Market Anomalies of LQ 45 Companies Stock Return Listed On the Indonesia Stock Exchange

Rifatun Nuroniyah[1], Sri Utami Ady [2], Sugiyanto[3]

[1,2,3]*Faculty of Economics and Business, Universitas Dr. Soetomo, Indonesia*
[*]*sri.utami@unitomo.ac.id*

Anomali Pasar Pengembalian Saham Perusahaan LQ 45 Terdaftar Di Bursa Efek Indonesia

Abstrak

Tujuan penelitian ini adalah untuk: (1) menganalisis perbedaan Efek Rogalski (2) untuk menguji perbedaan Efek Senin (3) untuk mengeksplorasi perbedaan Efek Akhir Pekan terhadap return saham pada perusahaan LQ 45 yang terdaftar di Bursa Efek Indonesia. Metode yang digunakan dalam penelitian ini adalah deskriptif kuantitatif, sampel dalam penelitian ini berjumlah 43 perusahaan yang dipilih dengan menggunakan teknik purposive sampling, alat analisis yang digunakan adalah Independent sample t-test. Hasil penelitian menunjukkan (1) tidak ada perbedaan signifikan antara rata-rata hari Senin-April dengan rata-rata return saham hari Senin, bukan return saham bulan April, dan tidak ada Efek Rogalski pada saham LQ 45 yang terdaftar di Bursa Efek Indonesia, (2) tidak ada perbedaan signifikan antara rata-rata pengembalian saham hari Senin dengan rata-rata pengembalian saham bukan hari Senin. Dan tidak ada Efek Senin terhadap return saham LQ 45 yang terdaftar di Bursa Efek Indonesia, (3) ada perbedaan signifikan yang terjadi pada hari Rabu, sedangkan pada hari Senin, Selasa dan Kamis tidak ada perbedaan yang signifikan antara rata-rata return saham. Dan tidak ada Efek Akhir Pekan terhadap return saham LQ 45 yang terdaftar di Bursa Efek Indonesia dari Februari 2016 hingga Januari 2017.

Kata kunci: Efek Rogalski, Efek Senin, Efek Akhir Pekan, Pengembalian Saham.

Abstract

The purposes of this study were to: (1) analyze the differences of Rogalski Effect (2) to examine the differences of Monday Effect (3) to explore the differences of Weekend Effect on stock return at LQ 45 company listed in Indonesia Stock Exchange. The method used in this study was descriptive quantitative, the sample in this study amounted to 43 companies selected by using purposive sampling technique, the analysis tool used was the Independent sample t-test. The result of this research showed (1) there was no significant differences between the average of Monday-April with the average stock return of Monday, not April stock return. And there was no Rogalski Effect on LQ 45 stock return listed on Indonesia Stock Exchange, (2) there was no significant differences between the average return of the stock of Monday with the average return of not Monday stock. And there was no Monday Effect on LQ 45 stock return listed on Indonesia Stock Exchange, (3) there were significant differences occurred on Wednesday, while on Monday, Tuesday and Thursday there was no significant difference between the average stock return. And there was no Weekend Effect on LQ 45 stock return listed on Indonesia Stock Exchange from February 2016 until January 2017.

Keywords: Effect Rogalski, Monday Effect, Weekend Effect, Stock Return.

INTRODUCTION

The stock market is a very dynamic industry, attractive, continually changing and has such a high interdependence with the financial services sector. Capital markets as well as a means to reconcile the two parties concerned. The first party is a corporation, as those in need of funding and investors as the second party is the party that wants to invest. Everyone involved in the capital markets, especially investors must always strive and hope for the return of all commercial activities and transactions, resulting expected return for investors (Hartono, 2013). (Ady, Salim, & Susanto, 2010), Showed that the variant return is preferen considered by investors compared to dividends. Return directly proportional to the risk. The more return desired by the investors, the higher the risk that is faced by investors. Therefore, investors need to analyze whether the benefits will be higher than the chances or just the opposite.

One of the breakthroughs that are not less important in the development of capital market theory is the priority of the efficient market hypothesis by Fama in 1970. The capital market is said to be efficient if all securities traded prices already reflect all available information. The more efficient a capital market, the faster the new information is reflected in security prices.

Some of the theories and concepts that there is still much debate that often occurs in an efficient market. Appeared many studies that the existence of irregularities or abnormalities of the approach and the concept of efficient markets, e.g., in research of Udayani, (2016); (Ramadhani, 2014). It is due to the psychological aspects that affect the investment decision of investors act irrationally (Ady, Sudarma, Salim, & Aisyah, 2013). (Jannah & Ady, 2017) showed the presence of overconfidence (psychological aspect) in making investment decisions, one of the causes of deviations. (Ady, 2018a) by using qualitative research methods indicated the existence of a variety of bias both cognitive and psychological that caused behavioral bias to Indonesian investors. (Ady, 2018b) showed that good ethics and morals in transactions could reduce the psychological effects on investment decisions. Irregularities or abnormalities in the capital market usually called market anomalies. Jones (1996) in Hartono (2013) suggests that the peculiarity of the market (market anomalies) as techniques or strategies are contrary to the concept of efficient markets. Various studies of diverse research results raise the question of retesting the anomaly in the LQ-45 stock, as a liquid stock.

This study had examined the types of seasonal anomalies. This anomaly is very dependent on the time, in this study included Rogalski Effect, Monday effect, and the Weekend Effect. Monday Effect is a return stock of negative that happened on Monday,(Cahyaningdyah & Witiastuti, 2010); (Rr. Iramani & Ansyori Mahdi, 2006); (Cahyaningdyah & Faidah, 2017); (Cheong, 2016) Weekend Effect is stock returns positive occurred on Friday, (Cahyaningdyah, 2005), Rogalski Effect is a phenomenon associated with the Day of the Week Effect for returns negative that are common in the Monday (Monday Effect) will disappear in a given month. In Indonesia phenomena, Rogalski effect was found in April (Cahyaningdyah & Witiastuti, 2010). In some studies have often done testing on anomaly but the measurement of market anomaly is still a matter of research must remain to be investigated and retested for the periods/years to date. That is because to understand the pattern of returns stock seasonally expected that investors can use information in the decision to buy or sell shares properly so they can gain an advantage over stock market investments.

The purposes of this study were (1) To analyze the differences(Rogalski Effect) to return stock in LQ 45 listed companies in Indonesia Stock Exchange. (2) To examine the differences (Monday Effect) to LQ 45 stock return listed companies in Indonesia Stock Exchange. (3) To explore the differences(Weekend Effect) to return stock in LQ 45 listed companies in Indonesia Stock Exchange.

THEORETICAL FRAMEWORK AND HYPOTHESES FORMULATION

a. Capital Markets

The Capital market is a meeting between the parties that have surplus funds and those who need funds by traded securities that have a lifespan of more than one year, such as stocks and bonds (Tandelilin, 2010). Herlianto (Herlianto, 2013: 14) divides the types of the capital market into 4 (four), namely:

1. primary market(primary market)is a public offering of the company that issued the shares (issuer) to investors during the period set by the parties published before the shares are traded in the secondary market.
2. Secondary market(secondary market) is stock after a period of offerings on the stock market. In a time not later than 90 days after emissions permits given securities are to be listed on the exchange.
3. The third market(third market)is a stock trading or other securities outside the exchange (over the counter market).
4. The fourth market(fourth market)is an investor securities trading or transfer of shares from one shareholder to the other shareholders without going through a broker.

b. Efficient Markets

Efficient market(Efficient Market)is a condition in which information about all the prices can be obtained openly and quickly without any specific difficulties. Fama (Fama, 1970) defines an efficient market is a securities market is said to be efficient if security prices fully reflect available information. Ady & Mulyaningtyas, (2017) showed that the Indonesian capital market to date has not been efficient the half strongly evidenced by the number of investors who still get returns using historical information. Fama, (1970) distinguishes the efficiency of capital markets into three (3) forms namely;

1. weak form Efficiency
   Hypothesis efficient capital market in the weak form which states that stock prices reflect all the information on the record price previous disclosures.
2. A semi-strong form
   The hypothesis in a semi-strong form stating that prices not only reflect the rates in the past but all of the information published.
3. Strong form
   The capital market efficient Hypothesis of strong form stating that all relevant information available is reflected in the stock price. So good news already published or unpublished (private information) will be reflected in the stock price.

c. Shares

Shares participation is proof of ownership of capital or funds in a company. The paper stock is listed nominal value, followed by the name of the company and the rights and obligations described to each holder. In the stock market, there are two types of stocks most commonly known by the public, namely common stock and preferred stock.

1. Common Stock (common stock) is security sold by a company. Where the holder is given the right to participate in the GMS (General Meeting of Shareholders) and Extraordinary General Meeting and has the right to decide to buy the Right Issue (limited sales) or not, which further end of the year will earn a profit in dividends.
2. Preferred Stock is security sold by a company. Where the holder is given the right to participate in the GMS (General Meeting of Shareholders) and Extraordinary General Meeting (General Meeting of Shareholders of Extraordinary) and will earn a fixed income in the form of dividends to be received every quarter (three months).

d. Return Equity

Stock return is the result of the gain or loss derived from a stock investment. Stock return is also called the expected rate of return on investments made in stock. There are two types of stock returns. The first return may be the return realization has occurred and that the return expected that has not happened yet but is likely to happen in the future (Rodoni & Herni, 2010).

1. Return realization(Tirrenusin return)is the returns that have occurred that are calculated based on historical data.
2. While the return expected (expected return)Represents the return expected will be obtained by investors in the future.

e. LQ 45

LQ 45 index is a calculation of 45 issuers/share, from the selection criteria as an assessment of liquidity. Selection of the issuer/shares is also taking into account the capitalization of the market. LQ 45 which contains 45 listed companies/stocks in every six months precisely at the start of February and August customizable, meaning that issuers/shares are to be changed.

f. Market Anomalies

The anomaly is a peculiarity, oddity or deviation from the standard state/normal that different from the general conditions in the environment. The Market anomaly is an event (events) that could be exploited to produce abnormal return/profit. (Hartono, 2013: 606) argues that the anomalies market as techniques or strategies are contrary to the concept of efficient markets.

g. Seasonal Anomaly

The seasonal anomaly is a market anomaly or economic effects arising regarding the time. The result includes the different behavior of the stock market, at a time that is different in a week, a different time in a month, and at different times of the year (seasonal).

1. **RogalskiEffect**

   RogalskiEffect is a phenomenon discovered by a researcher named Rogalski in 1984. His research revealed an interesting relationship between the event of The Day of the Week Effect in January Effect, which found that the average return negative on Monday disappeared in January.

2. **Effect Monday**

   Effect Monday is where Return Monday tends to produce negative returns. The phenomenon Monday Effect occurs because the influenced by the patterns of behavior that irrational investors in trading Monday. Investors assume that Monday is the first day of the transaction will be carried out after the weekend, and the investors are pessimistic, not ready and were not able to work productively or maximum to conduct operations in the capital market like any other day other than Monday.

3. **Weekend Effect**

   Weekend Effect is a phenomenon in which the return on the last day of the week trading had positive returns. Weekend Effect is also known as the Friday Effect. Investors assume that Friday is the last day before a holiday weekend, and investors have a spirit to make transactions in the capital market. Tend Friday returns the highest positive stock compared with another day.
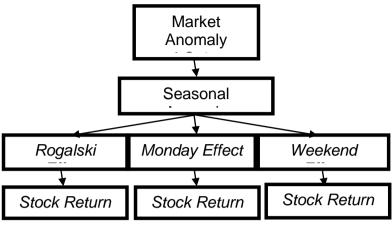
Conceptual Framework

Figure 1. Conceptual Framework

The hypothesis of this study are as follows:
1. There is a difference of RogalskiEffect to stock return in LQ 45 companies listed in Indonesia Stock Exchange.
2. There is a difference of Monday Effect to stock return in LQ 45 companies listed in Indonesia Stock Exchange.
3. There is a difference of Weekend Effect to stock return in LQ 45companies listed in Indonesia Stock Exchange.

METHODS

This study used quantitative comparative approach. This type of research chosen is to compare the differences between two or more groups of a particular variable. Data used is secondary data. The analysis technique used to analyze is by reducing the stock's closing price on day i or days now with the day to i-1 or the previous day and then divided by the i-1 or the day before. And to test the hypothesis by using test of independent sample t-test.

$$R_{it} = \frac{P_{it} - P_{it-1}}{P_{it-1}}$$

Table 1. Operational Definition, Identification, and Indicators Variable Variable

Variable Type	Operational Definition	Variable Indicators
Effect	Rogalski'sclosing stock price on Monday reduced the stock's closing price on Friday, and the result is divided by the stock's closing price on Friday.	Gains(Return)On Monday, the high positive in April.
Effect	Monday closing stock price on Monday reduced the stock's closing price on Friday, and the result is divided by the stock's closing price on Friday.	Gains(Return)negative tends to happen on Monday.
Weekend Effect	stock's closing price on Friday reduced the stock's closing price on Thursday, and the	Gains(Return)highest tend to occur on Friday.

Variable Type	Operational Definition	Variable Indicators
	result is divided by the stock's closing price on Thursday.	
Stock Return Stock	return at the closing stock price changes i at day-t/ closing stock price i previous day/day-1. Then the result is divided by the closing share price the previous day/day t-1.	Gains(Return)

The research design of this study were as follows:

The population used in this study are shares listed on LQ 45 during the period of February 2016 up to January 2017, which was selected by using purposive sampling technique. Purposive sampling technique is, sampling technique with a specific consideration (Sugiyono, 2001: 61), that the criteria listed company active and make transactions in the LQ 45 index during the period, which in February 2016 until January 2017 at the Indonesia Stock Exchange. Based on these criteria of 45 members of the population who qualify as many as 43 companies on the condition that the first six months from February to July was the transaction but in the second six months are August through January, two members of the population are no longer recorded into LQ45.

Table 2. CharacteristicsSample

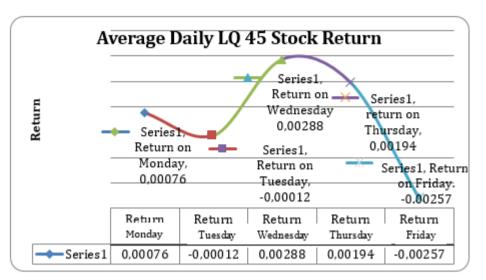| No.	CharacteristicsSample	Number
1	Total Population / companies listed in LQ45	45
2	Companies out of LQ45	(2)
	Number of Samples	43

RESULTS AND DISCUSSION

1. Descriptive Analysis Return Stock

Table 3. Descriptive Analysis Return Daily Stocks LQ 45

Descriptive Analysis Return Daily StockLQ 45					
	N	Minimum	Maximum	Mean	Std. Deviation
Return_monday	47	-0.02916	0.02664	0.00076	0.01251
Return_tuesday	52	-0.02688	0.01768	-0.00012	0.00972
Return_wednesday	49	-0.01533	0.03110	0.00288	0.00998
Return_thursday	50	-0.02232	0.03536	0.00194	0.01152
Return_friday	49	-0.04348	0.02709	-0.00257	0.01124
Total	247	-0.13717	0.13787	0.00288	0.05496

Source: Data processed

order provide a clearer picture can be viewed in Figure 3 as follows:

Average Daily LQ 45 Stock Return

	Return Monday	Return Tuesday	Return Wednesday	Return Thursday	Return Friday
Series1	0,00076	-0,00012	0,00288	0,00194	-0,00257

Figure 3. Average Daily LQ 45 Stock Return Chart

the above data shows the average value of return the highest shares on Wednesday at 0.00288 and the lowest average on Friday of -0.00257.

Daily Stock Deviation Standard Chart.

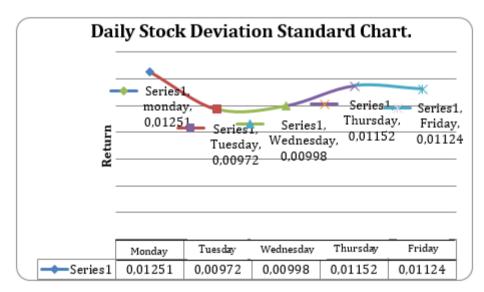|	Monday	Tuesday	Wednesday	Thursday	Friday
Series1	0,01251	0,00972	0,00998	0,01152	0,01124

Figure 4. LQ 45 Daily stock Deviation Standard Chart

The Value of standard deviations is higher than the average value of stock return which means the risk accepted by the investor/issuer more elevated than the returns to be obtained.

2. First Hypothesis Testing Results

The objective of the one-sample test-Smirnov Kolmogrov normality is to determine whether the calculation of Effect Rogalski normally distributed or not.

Table 4. Results of Normality Test One-Sample
Kolmogorov-Smirnov Rogalsky Effect

Moon	N	Asym. Sig. 2-tailed
February	8	0769
March	8	0904
May	9	0896
June	8	0855
July	7	0992
August	9	0994
September	7	0706
October	9	0979
November	8	0873
December	6	0891
January	8	0795

Based on the output "Statistics Test" above, by using One-Sample Kolmogorov-Smirnov can be seen that the entire value Asymp. Sig. (2-tailed) Is greater than the value of α (0.05), it can be concluded that the data used was normally distributed. Thus it can be continued by independent sample-t-test.

Table 5. Test Results Independent Sample t-test Rogalski Effect

Group Statistics		independent sample t-test						
April	Non-April (February)	Equal Variances Assumed				not Equal Variances Assumed		
		Sig.	t	df	Sig. 2 tailed	t	df	Sig. 2 tailed
.0050350 .006		.000 760 0	-.757	6	.478	-.757	3,707	.494

Source: Data processed

sig value. 0.006 <0.05, it can be concluded that the data variance is not homogeneous. With t value $_{the}$ of -0.757, while the amount of t_{table} with df = 3.7 is equal to 3.182 with a significance level of 5%, i.e. $_{(t}$ <$t_{table)}$, then Ho is accepted. Value Sig. 2-tailed for 0494> 0.05 then Ho is accepted there was no significant difference between Monday-April and a Monday in February.

Table 6. Test Results Independent Sample t-test Rogalski Effect

Group Statistics		independent sample t-test						
April	Non-April (March)	Equal Variances Assumed				not Equal Variances Assumed		
		Sig.	t	df	Sig. 2 tailed	t	df	Sig. 2 tailed
	.0007600.. 586	002 812 5	-.277	6	.791	-.277	5992	.791

Source: Data processed

Sig value. for 0586> 0.05 it can be concluded that the data variance was homogeneous. With t value $_{the}$ at -0277, while the value of t_{table} with df = 6 is equal to 2,447 with significance level of 5% ie$_{(t}$ <$t_{table)}$,then Ho is accepted. Value Sig. 2-tailed for 0791> 0.05

then Ho is accepted there was no significant difference between on Monday in April and on a Monday in March.

Table 7. Test Results Independent Sample t-test Rogalski Effect

Group Statistics		Independent Sample t-test						
April	Non April (Mei)	Equal Variances Assumed				Equal Variances not Assumed		
		Sig.	t	df	Sig. 2 tailed	t	df	Sig. 2 tailed
.0007600	-.0067580	.945	.938	7	.379	.960	6.963	.369

Source: Data processed

Sig value. amounted to 0.945> 0.05, it can be concluded that the data variance is homogeneous. With the value of t_{count} equal to 0.938, while the value of t_{table} with df = 7 amounted to 2,365 with a significance level of 5%, i.e. $_{(t<t\ table)}$, then Ho was accepted. Value Sig. 2-tailed by 0.379> 0.05 then Ho was accepted there are no significant difference between Monday 0n April and a Monday on May.

Table 8. Test Results Independent Sample t-test Rogalski Effect

Group Statistics		independent sample t-test						
April	Non-April (June)	Equal Variances Assumed				not Equal Variances Assumed		
		Sig.	t	df	Sig. 2 tailed	t	df	Sig. 2 tailed
.0045275 .691	.0007600		-.499	6	.635	-.499	6.000	.635

Source: Data processed

Sig value. amounted to 0.691> 0.05, it can be concluded that the data variance is homogeneous. With t value $_{the}$ at -0499, while the value of t_{table} with df = 6 is equal to 2,447 with significance level of 5% ie $_{(t<t_{table}),}$ then Ho was accepted. Value Sig. 2-tailed by 0.635> 0.05 then Ho was accepted, there were no significant differences between Monday on April and a Monday on June.

Test Results Table 9. IndependentSample t-test Rogalski Effect

Group Statistics		Independent Sample t-test						
April	Non April (Juli)	Equal Variances Assumed				Equal Variances not Assumed		
		Sig.	t	df	Sig. 2 tailed	t	df	Sig. 2 tailed
.0007600	.0139600	.507	-1.658	5	.158	-1.676	4.620	.159

Source: Data processed

Sig value. amounted to 0.507> 0.05, it can be concluded that the data variance is homogeneous. With t value $_{the}$ at -1658, while the value of t_{table} with df = 5 was equal to 2,571 with a significance level of 5% i.e. $_{(t<t\ table)}$, then Ho was accepted. Value Sig. 2-tailed by 0.158> 0.05 then Ho was accepted, there were no significant differences between Monday on April and a Monday on July.

Table 10.Test Results Independent Sample t-test Rogalski Effect

Group Statistics		independent sample t-test						
April	Non-April (August)	Equal Variances Assumed				not Equal Variances Assumed		
		Sig.	t	df	Sig. 2 tailed	t	df	Sig. 2 tailed
.0007600	-.0013640	.179 .863		7	.195	.193	6,076	.853

Source: Data processed

Sig value. for 0195> 0.05 it can be concluded that the data variance is homogeneous. With the value of t_{count} equal to 0.179, while the value of t_{table} with df = 7 amounted to 2,365 with a significance level of 5%, i.e. $(t < t_{table})$, then Ho was accepted. Value Sig. 2-tailed by 0.863> 0.05 then Ho was taken, there are no significant differences between Monday on April and a Monday on August.

Table 11. Results of Test Independent Sample t-test Rogalski Effect

Group Statistics		independent sample t-test						
April	Non-April (September)	Equal Variances Assumed				not Equal Variances Assumed		
		Sig.	t	df	Sig. 2 tailed	t	df	Sig. 2 tailed
.0030267 .724		.000 7600	-.249	5	.814	-.239	3,741	.824

Source: Data processed

Sig value. for 0724> 0.05 it can be concluded that the data variance is homogeneous. With t value $_{the}$ of -0.249, while the value of t_{table} with df = 5 is equal to 2,571 with a significance level of 5%, i.e. $(t < t_{table})$, then Ho was accepted. Value Sig. 2-tailed by 0.814> 0.05 then Ho was allowed, there were no significant differences between Monday on April with Monday in September.

Table 12. Results of Test Independent Sample t-test Rogalski Effect

Group Statistics		independent sample t-test						
April	Non-April (October)	Equal Variances Assumed				not Equal Variances Assumed		
		Sig.	t	df	Sig. 2 tailed	t	df	Sig. 2 tailed
.0067640 .770		.000 7600	-.799	7	.451	-.807	6794	.447

Source: Data processed

Sig value. amounted to 0.770> 0.05, it can be concluded that the data variance is homogeneous. With t value $_{the}$ at -0799, while the value of t_{table} with df = 7 amounted to 2,365 with a significance level of 5%, i.e. $(t < t_{table})$, then Ho was accepted. Value Sig. 2-tailed by 0.451> 0.05 then Ho was received, there are no significant differences between Monday on April with a Monday in October.

Table 13. Results of Test Independent Sample t-test Rogalski Effect

Group Statistics		Independent Sample t-test						
April	Non April (November)	Equal Variances Assumed				Equal Variances not Assumed		
		Sig.	t	df	Sig. 2 tailed	t	df	Sig. 2 tailed
.0007600	-.0082225	.756	.987	6	.362	.987	5.468	.365

Source: Data processed

Sig value. for 0756> 0.05 it can be concluded that the data variance is homogeneous. With the value of t_{count} equal to 0.987, while the amount of t_{table} with df = 6 is equal to 2,447 with a significance level of 5%, i.e. $(t < t_{table})$, then Ho was accepted. Value Sig. 2-tailed by 0.362> 0.05 then Ho was taken, there were no significant differences between Monday on April with Monday of November.

Table 14. Results of Test Independent Sample t-test Rogalski Effect

Group Statistics		Independent Sample t-test						
April	Non April (Desember)	Equal Variances Assumed				Equal Variances not Assumed		
		Sig.	t	df	Sig. 2 tailed	t	df	Sig. 2 tailed
.0007600	-.0040250	.614	.476	4	.659	.424	1.614	.721

Source: Data processed

Sig value. for 0614> 0.05 it can be concluded that the data variance is homogeneous. With the value of t_{count} equal to 0.476, while the value of t_{table} with df = 4 amounted to 2,776 with a significance level of 5%, i.e. $(t < t_{table})$, then Ho was accepted. Value Sig. 2-tailed by 0.659> 0.05 then Ho was allowed, there were no significant differences between Monday on April with a Monday in December.

Table 15. Results of Test Independent Sample t-test Rogalski Effect

Group Statistics		Independent Sample t-test						
April	Non April (Januari)	Equal Variances Assumed				Equal Variances not Assumed		
		Sig.	t	df	Sig. 2 tailed	t	df	Sig. 2 tailed
.0007600	-.0050250	.001	1.052	6	.333	1.052	3.371	.362

Source: Data processed

Sig value. of 0001 <0.05 it can be concluded that the data variance was not homogeneous. With t value $_{the}$ amounted to 1,052, while the cost of t_{table} with df = 3.4 was equal to 3,182 with a significance level of 5%, i.e. $(t < t_{table})$, then Ho was accepted. Value Sig. 2-tailed by 0.362> 0.05 later Ho was received, there were no significant differences between Monday on April with Monday of January.

3. Second Hypothesis Testing Results

The objective oftest the one-sample Kolmogorov-Smirnov was to determine whether the calculation of effect Monday distributed normally or not.

Table 16. Results of Normality Test One-Sample Kolmogorov-Smirnov Monday Effect

Day	N	Asym. Sig. 2-tailed
Tuesday	99	0779
Wednesday	96	0758
Thursday	97	0501
Friday	96	0582

Based on the output "Test Statistics" table 16, by using One-Sample Kolmogorov-Smirnov can be seen that the entire value Asymp. Sig. (2-tailed) more than 0.05 α value, so that the data used otherwise distributed normally. Thus it can be continued by independent sample t-test.

Table 17. Results of Test Independent Sample t-test Monday Effect

Group Statistics		Independent Sample t-test						
monday	Non Senin (Selasa)	Equal Variances Assumed				Equal Variances not Assumed		
		Sig.	t	df	Sig. 2 tailed	t	df	Sig. 2 tailed
.0007589	-.0001206	.081	.393	97	.695	.388	86.611	.699

Source: Data processed

Sig value. for 0081> 0.05 it can be concluded that the data variance is homogeneous. With the value of t_{count} equal to 0393, while the cost of t_{table} with df = 97 amounted to 1,985 with a significance level of 5%, i.e. $(t < t_{table})$, then Ho was accepted. Value Sig. 2-tailed by 0.695> 0.05 then Ho was taken, there were no significant differences between Monday and Tuesday.

Table 18. Results of Independent Sample t-test Monday Effect

Group Statistics		Independent Sample t-test						
Senin	Non Senin (Rabu)	Equal Variances Assumed				Equal Variances not Assumed		
		Sig.	t	df	Sig. 2 tailed	t	df	Sig. 2 tailed
.0007589	.0028751	.194	-.918	94	.361	-.914	87.897	.363

Source: Data processed

Sig value. for 0194> 0.05 it can be concluded that the data variance is homogeneous. With t value $_{the}$ at -0918, while the value of t_{table} with df = 94 amounted to 1,986 with a significance level of 5%, i.e. $(t < t_{table})$, then Ho is accepted. Value Sig. 2-tailed by 0.361> 0.05 then Ho was allowed, there were no significant differences between Monday to Wednesday.

Table 19. Results of Independent Sample t-test Monday Effect

Group Statistics		Independent Sample t-test						
Senin	Non Senin (Kamis)	Equal Variances Assumed				Equal Variances not Assumed		
		Sig.	t	df	Sig. 2 tailed	t	df	Sig. 2 tailed
.0007589	.0019424	.456	-.485	95	.629	-.484	93.056	.630

Source: Data processed

Sig value. for 0456> 0.05 it can be concluded that the data variance was homogeneous. With t value $_{the}$ at -0485, while the value of t_{table} with df = 95 amounted to 1,985 with a

significance level of 5%, i.e. $_{(t <t\ table)}$, then Ho was accepted. Value Sig. 2-tailed by 0.629> 0.05 later Ho was received, there were no significant differences between Monday to Thursday.

Table 20. Results of Independent Sample t-test Monday Effect

Group Statistics		Independent Sample t-test						
Senin	Non Senin (Jumat)	Equal Variances Assumed				Equal Variances not Assumed		
		Sig.	t	df	Sig. 2 tailed	t	df	Sig. 2 tailed
.0007589	-.0025700	.268	1.373	94	.173	1.370	91.963	.174

Source: Data processed

Sig value. for 0268> 0.05 it can be concluded that the data variance was homogeneous. With t value $_{the}$ amounted to 1,373, while the value of t $_{table}$ with df = 94 amounted to 1,986 with a significance level of 5%, i.e. $_{(t <t\ table)}$, then Ho is accepted. Value Sig. 2-tailed by 0.629> 0.05 then Ho is taken, there were no significant differences between Monday to Friday.

4. Third Hypothesis Testing Results

The objective of test the one-sample Kolmogorov-Smirnov is to determine whether the calculation effect Weekend normally distributed or not.

Table 21. Results of One-Sample Kolmogorov-Smirnov Normality Test -Weekend Effect

Day	N	Asym. Sig. 2-tailed
Monday	96	0582
Tuesday	101	0240
Wednesday	98	0759
Thursday	99	0738

Based on the output "Test Statistics" table 21, by using One-Sample Kolmogorov-Smirnov can be seen that the entire value Asymp. Sig. (2-tailed) more than 0.05 α value, so that the data used otherwise distributed normally.

Table 22. Results of Independent Sample t-test- Weekend Effect

Group Statistics		Independent Sample t-test						
Jumat	Non Jumat (Senin)	Equal Variances Assumed				Equal Variances not Assumed		
		Sig.	t	df	Sig. 2 tailed	t	df	Sig. 2 tailed
-.0025700	.0007589	.268	-1.373	94	.173	-1.370	91.963	.174

Source: Data processed

Sig value. for 0268> 0.05 it can be concluded that the data variance was homogeneous. With the value of t $_{count}$ equal to -1,373, while the value of t $_{table}$ with df = 94 amounted to 1,986 with a significance level of 5%, i.e. $_{(t <t\ table)}$, then Ho was accepted. Value Sig. 2-tailed by 0.173> 0.05 then Ho has accepted it means there was no significant difference between Friday to Monday.

Tabel 22. Result of Independent Sample t-test Weekend Effect

Group Statistics		Independent Sample t-test						
Jumat	Non Jumat (Selasa)	Equal Variances Assumed				Equal Variances not Assumed		
		Sig.	t	df	Sig. 2 tailed	t	df	Sig. 2 tailed
-.0025700	-.0001206	.608	-1.174	99	.243	-1.169	95.054	.245

Source: Data processed

Sig. for 0608> 0.05 it can be concluded that the data variance is homogeneous. $_{the}$ at -1174, while the value of t_{table} with df = 99 amounted to 1,984 with a significance level of 5%, i.e.$_{(t}$ $<t_{table)}$, then Ho was accepted. Value Sig. 2-tailed for 0243> 0.05 then Ho was received, it means that there was no significant difference between Friday to Tuesday.

Table 23. Results of Independent Sample t-test Weekend Effect

Group Statistics		independent sample t-test						
Friday	Non Friday (Wednesday)	Equal Variances Assumed				not Equal Variances Assumed		
		Sig.	t	df	Sig. 2 tailed	t	df	Sig. 2 tailed
-.0025700	.965 -2,536.013 -2,536 94,675 .013			96				.0028751

Source: Data processed

Sig value. for 0965> 0.05 it can be concluded that the data variance was homogeneous. With t value $_{the}$ at -2536, while the cost of t_{table} with df = 96 amounted to 1,985 with a significance level of 5%, i.e.$_{(t}$ $<t_{table)}$, then Ho was accepted. Value Sig. 2-tailed stood to 0.013 <0.05 then Ho was rejected, there was a significant difference between Friday to Wednesday.

Table 24. Results of Independent Sample t-test Weekend Effect

Group Statistics		independent sample t-test						
Friday	Non Friday (Thursday)	Equal Variances Assumed				not Equal Variances Assumed		
		Sig.	t	df	Sig. 2 tailed	t	df	Sig. 2 tailed
-.0025700	.695 -1,972-1,973 96,998			97	.05	.0019424		.05

Source: Data processed

Sig value. for 0695> 0.05 it can be concluded that the data variance was homogeneous. With t value $_{the}$ at -1972, while the cost of t_{table} with df = 97 amounted to 1,985 with a significance level of 5%, i.e.$_{(t}$ $<t_{table)}$, then Ho was accepted. Value Sig. 2-tailed 0.05 = 0.05 then Ho was taken, there was no significant difference between Friday to Thursday.

DISCUSSION

1. Discussion First Hypothesis Rogalski Effect
In this research Rogalski Effect which was used by researchers was in April as seen from previous studies that examined Rogalski effect in January but has not been proven in January but proved in April. Udayani (Udayani, 2016) states that Rogalski effect is an

average negative return on Monday, disappearing in a given month and Indonesia Rogalski effect tends to occur in April. From the test, shows that the return in April was positive. It indicates that the company presented its annual report on time, which according to the provisions of the Capital Market Supervisory Agency (Bapepam) 80 / PM / 1996, states that the submission of annual financial statements no later than 120 days after the date of the yearly book closing. And judging from the average stock returns are highest in July with an average value return of 0.01396. By KSEI (Indonesian Central Securities Depository), which noted some improvement of operational performance and development of the Indonesian capital market for one semester. Based on the chart the progress of an investor on the number SID (Single Investor Identification), SRE (Sub Account) and login to access facilities from the previous year has increased. Investors assume by looking at the development over one semester investors can analyze that in July the stock price to rise and many investors who invest in the stock so that the profits generated will be higher.

2.   Second Hypothesis discussion Monday Effect
      From the research, it appears that the factors were causing the mood of investors on the Monday stock return was positive. It can occur because of many announcements that often appear in the afternoon in Friday on the Indonesian Stock Exchange before the holiday weekends, both the bad news (Bad News) and the good news (good news) that can cause the investor overreaction that was overreacting. According to Ady (Ady, 2015) overreaction or extreme reactions also occur on the good news. Investors tend to over-react to the good news that resulted in the share price increase was excessive, so that on the day after a holiday weekend or more precisely on Monday, investors will feel better make purchases and perform the demand for shares. It resulted in the average value stock returns may be positive and rising on Monday and reduce the effect weekend. Excessive emotions can be reduced by incorporating morals and ethics in the transaction. (Ady, 2018b) showed that a right way of trading stocks, do not commit ethical violations, did demand and supply of false, short selling, margin trading, will give you peace in the transaction, thereby reducing emotional instability investors. The result of this research (Caporale, Gil-Alana, & Plastun, 2016) who found that there was a weekend effect on the capital market in ukraine but was positive return on Friday.

      This test is also supported by a statement from the Indonesia Stock Exchange stating that the performance of the capital markets creates the best record throughout history since its foundation in 1977. A series of global sentiment coloring the capital market sentiment in 2016. There were quite surprising and a serious concern, which is slowing the world economy continues, the decision of the UK out of the EU or Brexit, as well as the results of the US presidential elections won by Donald Trump. Although the sentiment third time to make the Indonesian capital market hit by the turmoil, but the confidence of investors to Indonesia's economic fundamentals as well as the achievement of the performance of listed companies in Indonesia Stock Exchange continued to grow impressively made the Indonesian capital market capable through the tough challenges, can even achieve their best performance.

3.   Discussion of Third Hypothesis Weekend Effect
      It can happen as many investors buy shares on Monday or early in the week so that should the value of the average stock return was negative turned positive value, and the purchase of shares, investors would observe the movement of the stock price until the increase of stock price was regarded by investors. The jump is quite high on Wednesday, with the average value of stock returns by 0.00288, which makes investors took profit that

was causing the sale of shares when the upward trend in stock prices, respectively. The purpose of profit-making alone was that investors make a profit (capital gain) from investments. And if shares were not sold when the stock price rises it was concerned that stock prices continued to increase would reverse direction and decline, seen in the average stock returns Thursday with a value of 0.00194 which decreased from Wednesday and will continue to decline until Friday to return the average value of -0.00257. Therefore, the average value of stock returns Friday tends to be negative due to their analysis that investors who see the movement of stock prices continuously and successively down.

CONCLUSIONS, IMPLICATIONS, RECOMMENDATIONS, AND LIMITATIONS OF RESEARCH

Conclusions
1. The results of testing the first hypothesis that there was no significant difference between the average stock return Monday in April with an average stock return of not-April Monday. The first hypothesis was rejected. And it does not happen Rogalski effect on stock returns LQ 45 listed in Indonesia Stock Exchange during the period February 2016 until January 2017, that average stock returns is positive in April, but not the highest. The average stock returns Monday, April amounted to 0.000760, and the average stock return is highest in July amounted to 0.01396.
2. Results of testing the second hypothesis that there is no significant difference between the average stock returns Monday to the average stock return of not Monday. The second hypothesis was rejected. And there was no effect on stock returns Monday LQ 45 listed in Indonesia Stock Exchange during the period February 2016 to January 2017, the average stock return Monday at 0.00076. It was proved that the average stock return Monday is positive or not happen Monday effect because the average stock returns that are negative should not occur in this study.
3. Results of testing the third hypothesis that there are significant differences occurred on Wednesday, while on Monday, Tuesday, and Thursday was not a significant difference. The third hypothesis was rejected. And it does not happen Weekend Effect on the return of LQ 45 stocks listed in Indonesia Stock Exchange during the period February 2016 until January 2017, which is the average stock return Friday tends to be negative. The average stock return Friday amounted -0.00257. It proves that the average stock return was negative or Friday Weekend effect does not occur because the average stock returns are high positive should not happen in this study.

Recomendation and Research Limitations
1. This study was expected to serve as a guide for investors in the capital markets decided to buy the stock, especially if there are anomalies in the market. With the test of these anomalies may be expected investors in analyzing the first shares to be purchased in order to obtain the maximum return.
2. In this case, need advanced research and researchers are expected to add variables and add the periods/years of recent study will be conducted.
3. In this study, only limited testing and proving what happened to return stock market anomaly or not is expected to further researchers can provide or insert additional analysis regarding market efficiency and others.

REFERENCES

Ady, S. U. (2015). *Manajemen Psikologi dalam Investasi Saham, Kajian Fenomenologi dalam Sentuhan Behavioral Finance*. (Monika Bendatu, Ed.) (1st ed.). Jogja: CV. Andi Offset.

Ady, S. U. (2018a). The Cognitive and Psychological Bias in Investment Decision-Making Behavior: (Evidence From Indonesian Investor's Behavior). *Journal of Economics and Behavioral Studies*, *10*(1), 86–100.

Ady, S. U. (2018b). The Moral Values of Psychological Stability , Successful Key of Investment. In *1st International Conference on Intellectuals' Global Responsibility (ICIGR 2017)* (Vol. 125, pp. 33–37). Atlantis Press.

Ady, S. U., & Mulyaningtyas, A. (2017). Eksplorasi Tingkat Efisiensi Pasar Modal Indonesia, Studi Kasus di Bursa Efek Indonesia. *Ekspektra: Jurnal Bisnis Dan Manajemen*, *1*(2), 103–123. https://doi.org/DOI: http://dx.doi.org/10.25139/ekt.v0i0.184

Ady, S. U., Salim, U., & Susanto, H. (2010). Analisis Variabel yang Berpengaruh terhadap Spread Harga Saham pada Industri Manufaktur di Bursa Efek Jakarta. *WACANA*, *13*(132).

Ady, S. U., Sudarma, M., Salim, U., & Aisyah, S. (2013). Psychology's Factors of Stock Buying and Selling Behavior in Indonesia Stock Exchange (Phenomenology Study of Investor Behavior in Surabaya). *IOSR Journal of Business and Management*, *7*(3), 11–22. Retrieved from www.iosrjournals.org

Cahyaningdyah, D. (2005). Analisis Pengaruh Hari Perdagangan Terhadap Return Saham: Pengujian Week-Four Effect Dan Rogalski Effect Di Bursa Efek Jakarta. *Jurnal Ekonomi Dan Bisnis Indonesia*, *20*(2). https://doi.org/10.22146/jieb.6567

Cahyaningdyah, D., & Faidah, F. (2017). Analisis Pengaruh Hari Perdagangan Terhadap Return Saham Di Bursa Efek Indonesia : Pengujian Menggunakan Garch (Generalized Autoregressive Conditional Heteroskedasticity). *Ekspektra: Jurnal Bisnis Dan Manajemen*, *1*(1), 1–10.

Cahyaningdyah, D., & Witiastuti, R. S. (2010). Jurnal Dinamika Manajemen. *JDM: JUrnal Dinamika Manajaemen*, *1*(2), 154–168. Retrieved from http://journal.unnes.ac.id/nju/index.php/jdm

Caporale, G. M., Gil-Alana, L. A., & Plastun, A. (2016). The weekend effect: an exploitable anomaly in the Ukrainian stock market? *Journal of Economic Studies*, *43*(6), 954–965. https://doi.org/10.1108/JES-09-2015-0167

Cheong, F. (2016). Debunking Two Myths of the Weekend Effect. *International Journal of Financial Studies*, *4*(2), 7. https://doi.org/10.3390/ijfs4020007

Fama, E. F. (1970). American Finance Association Efficient Capital Markets : A Review of Theory and Empirical Work. *The Journal of Finance*, *25*(2), 383–417.

Hartono, J. (2013). *Teori Portofolio dan Analisa Investasi* (7th ed.). Jogjakarta: BPFE.

Herlianto, D. (2013). *Manajemen Investasi Plus Jurus Mendeteksi Investasi Bodong*. Jogjakarta: Gosyen Publishing.

Jannah, W., & Ady, S. U. (2017). Analisis Fundamental, Suku Bunga, Dan Overconfidence Terhadap Pengambilan Keputusan Investasi Pada Investor Di Surabaya. *Ekspektra: Jurnal Bisnis Dan Manajemen*, *1*(2), 138–155. https://doi.org/10.1007/BF00139728.5

Jones, C. P. (1996). *Investment: Analysis and Management* (5th ed.). New York: John Wiley & Sons, Inc.

Ramadhani, R. (2014). Pengujian Anomali Pasar Monday Effect , Weekend Effect , Rogalski Effect Di Bursa Efek Indonesia.

Rr. Iramani, & Ansyori Mahdi. (2006). Studi Tentang Pengaruh Hari Perdagangan Terhadap

Return Saham Pada Bej. *Jurnal Akuntansi Dan Keuangan*, *8*(2), 63–70. Retrieved from http://puslit2.petra.ac.id/ejournal/index.php/aku/article/view/16646

Tandelilin, E. (2010). *Portofolio dan Investasi Teori dan Aplikasi* (1st ed.). Jogjakarta: Kanisius.

Udayani, V. (2016). Pengujian Monday Effect dan Rogalski Effect pada Return Saham LQ-45 di Bursa Efek Indonesia.