday and 0 if day t falls on

another day. DTUE value = 1 for stock returns if day t falls on Tuesday and 0 if day t falls on another day. DWED value = 1 for stock returns if day t falls on Wednesday and 0 if day t falls on another day. DTHU value = 1 for stock returns if day t falls on Thursday and 0 if day t falls on another day. DFRI value = 1 for stock returns if day t falls on Friday and 0 if day t falls on another day.

### Hypothesis Test and Data Analysis

Analysis of the data used in this study is a quantitative analysis method in multiple linear regression analysis without intercept (multiple regression through the origin). The variable used in this study is the dummy variable. To test the truth of the proposed hypothesis and achieve this study's objectives, using the t-test. The dependent variable of the regression equations used to test each hypothesis of this study is the daily stock return. The first hypothesis testing ( $H_1$ ), namely whether stock returns affect The Day of The Week Effect (trading day) on the IDX, using the following formula:

$$R = b_1 \text{ MON} + b_2 \text{ TUE} + b_3 \text{ WED} + b_4 \text{ THU} + b_5 \text{ FRI} + e_t \quad (1)$$

Where:

- $R_t$  = shows the number of daily stock returns on day t.
- Dummy Variable = MON, TUE, WED, THU, FRI indicates the trading day of the week.
- MON value = 1 if stock returns fall on Monday and given a value of 0 if it falls on other days.
- TUE value = 1 if stock returns fall on Tuesday and given a value of 0 if it falls on other days WED, THU, FRI, and Monday and Tuesday in advance.
- $b_1 - b_5$  = regression coefficient for Monday-Friday dummy variables
- $e_t$  = error term

Testing the second hypothesis ( $H_2$ ), namely whether the lowest return (negative) on Monday in LQ-45 is concentrated on Monday the last two weeks of each month (fourth and fifth week) on the Stock Exchange using the following formula:

$$R_t = b_1 \text{ MON}_1 + b_2 \text{ MON}_2 + b_3 \text{ MON}_3 + b_4 \text{ MON}_4 + b_5 \text{ MON}_5 + e_t \quad (2)$$

$$R_t = b_1 \text{ MON}_{123} + b_2 \text{ MON}_{45} + e_t \quad (3)$$

Where:

- $R_t$  = shows the number of daily stock returns on day t.

- MON<sub>1</sub> - MON<sub>5</sub> = shows Monday the first week through Monday the fifth week
- b<sub>1</sub> - b<sub>5</sub> = coefficient, which describes the average return on Monday of the first week to the fifth week. If true, the Monday effect occurs in the fourth and fifth week, then b<sub>4</sub> and b<sub>5</sub> (equation 2) are negative, but b<sub>1</sub>, b<sub>2</sub>, b<sub>3</sub> are non-negative/positive.
- MON<sub>123</sub> = dummy for the first, second and third Monday of the week. Worth 1 for Monday, which falls in the first, second, and third week and worth 0 for Monday, the fourth and fifth week.
- MON<sub>45</sub> = dummy for Monday the fourth and fifth week. Worth 1 for Monday, which falls in the fourth and fifth week, and 0 for Monday first, second, and third Monday.
- et = error term

The third hypothesis testing (H<sub>3</sub>), namely whether a negative return on Monday in LQ-45 is influenced by a negative return on the previous Friday in the IDX, using the following formula:

$$R_t = b_1NFM_1 + b_2NFM_2 + b_3NFM_3 + b_4NFM_4 + b_5NFM_5 + et \quad (4)$$

$$R_t = b_1PFM_1 + b_2PFM_2 + b_3PFM_3 + b_4PFM_4 + b_5PFM_5 + et \quad (5)$$

Where:

- R<sub>t</sub> = Shows the daily stock return on day t.
- b<sub>1</sub> - b<sub>5</sub> = Regression coefficient
- NFM<sub>1</sub> - NFM<sub>5</sub> = Negative Friday to Monday is a dummy interaction for Monday preceded by a negative Friday return. NFM<sub>1</sub>, which has a value of 1 for Monday return on the first week, is preceded by a negative Friday return and is 0 for other Monday returns. The same thing applies for NFM<sub>2</sub> to NFM<sub>5</sub>.
- PFM<sub>1</sub> - PFM<sub>5</sub> = Positive, Friday to Monday, is a dummy interaction for Monday preceded by a positive Friday return. PFM<sub>1</sub>, which has a value of 1 for Monday return on the first week, is preceded by a positive Friday return and is 0 for other Monday returns. The same thing applies for PFM<sub>2</sub> to PFM<sub>5</sub>.
- et = error term

The fourth hypothesis testing ( $H_4$ ), namely whether Monday's return in April is positive or tends to be higher than on other Monday (non-April) on the IDX, using the following formula:

$$R_t = b_1\text{JAN} + b_2\text{FEB} + b_3\text{MAR} + b_4\text{APR} + b_5\text{MAY} + b_6\text{JUN} + b_7\text{JUL} + e_t \quad (6)$$

Where:

$R_t$  = Shows the daily stock return on day t.

$b_1 - b_6$  = regression coefficient for the Dummy variable Monday, February, March, April, May, June, July.

Var. dummy = FEB, MAR, APR, MAY, JUN, JUL indicates Monday in each trading month.

FEB value = 1 if stock returns on Monday fall in February and are valued 0 if it falls in another month.

The value of MAR = 1 if stock returns on Monday fall in March and given a value of 0 if it falls in other months APR, MAY, JUN, JUL as is the case for February and March in advance.

$E_t$  = error term

## RESULTS

**Table 2**  
**Descriptive Statistics Analysis Results**

	SENIN	SELASA	RABU	KAMIS	JUMAT	RETURN
Mean	0.346154	0.397436	0.448718	0.410256	0.538462	0.001819
Median	0.000000	0.000000	0.000000	0.000000	1.000000	0.001819
Maximum	1.000000	1.000000	1.000000	1.000000	1.000000	0.001819
Minimum	0.000000	0.000000	0.000000	0.000000	0.000000	0.001819
Std. Dev.	0.478822	0.492535	0.500582	0.495064	0.501745	0.000000
Skewness	0.646762	0.419170	0.206216	0.364900	-0.154303	0.000000
Kurtosis	1.418301	1.175704	1.042525	1.133152	1.023810	0.000000
Jarque-Bera	13.56867	13.10033	13.00588	13.05762	13.00184	0.000000
Probability	0.001131	0.001430	0.001499	0.001461	0.001502	0.000000
Sum	27.00000	31.00000	35.00000	32.00000	42.00000	0.141901
Sum Sq. Dev.	17.65385	18.67949	19.29487	18.87179	19.38462	0.000000



Observations	78	78	78	78	78	78
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Source: Output Eviews 10

From this description, it can be seen the average stock returns every day, all showing positive values. From the table, it can be seen that the average return on Monday is at the value of 0.346154, which then rises on Tuesday to 0.397436. On Wednesday, the average return increased to 0.448718 and Thursday to 0.410256, which ended on Friday with a value of 0.538462. Average return increases from Monday to Friday. Standard deviation is a deviation from the mean price, so the higher the standard deviation, the deviation from the average price is more significant, and the data has higher fluctuations. The highest standard deviation value occurs on Friday, and the lowest standard deviation occurs on Monday, so that the highest stock return fluctuations occur on Friday. The lowest stock return fluctuations occur on Monday.

**Table 3**  
**The Significance Test Results of stock returns affect The Day of The Week Effect (trading day) on the IDX**

Dependent Variable: RETURN

Method: Least Squares

Date: 02/18/20 Time: 06:45

Sample (adjusted): 1 78

Included observations: 78 after adjustments

Variable	Coefficien t	Std. Error	t-Statistic	Prob.
C	0.001819	3.90E-19	4.66E+15	0.0000
MONDAY	1.48E-18	3.34E-19	4.442909	0.0000
TUESDAY	1.62E-18	3.31E-19	4.887228	0.0000
WEDNESDAY	7.34E-19	3.08E-19	2.382079	0.0199
THURSDAY	8.19E-19	2.99E-19	2.738236	0.0078
FRIDAY	7.71E-19	3.02E-19	2.548125	0.0130
Mean dependent var	0.001819	S.D. dependent var		0.000000
S.E. of regression	1.28E-18	Sum squared resid		1.19E-34
Durbin-Watson stat	1.310825			

Source: Output Eviews 10

From the table above, it can be seen the regression model as follows:

$$R_t = 0.0148\text{MON} + 0.0162\text{TUE} + 0.0734\text{WED} + 0.0819\text{THU} + 0.0771\text{FRI} + e$$

Based on the results of the statistical calculations presented in Table 3, for all observations, the lowest and significant positive returns occurred on Monday and Tuesday because the significance value was 0,000 less than the a value of 0.05 and the highest return occurred on Wednesday with a significance value of 0,0199 is smaller than e value of 0.05. In contrast, returns on Thursday, Friday show a positive and significant value. This positive return on Monday is referred to as the Monday effect. These results indicate for the entire observation period that Monday through Friday influences stock returns on the IDX. Therefore, the Monday effect has been identified in all observations where Monday's return is the highest compared to other trading day returns.

**Table 4**  
**Significance Test Results for Monday Stock Returns based on Sunday Categorization**

Dependent Variable: RETURN

Method: Least Squares

Date: 02/18/20 Time: 06:50

Sample (adjusted): 1 18

Included observations: 18 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.001689	4.68E-19	3.61E+15	0.0000
MONDAY1	-7.24E-19	5.52E-19	-1.311101	0.2144
MONDAY2	-6.90E-19	4.68E-19	-1.475119	0.1659
MONDAY3	-7.61E-19	5.72E-19	-1.331002	0.2079
MONDAY4	-9.81E-19	4.93E-19	-1.990435	0.0698
MONDAY5	-5.51E-19	1.05E-18	-0.523190	0.6104
Mean dependent var	0.001689	S.D. dependent var	0.000000	
S.E. of regression	9.34E-19	Sum squared resid	1.05E-35	
Durbin-Watson stat	1.453391			

Source: Output Eviews 10

From the table above, it can be seen the regression model as follows:

$$R_t = 0.0724MON_1 - 0.069MON_2 - 0.0761MON_3 - 0.0981MON_4 - 0.0551MON_5 + e$$

Data on trading days Monday the first week through the fifth week is converted into a dummy variable, an explanatory variable with a nominal scale of 1 or 0 using multiple regression analysis without intercepts. The return pattern based on the week category shows that the fourth-week return is negative but not significant or has no effect. By looking at Table 4, it can be concluded that nothing influences from Monday first week to the fifth week on stock returns on the IDX.

**Table 5**  
**Week Four Effect Significance Test Results**  
 Dependent Variable: RETURN

Method: Least Squares

Date: 02/18/20 Time: 06:53

Sample: 1 30

Included observations: 30

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.001689	2.10E-19	8.06E+15	0.0000
MON123	1.05E-18	3.12E-19	3.362856	0.0023
MON45	1.02E-18	4.49E-19	2.260200	0.0321
Mean dependent var	0.001689	S.D. dependent var		0.000000
S.E. of regression	8.30E-19	Sum squared resid		1.86E-35
Durbin-Watson stat	1.155009			

Source: Output Eviews 10

From the table above, it can be seen the regression model as follows:

$$R_t = 0.0105SEN_{123} + 0.0102SEN_{45} + e$$

The results of testing the fourth and fifth-week effects can be seen in Table 5, which appears that on Monday, the first three weeks (Monday first, the second week and showed a significant positive with a significance value of 0.0023 smaller than  $\alpha$  of 0.05. This can be it is said that Monday the first, second and third Monday have significantly positive returns while on Monday the last two weeks (fourth and fifth Monday) are also positive, this proves

that the Monday effect is not only concentrated on the fourth and fifth week of Monday, or the last two weeks of each month, so overall it can be concluded that Monday the first, second, third, fourth and fifth Monday has a significantly high return.

**Table 6**  
**Bad Friday Returns to the Monday Effect (Monday returns are preceded by Friday Negative returns)**

Dependent Variable: RETURN				
Method: Least Squares				
Date: 02/18/20 Time: 06:55				
Sample (adjusted): 1 18				
Included observations: 18 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.004281	5.53E-19	7.75E+15	0.0000
NFM1	-1.51E-18	8.94E-19	-1.685232	0.1158
NFM2	-1.11E-18	6.92E-19	-1.609837	0.1314
NFM3	-9.21E-19	7.24E-19	-1.272985	0.2253
NFM4	9.10E-19	9.76E-19	0.931996	0.3683
Mean dependent var	0.004281	S.D. dependent var	0.000000	
S.E. of regression	1.35E-18	Sum squared resid	2.36E-35	
Durbin-Watson stat	1.205518			

Source: Output Eviews 10

From the table above, it can be seen the regression model as follows:

$$R_t = 0.0151NFM_1 - 0.0111NFM_2 - 0.0921NFM_3 + 0.091NFM_4 + e$$

Based on the statistical calculations, Table 6 shows that the return on Friday the first week with a significance value of 0.1158 the second week 0.1314, the third week of 0.2253, and the fourth week with a significance value of 0.3683 more significant than the value of e of 0.05.

**Table 7**  
**Effects of Bad Friday returns on the Monday Effect (Monday returns are preceded by Positive Friday returns)**

Dependent Variable: RETURN				
Method: Least Squares				
Date: 02/18/20 Time: 06:57				
Sample (adjusted): 1 18				

Included observations: 18 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.004281	2.15E-18	1.99E+15	0.0000
PFM1	-5.08E-18	1.72E-18	-2.947768	0.0113
PFM2	-1.09E-18	1.33E-18	-0.813906	0.4304
PFM3	1.98E-18	1.39E-18	1.419481	0.1793
PFM4	0.000000	1.88E-18	0.000000	1.0000
Mean dependent var	0.004281	S.D. dependent var	0.000000	
S.E. of regression	2.60E-18	Sum squared resid	8.77E-35	
Durbin-Watson stat	2.131458			

Source: Output Eviews 10

From this table, we can know the regression model as follows:

$$R_t = 0.0508PFM1 - 0.0101PFM2 + 0.0198PFM3 + 0.000PFM4 + e$$

The statistical calculations in Table 7 show that the return on Friday the first week with a significance value of 0.0113, the second week 0.4304, the third week 0.1793, and the fourth week with a significance value of 1.0000 is greater than the e value of 0.05. The calculation results in Table 7 show a positive Friday return in the first week with a significance value of 0.0113 smaller than the  $\alpha$  value of 0.05. This test indicates that it is not only negative Friday returns that drive negative Monday returns. In part, a positive Friday return will also be followed by a negative Monday return. There is no difference between a negative Friday return and a positive Friday return in driving the Monday effect (negative Monday return).

**Table 8**  
**Rogalsky Effect Test Results**

Dependent Variable: RETURN

Method: Least Squares

Date: 02/18/20 Time: 07:03

Sample: 1 30

Included observations: 30

Variable	Coefficient	Std. Error	t-Statistic	Prob.
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C	0.001819	7.47E-19	2.44E+15	0.0000
FEB	1.00E-18	8.01E-19	1.251796	0.2232
MAR	1.79E-18	7.38E-19	2.422569	0.0237
APR	2.47E-18	7.30E-19	3.381366	0.0026
MAY	2.56E-20	6.23E-19	0.041129	0.9675
JUN	2.26E-18	7.62E-19	2.966694	0.0069
JUL	-9.09E-19	8.39E-19	-1.083693	0.2897
<hr/>				
Mean dependent var	0.001819	S.D. dependent var	0.000000	
S.E. of regression	1.64E-18	Sum squared resid	6.18E-35	
Durbin-Watson stat	2.448358			

Source: Output Eviews 10

From the table above, it can be seen the regression model as follows:

$$R_t = 0.01\text{FEB} + 0.0179 \text{MAR} + 0.0247 \text{APR} + 0.0256\text{MAY} + 0.0226\text{JUN} - 0.0909 \text{JUL} + e$$

Based on Table 8, it can be seen that Monday in April is positive. Compared to Monday's non-April returns, Monday's April returns are no higher than Monday's non-April returns. Although the coefficient for Monday in April is positive, when viewed from the significance value 0.0026 smaller than a value of 0.05 is significant. This can be explained that there was no Rogalsky Effect on the IDX during February 2018 - July 2018. Based on this study's results, it can be seen that stock returns affect The Day of The Week Effect. It can be seen from the variable The Day of The Week Effect has a significance of less than e. This proves that there are differences in returns to 5 trading days in a week, where Monday is the lowest average return day of 0.00148 and Thursday is the day with the highest average return of 0.00819. The Day of the Week Effect significantly influences the resulting return. There was a Day of the Week effect on LQ-45 stock returns during the study period. According to Bella (2015), the difference in average returns in a week can be caused by investors' profit-taking. The lowest average return occurs on Monday with the most considerable negative value possible. On Monday (the beginning of the exchange day), many investors tend to study various relevant information and try to determine a strategy in dealing with information that enters the market, domestic and foreign information. So that most investors postpone stock purchase transactions. When viewed from the psychological side, investors do not like

Monday, which is the beginning of the early workday, affecting their buying and selling shares. It is indicated that institutional investors do fewer trading activities on Monday, while individual investors do more trading activities, but sales orders dominate their trading activities more.

As a result, activities on the stock exchange will also be affected by this condition, and stock prices will fall due to an increase in supply that is not matched by demand. The increase in average stock returns on Wednesday, Thursday, and Friday is likely due to the day investors have begun implementing their investment strategies. The investment strategy used in buying shares reviewed and analyzed beforehand enables investors to obtain a positive return. Based on the results of this study, it can be seen that the Monday effect is not only concentrated on Monday the fourth and fifth week, or the last two weeks of each month. This can be seen from the average value of the Week Four Effect variable for the group returns on the fourth and fifth week of Monday at 0.00102 and the average return on the first, second, and third Monday of the week at 0.00105. Based on the return of Monday at the end of the month, the value of  $t$  is more significant than  $t$  table ( $2.260200 > 1.69726$ ) with a significance level of  $0 < 0.05$ , as well as the return of Monday at the beginning of the month where the value of  $t$  is more significant than  $t$  table ( $3.362856 > 1.69726$ ) with a significance level of  $0 < 0.05$ , which means that  $H_0$  is rejected.

This research is in line with Siti Fatimah et al. (2019), stating that there is no evidence of differences between the end of the month and the beginning of the month. With this Week Four Effect not proven in February 2018 - July 2018. Week four effect is usually caused by demands to meet all the primary needs that must be done at the beginning of the following month.

The calculation results in Table 7 show a positive Friday return in the first week to the second week with a significance value of 0.0113 smaller than the  $\alpha$  value of 0.05. This test indicates that it is not only negative Friday returns that drive negative Monday returns. In part, a positive Friday return will also be followed by a negative Monday return. There is no difference between a negative Friday return and a positive Friday return in driving the Monday effect (negative Monday return). This study's results align with Udayani (2016), which explains that the Monday Effect phenomenon did not occur in LQ45 shares. Based on the results of this study, it can be seen that there is no Rogalsky effect. It can be seen that the

average low stock return occurred in July of 0.0909, and the highest average return was May of 0.0256. Then it is known that  $t$  count MAY is smaller than  $t$  table of  $0.041129 < 1.69726$ , with a significance level of 0.9675, which is greater than 0.05 ( $0.9675 > 0.05$ ). From these results, it can be concluded that the hypothesis was rejected, which means that there was no Rogalsky Effect in April in LQ-45 shares during the February 2018-July 2018 period. The rupiah exchange rate against the United States dollar (U.S.) is still volatile up, price fluctuations commodity, and the release of the balance of payments will affect LQ-45.

## CONCLUSION

Stock Returns affect The Day of The Week Effect When viewed from a psychological point of view, and investors do not like Monday, which is the beginning of the early workday, affecting their mood in buying and selling shares. It is indicated that institutional investors do fewer trading activities on Monday, while individual investors do more trading activities, but sales orders dominate their trading activities more. As a result, activities on the stock exchange will also be affected by this condition, and stock prices will fall due to an increase in supply that is not matched by demand. The increase in average stock returns on Wednesday, Thursday, and Friday is likely due to the day investors have begun implementing their investment strategies. The investment strategy used in buying shares reviewed and analyzed beforehand enables investors to obtain a positive return.

There is no Week Four Effect. This can be seen from the average value of the Week Four Effect variable for the group returns on the fourth and fifth week of Monday at 0.00102 and the average return on the first, second, and third Monday at 0.00105. This Week Four Effect is usually caused by demands to fulfill all the primary needs that must be done at the beginning of the following month.

The Monday Effect variable indicates that it is not only negative Friday returns that drive negative Monday returns. In part, a positive Friday return will also be followed by a negative Monday return. There is no difference between a negative Friday return and a positive Friday return in driving the Monday effect (negative Monday return).

Based on the results of this study, it can be seen that there is no Rogalsky Effect. The lowest return occurs in July, and the highest average return is in May. The hypothesis was rejected from these results, which means that there was no Rogalsky Effect in April in LQ-45 shares during the February 2018-July 2018 period. Rupiah exchange rate against the United



States dollar (U.S.) is still fluctuating upward, fluctuations in commodity prices, and the release of the balance of payments will affect LQ-45.

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