

## RETURN ON STOCK IN THE CONTEXT OF DAY OF THE WEEK EFFECT

**Indri Ayu Tansar**  
**STIE Pasundan, Bandung**  
**Email: indri@stiepas.ac.id**

### *Abstract*

*Capital market is an alternative for investors to invest their capital. Market efficiency is an ideal and attractive form in the capital markets. Under condition of market efficiency, the new information will be responded by market participants to decide whether to buy or sell, thus causing changes in the price and then the price will be stabilized. In the efficient market itself, irregularities or deviations emerge, these are called market anomalies. One of the most important types of market anomalies that is interesting to study is the calendar anomalies such as day of the week effect. The day of the week is an effect which states that the expected returns are not the same every day. Furthermore, there are phenomenon in day of the week effect which are related to Monday effect, namely week-four effect, bad Friday effect and Rogalski effect. The objective of this research is to determine the existence of the day of the week effect, week-four effect, bad Friday effect and Rogalski effect in Indonesia stock exchange. The study uses dummy variable multiple linear regression for independent variables. Then the fourth of phenomenon compared by using ANOVA. The result show that doesn't exist a day of the week effect, week – four effect, bad Friday effect and Rogalski effect in Indonesia Stock Exchange during January 2008 until December 2012. This show that the market anomaly doesn't always happen, especially in the period of research.*

**Keywords :** *capital market; weak-form efficient market; day of the week effect; week-four effect; bad friday effect; rogalski effect.*

### **Abstrak**

Pasar modal merupakan alternatif bagi investor untuk menanamkan modalnya. Efisiensi pasar merupakan suatu bentuk yang ideal dan menarik dalam pasar modal. Dalam kondisi efisiensi pasar, adanya informasi baru akan segera direaksi oleh para pelaku pasar untuk memutuskan apakah membeli atau menjual, sehingga menyebabkan terjadinya perubahan harga dan kemudian harga akan kembali stabil. Di dalam pasar efisien itu sendiri, muncul ketidakteraturan atau penyimpangan yang disebut anomali pasar (*market anomaly*). Salah satu anomali pasar yang menarik untuk diteliti adalah anomali kalender berupa *day of the week*

*effect*. *Day of the week effect* adalah efek yang menyatakan bahwa imbal hasil saham yang diharapkan tidaklah sama pada setiap harinya. Di dalam *day of the week effect* itu sendiri terjadi fenomena-fenomena menarik seperti *Monday effect*, *week-four effect*, *bad Friday effect* dan *Rogalski effect*. Tujuan dari penelitian ini adalah untuk mengetahui ada atau tidaknya pengaruh *day of the week effect*, *week-four effect*, *bad Friday effect* dan *Rogalski effect* pada imbal hasil saham di Bursa Efek Indonesia. Metode yang digunakan adalah analisis regresi linear berganda dengan variabel dummy sebagai variabel independen, IHSG untuk variabel dependen di Bursa Efek Indonesia. Kemudian keempat fenomena tersebut dilakukan uji beda rata-rata dengan menggunakan ANOVA. Data yang digunakan adalah imbal hasil saham dari indeks LQ45 selama periode penelitian (Januari 2008-Desember 2012). Hasil penelitian ini menunjukkan bahwa hari perdagangan tidak berpengaruh terhadap imbal hasil saham di BEI. Hal ini ditunjukkan dari tidak terjadinya *day of the week effect*, *week-four effect*, *bad Friday effect* dan *Rogalski effect* selama penelitian.

**Kata kunci:** pasar modal; pasar efisien; *day of the week effect*; *week-four effect*; *bad Friday effect*; *rogalski effect*.

## INTRODUCTION

The stability and economic progress is to be achieved by each country, one of the indicators to measure progress and economic stability is the capital market, when developing the capital market and advancing the economic progress and stability can be achieved. Indonesia stock exchange (idx) is one of the capital market in Indonesia, located in Jakarta. Market efficiency is a form of an ideal and attractive in the capital markets. Scott (2000: 93) define an efficient securities market as the market price of securities that are trade in the market appropriately reflect all public information about those securities. Under condition of market efficiency, the new information will be responded by market participants to decide whether to buy or sell, thus causing changes in the price and then the price will be stabilized. In conditions like this, investors will not be acquiring. The Efficient Market Hypothesis (EMH) asserts that in informationally-efficient markets, the market prices of assets should be equal to their true expected values, reflecting all information available to the market participants (Fama, 1965; Fama et al, 1969). In particular, this would imply that stock returns follow a random walk, unpredictable, without pattern.

However, several market anomalies, contradicting the EMH, have been reported, such as the January effect, the Monday effect, the turn-of-the-month effect, the holiday effect, the small-firm effect, announcement effects, and many others. Such market anomalies are primarily due to behavioural causes. The presence of market anomalies seems to be ubiquitous, occurring in stock markets around the world, in both developed markets and emerging markets.

## LITERATURE REVIEW

### **Day of the Week Effect**

The day-of-the-week effect in stock market returns has also been extensively reported in developed and emerging stock markets, with lower mean returns on Mondays and higher mean returns on Fridays. Research the day of the week on the Indonesia Stock Exchange itself show the results vary. Several studies have also examined seasonality of stock returns in Indonesia stock markets. Algifari (1998) tested the day trading stocks return to the LQ 45 with observation periods of January to December 1996. His research results showed that trading day Tuesday, Wednesday and Friday to return stocks while trading days Monday and Tuesday did not affect the return of shares on the JSE. On the day of trade Thursday there are positive which means return on day trade Monday investors earn capital gains. However, the capital gains earned on trading investors Monday were not significant.

Research conducted by Cahyaningdyah (2004) during the period from January 2001 to December 2003 shows that there is a similarity with the pattern of daily stock return on U.S. stock exchanges that showed evidence that the average lowest return occurred on Monday and the highest return on average occurs on the day of trade Friday. The results of this research adds to the empirical evidence on the influence of day of the week effect of stock return on the JSE.

### **Week-Four Effect**

Week-four Effect is a phenomenon that reveals that the Monday Effect only happens on the fourth week of each month. While the return on Monday of the first week until the third week is considered not significant negative or equal to zero. The phenomenon of week four effect was revealed by Wang, Li and Erickson. In the study it was found that significant Effects occurred Monday on the fourth Sunday of each month, while the return Monday of the first until third statistically not different from zero (Li and Wang, Erickson, 1997). This means that the return Monday the biggest negative occurred in the fourth week.

Abraham and Ikenberry found that the overall average return Monday was negative and substantially is a consequence of the information announced in previous trading session. The sales pressure from individual investors on Monday substantially higher if preceded by a negative return is happening on today Friday. This shows that there is a correlation between the return day Friday and Monday (Abraham and Ikenberry 1994).

### **Bad Friday Effect**

Bad Friday effect is an effect of the end of the week which resulted in the presence of a symptom that indicates that the return of shares on Friday will be higher than any other trading days, on Monday will show a lower return (Tandelilin, 2001). The reason of bad Friday effect occurrence is due to the difference in the behavior of individual investors and the stock exchange. Low return Monday identified that a sales order more from the purchase order. Thus the case surplus sales order on Monday (Tandelilin, 2001). Individual financiers, in general they are not a professional in the field of investment, will perform a

readjustment after assessing the performance portfolio during trading days a week before and they will be taking action in the form of purchase order or sales on Monday next week. In addition, other causes of factors namely the influence of differences between capital markets trading volume of the stock.

### **Rogalski Effect**

Rogalski Effect is a phenomenon that was discovered by a researcher named Rogalski in 1984. In his research, Rogalski (1984) in Cahyaningdyah (2005) found an interesting relationship between the existences of the phenomenon of Day of the Week Effect with the January Effect, where it is found that an average negative return on Monday, disappeared in January. This is due to the January Effect, the tendency of a higher return in January compared to other months. Rogalski Effect could be interpreted as a phenomenon in which a common negative return on Monday (the Monday Effect) disappeared in a given month. This is due to the tendency of a higher return for the month compared to other months. American said that the capital market return in January is higher than the return on other months, so the phenomenon is said to be a January Effect. Much research has been done in Indonesia to unveil the phenomenon of January Effect, but the researchers did not find the existence of the phenomenon of January Effect on Jakarta Stock Exchange.

Anggraini (2011) conducted a study on the influence of day of the week effect, week four effect, bad Friday effect and effect on yields Rogalski shares in Indonesia stock exchange and the stock exchange of Singapore. The results of the research indicate that the day of the week effect did not occur in Indonesia stock exchange and the stock exchange of Singapore. Not found too week four effect on both exchanges. bad Friday effect in Indonesia stock exchange found only partially during the sub period I on Monday third week, while the Singapore Stock Exchange in an overall period of not going bad Friday effect simultaneously as well as partially. Rogalski effect that allegedly occurred in January also was not found in Indonesia stock exchange and Singapore stock exchange on the overall period.

## **RESEARCH METHOD**

Method research used on paper this is using methods descriptive and verificative. The source of the data used in this research is to use secondary data, where data was available and published by certain parties. Data obtained from the price of stocks listed on the Indonesia stock exchange (IDX). The data used in this study is time series data, it consists of specific time series of daily data. This research using data from the stock's closing stock price of LQ45 observation period starting with January 2008 until December 2012. The closing price data then will be used in the calculations so that the retrieved daily stock returns to be used in testing.

This research uses a quantitative approach with based on formulas and specific figures. In doing data processing, researchers using computer software, i.e. Microsoft Excel, SPSS 16 and Eviews. There is two ways of doing modeling using a dummy variable (Gujarati, 2006).

1. Enter all the dummy variable into the equation and eliminate intercept

2. Enter the equation into intercept and inserts (m-1) dummy, where (m) is the number of dummy variables to be examined.

Many of the study was performed with a fixed enter intercept into model because it is more research can answer the question. Hence in this research will use the method of the second is still enter intercept into model and using ( m-1 ) dummy side variables into the equation. This research will attempt to see the daily yield differences within one week, hence the Monday, Tuesday, Wednesday, Thursday and Friday will be used as a variable in the study. The use of dummy variables are required to ignore or nullify one of the variables in the modeling. This is useful to prevent the occurrence of a dummy variable trap that is a condition where the occurrence of perfect collinearity because there is more than one linear relationships between variables that occur (Gujarati, 2006).

Then do a classic assumption test, such as the test of normality, multicollinearity, heterokedasitas, and autocorrelation. After that do a linear regression model analysis to see the influence of day trading on the stock yields in Indonesia Stock Exchange.

#### 1. *Day of the Week Effect*

$$R_{mt} = \beta_0 + \beta_1 M + \beta_2 T + \beta_3 Th + \beta_4 F + e_t$$

#### 2. *Week-four Effect*

$$R_{mt} = \beta_0 + \beta_1 M_1 + \beta_2 M_3 + \beta_3 M_4 + \beta_4 M_5 + e_t$$

#### 3. *Bad Friday Effect*

$$R_{mt} = \beta_0 + \beta_1 NFM_1 + \beta_2 NFM_3 + \beta_3 NFM_4 + \beta_4 NFM_5 + e_t$$

#### 4. *Rogalski Effect*

$$R_{mt} = \beta_0 + \beta_1 M + \beta_2 T + \beta_3 Th + \beta_4 F + e_t$$

### Multiple Linear Regression Significance Test (F test)

This test was aimed at testing whether the regression obtained on this research can be used to deduce the relation of a number of changes that were being explored. In other words, whether any the independent variable having the role that matters in forebode the magnitude of the dependent variable for. The form of the formula is as follows:

Hypothesis

$$H_0 : \beta_1 = \beta_2 = \beta_3 = \beta_4 = \beta_n = 0$$

$$H_a : \beta_1 \neq \beta_2 \neq \beta_3 \neq \beta_4 \neq \beta_n \neq 0$$

Criteria :

Probability > a      $H_0$  can not be rejected

Probability = a      $H_0$  rejected

### Simple Linear Regression Significance Test (t test)

t test aims to conclude whether each of the independent variables have significant effects on the dependent variable with respect to partial.

Statistic test:

$$\frac{\beta_1 - \beta_1^*}{SE(\beta_1)}$$

Hypothesis :

$$H_0 : \beta_1 = 0$$

$$H_a : \beta_1 \neq 0$$

$\beta_1$  will be tested is equal to 0 ( $H_0 : \beta_1 = 0$ ), then the value of  $\beta^*$  in equation above should be replaced with zero. -t-test formula then becomes;

$$\frac{\beta_1}{SE(\beta_1)}$$

If  $H_0$  is rejected, then it can be said that a statistical test of significance. If the variable is not significant, it means that while the value of the coefficient being estimated is not exactly zero. These coefficients are statistically indistinguishable with zero value if placed in the equation and not the value that is being estimated, this means that whatever happens on the value of the explanatory variables, the variables will not be affected.

Criteria :

Probability >  $\alpha$   $H_0$  can not be rejected

Probability =  $\alpha$   $H_0$  rejected

### Anova test

Statistical tests are used in hypothesis testing that the fifth test is different from the average. Variables that are used more than two variables (ANOVA), i.e. an average return day of the week effect, the average return week four effect, the average return bad Friday effect and the average return Rogalski effect. Statistical hypothesis testing to be used are as follows :

$$H_0 : \mu_{DOW} = \mu_{WF} = \mu_{BF} = \mu_R$$

$$H_1 : \mu_{DOW} \neq \mu_{WF} \neq \mu_{BF} \neq \mu_R$$

Description :

If  $F_{ratio} \leq F_{0,05,df1,df2}$  or  $Sign > 0,05$ ,  $H_0$  accepted

If  $F_{ratio} > F_{0,05,df1,df2}$  or  $Sign < 0,05$ ,  $H_0$  rejected

## RESULTS

The object in this research is the return on the company's shares are calculated from the LQ 45 closing price daily in BEI for 5 years i.e. January 2008 until December 2012. Companies that are used as the sample of this research taken from the issuer that managed to enter in the calculation of the index changed LQ 45 every 6 months once the LQ 45 Index. According to the terms set in determination samples research, the company which satisfies the criteria and become samples research 16 companies, which means to 16th the company is

companies consistent around for the period observations. The which belong to the 16 company shares in the meantime, the lq45 is as follows :

Table1. List of the selected shares

No	Shares code	Company
1	AALI	PT Astra Agro Lestari Tbk
2	ANTM	PT Aneka Tambang Tbk
3	ASII	PT Astra Internasional Tbk
4	BBCA	PT Bank Central Asia Tbk
5	BBNI	PT Bank Negara Indonesia Tbk
6	BBRI	PT Bank Rakyat Indonesia Tbk
7	BDMN	PT Bank Danamon Indonesia Tbk
8	BMRI	PT Bank Mandiri Tbk
9	INCO	PT Internasional Nickel Indonesia Tbk
10	INDF	PT Indofood Sukses Makmur Tbk
11	PGAS	PT Perusahaan Gas Negara Tbk
12	PTBA	PT Tambang Batu Bara Bukit Asam Tbk
13	TINS	PT Timah Tbk
14	TLKM	PT Telekomunikasi Indonesia
15	UNSP	PT Bakrie Sumatera Plantations Tbk
16	UNTR	PT United Tractors Tbk

As for descriptive data the results of calculation of average return stocks to trade every day can be seen in table below :

Tabel 2. Average Return Stocks

Day	Means	Std. Deviation	Minimum	Maximum	N
Senin	0,0001	0,0303	-0,1477	0,2120	248
Selasa	0,0029	0,0443	-0,0953	0,6168	248
Rabu	0,0026	0,0223	-0,1343	0,1036	248
Kamis	-0,0006	0,0215	-0,1062	0,0931	248
Jumat	0,0038	0,0409	-0,0966	0,5592	248

From the data in the table above average return look low on Thursday that a negative value of-0.0006 (0.06%) and highest return average on Friday which of 0,0038 (0.38%). For a while, this fact indicated that the hunch return Monday was smaller when compared to the return on other days are not proven. Based on the standard deviation; can be known that standard deviation the increases on tuesday as that of 0,0443. It can be explained that average return on tuesday risk having highest trading days other. Standard deviation lowest is on thursday merely 0,0215. It indicates that risk on thursday smallest compared to the other day.

Based on studies of minimum and maximum, it can be noted that the lowest return occurred on Monday i.e.-7,29%, whereas the highest return occurred on Tuesday that amounted to 6.27%. The number of days (N) acquired as many as 261 days for each day of trading of a total of today as much as 1240 days (248x5 days) as for the average return during the research period (January 2008-December 2012) can be seen in the graphic below.

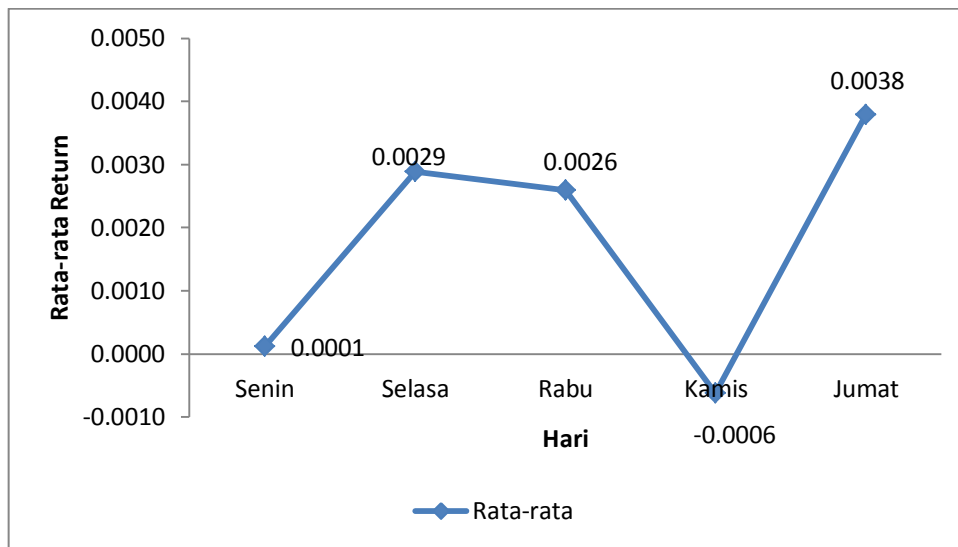


Figure 1. Average of Return

From the picture above, it can be seen clearly that the lowest return occurred on Thursday, while the highest return obtained on day Friday. This raises the suspicion that not necessarily happen Monday effect in Indonesia stock exchange.

### Day of The Week Effect

To see the influence of trading days against the return of shares then performed a test by doing regression analysis of daily stock return on day trading. The regression coefficient calculation results obtained the following results.

Tabel 3. Result of Regression

Variable	Coefficient	Std. Error
M	-0,002472	0,002982
T	0,000300	0,002982
Th	-0,003215	0,002982
F	0,001204	0,002982
C	0,002591	0,002108

Based on the results of data processing the influence of day of the week effect of stock yields according to the table above, can be formed a regression equation with the model estimates are as follows:

$$\hat{Y} = 0.002591 - 0.002472 M - 0.000300 T - 0.003215 Th + 0.001204 F$$

### Multiple Linear Regression Significance Test (F test)

To test whether there is influence on the whole day of the week effect of stock yields simultaneously in Indonesia Stock Exchange test-F statistics used by statistical hypothesis as follows:

$H_0 : \beta_1, \dots, \beta_4 = 0 \rightarrow$  There is no influence of the Day of the week effect of stock yields simultaneously on the Indonesia stock exchange.

$H_A : \beta_1, \dots, \beta_4 \neq 0 \rightarrow$  There is the influence of the Day of the week effect of stock yields simultaneously in Indonesia stock exchange.



To test the hypothesis above statistics statistical test is used-F. From the above table it can be seen that the value of F is 0,814560 count ( $p = 0,515840$ ). This value becomes the test statistics are compared with the value F from table to  $\alpha = 0,05$ . The results obtained showed Fhitung smaller than Ftabel or if viewed from the value of the p-value is greater than  $\alpha=0,05$ . so the test decision by degrees obtained error 5% ( $\alpha=0.05$ ) that  $H_0$  is rejected. Does that mean there is no influence of the day of the week effect of stock yields simultaneously on the Indonesia stock exchange.

### Testing the regression coefficient is partial (t test)

Testing the regression coefficient for the partial regression testing is a continuation of simultaneously. Testing the regression coefficient for the partial regression coefficients for aims that its influence was significant in the regression model is obtained. Testing is done through the test statistic t.

Tabel 5. Result of t Test

Variabel	T <sub>hitung</sub>	p (sig)	T <sub>tabel</sub>	Description
SENIN	-0,829179	0,4072	1,962	No Significant
SELASA	0,100448	0,9200	1,962	No Significant
KAMIS	-1,078059	0,2812	1,962	No Significant
JUMAT	0,403729	0,6865	1,962	No Significant

t value from table t-table student for  $\alpha = 0.05$  and degrees free 1235 on testing two-sided t-table value obtained = 1,962. Two-sided testing “ $H_0$  rejected if t-count > t-table or t-count < negative t-table.

### Week-four Effect

Based on the results of data processing to see week-four Effect, can be formed a regression equation with the model estimates are as follows :

$$\hat{Y} = -0,001858 + 0,007819M_1 + 0,000992M_3 - 0,000120M_4 - 0,002525M_5$$

### Multiple Linear Regression Significance Test (F test)

To test whether there is influence on the whole week-four effect of stock yields simultaneously in Indonesia Stock Exchange test-F statistics used by statistical hypothesis as follows:

$H_0 : \beta_1 \dots \beta_4 = 0 \rightarrow$  There is no influence of week-four effect of stock yields simultaneously on the Indonesia stock exchange.

$H_A : \beta_1 \dots \beta_4 \neq 0 \rightarrow$  There is the influence of week-four effect effect of stock yields simultaneously in Indonesia stock exchange.

To test the hypothesis above statistics statistical test is used-F. From the above table it can be seen that the value of F is 0,776132 count ( $p = 0,541641$ ). This value becomes the test statistics are compared with the value F from table to  $\alpha = 0,05$ . The results obtained showed Fhitung smaller than Ftabel or if viewed from the value of the p-value is greater than  $\alpha=0,05$ . so the test decision by degrees obtained error 5% ( $\alpha=0.05$ ) that  $H_0$  is rejected. Does that mean there is no

influence of week-four effect of stock yields simultaneously on the Indonesia stock exchange.

### Testing the regression coefficient is partial

Testing the regression coefficient for the partial regression coefficients for aims that its influence was significant in the regression model is obtained. Testing is done through the test statistic t.

Tabel 6. Result Partial Test

Variabel	T <sub>hitung</sub>	p (sig)	T <sub>tabel</sub>	Description
M1	1,406031	0,1610	1,970	No Significant
M3	0,174527	0,8616	1,970	No Significant
M4	0,021351	0,9830	1,970	No Significant
M5	-0,295352	0,7680	1,970	No Significant

t value from table t-table student for  $\alpha = 0.05$  and degrees free 1235 on testing two-sided t-table value obtained = 1,962. Two-sided testing "H0 rejected if t-count > t-table or t-count < negative t-table.

### Bad Friday Effect

Based on the results of the processing of data to see the Bad Effects of the outcome of Friday's stock Monday in Indonesia stock exchange, can be formed a regression equation with the model estimates are as follows

$$\hat{Y} = -0,001575 + 0,009107\text{NFM}_1 + 0,000740\text{NFM}_3 - 0,004855\text{NFM}_4 + 0,001322\text{NFM}_5$$

### Multiple Linear Regression Significance Test (F test)

To test whether there is influence on the whole bad Friday effect of stock yields simultaneously in Indonesia Stock Exchange test-F statistics used by statistical hypothesis as follows:

$H_0 : \beta_1 \dots \beta_4 = 0 \rightarrow$  There is no influence of bad Friday effect of stock yields simultaneously on the Indonesia stock exchange.

$H_A : \beta_1 \dots \beta_4 \neq 0 \rightarrow$  There is the influence of bad Friday effect effect of stock yields simultaneously in Indonesia stock exchange.

To test the hypothesis above statistics statistical test is used-F. From the above table it can be seen that the value of F is 0,411171 count ( $p = 0.800196$ ). This value becomes the test statistics are compared with the value F from table to  $\alpha = 0,05$ . The results obtained showed Fhitung smaller than Ftabel or if viewed from the value of the p-value is greater than  $\alpha=0,05$ . so the test decision by degrees obtained error 5% ( $\alpha=0.05$ ) that  $H_0$  is rejected. Does that mean there is no influence of bad Friday effect of stock yields simultaneously on the Indonesia stock exchange.

### Testing the regression coefficient is partial

Testing the regression coefficient for the partial regression coefficients for aims that its influence was significant in the regression model is obtained. Testing is done through the test statistic t.

Tabel 7. Result of Significant Test

Variabel	T <sub>hitung</sub>	P	T <sub>tabel</sub>	Description
NFM1	0,875584	0,3835	1,986	No Significant
NFM3	0,080401	0,9361	1,986	No Significant
NFM4	-0,521340	0,6034	1,986	No Significant
NFM5	0,087971	0,9301	1,986	No Significant

t value from table t-table student for  $\alpha = 0.05$  and degrees free 94 on testing two-sided t-table value obtained = 1,986. Two-sided testing "H0 rejected if t-count > t-table or t-count < negative t-table.

### *Rogalski Effect*

#### **Rogalski effect data on January**

Based on the results of data processing to see Rogalski effect data of January yields of shares Monday in Indonesia stock exchange, the regression equations can be formed with the model estimates for the following :

$$\hat{Y} = 0,004175 - 0,002205 M - 0,0000835 T - 0,005190 Th + 0,003904 F$$

#### **Multiple Linear Regression Significance Test (F test)**

To test whether there is influence on the whole Rogalski effect of stock yields simultaneously in Indonesia Stock Exchange test-F statistics used by statistical hypothesis as follows:

$H_0 : \beta_1 \dots \beta_4 = 0 \rightarrow$  There is no influence of Rogalski effect of stock yields simultaneously on the Indonesia stock exchange.

$H_A : \beta_1 \dots \beta_4 \neq 0 \rightarrow$  There is the influence of Rogalski effect effect of stock yields simultaneously in Indonesia stock exchange.

To test the hypothesis above statistics statistical test is used-F. From the above table it can be seen that the value of F is 0,141527 ( $p = 0,966307$ ). This value becomes the test statistics are compared with the value F from table to  $\alpha = 0,05$ . The results obtained showed Fhitung smaller than Ftabel or if viewed from the value of the p-value is greater than  $\alpha=0,05$ . so the test decision by degrees obtained error 5% ( $\alpha=0,05$ ) that  $H_0$  is rejected. Does that mean there is no influence of Rogalski effect of stock yields simultaneously on the Indonesia stock exchange.

### Testing the regression coefficient is partial

Testing the regression coefficient for the partial regression coefficients for aims that its influence was significant in the regression model is obtained. Testing is done through the test statistic t.

Tabel 9. Result of Regression

Variabel	T <sub>hitung</sub>	p (sig)	T <sub>tabel</sub>	Description
Monday	-0,255578	0,7988	1,985	No Significant
Tuesday	-0,000988	0,9992	1,985	No Significant
Thursday	-0,594426	0,5536	1,985	No Significant
Friday	-0,441335	0,6600	1,985	No Significant

### Comparison of Return of shares on the Day of The Week Effect, Week-four Effect, Bad Effects of Friday and Rogalski Effect

Table 10. Comparison of Return

Description	N	Means	Std. Deviation
<i>Day of the Week Effect</i>	1240	0,0018	0,0332
<i>Week-four Effect</i>	248	0,0001	0,0303
<i>Bad Friday Effect</i>	99	-0,0010	0,0332
<i>Rogalski effect data on januari</i>	101	0,0020	0,0271
<i>Rogalski effect data non januari</i>	1139	0,0017	0,0337

Views based on descriptive return sham of each model are examined, it can be known to bring on the model of the Bad Effects of Friday an average rating of negative return. As for the average return on the highest place on the model data in January effect Rogalski. To test whether there is a difference in return on stocks to four such phenomena was done using analysis of variance (ANOVA). As for the hypothesis to be tested are as follows:

$$H_0 : \mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5$$

There is no difference in return on equity to five model used

$$H_A : \mu_1 \neq \mu_2 \neq \mu_3 \neq \mu_4 \neq \mu_5$$

There is a difference on stock return to five model used. To test the hypothesis used ANOVA and Anova Test calculations (F test) is as follows:

Tabel 11. ANOVA

Return	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	,001	4	,000	,286	,887
Within Groups	3,065	2822	,001		
Total	3,066	2826			

The F-test statistics value obtained for the test of the difference the average return of data with the significance of 0,887 0,286. for non-degree (db) 4 and Ftabel value of 2,375 2822. Because the value of Fhitung is less than Ftabel (0,286 < 2,375) and test the significance value if seen greater than 0.05 the inconclusive no difference in average return data on the regression model is examined.

The following is a summary of the results of the regression analysis conducted to yield shares in Indonesia Stock Exchange:

Tabel 12. Summary of Regression Analysis

No	Research type	Results
1.	<b>Day of The Week Effect</b> Simultan Parsial Senin (S) Selasa (M) Kamis (Th) Jum'at (F)	$H_0$ can not rejected  $H_0$ can not rejected $H_0$ can not rejected $H_0$ can not rejected $H_0$ can not rejected
2.	<b>Week-four Effect</b> Simultan Parsial Minggu pertama ( $M_1$ ) Minggu ketiga ( $M_2$ ) Minggu keempat ( $M_4$ ) Minggu kelima ( $M_5$ )	$H_0$ can not rejected  $H_0$ can not rejected $H_0$ can not rejected $H_0$ can not rejected $H_0$ can not rejected
3.	<b>Bad Friday Effect</b> Simultan Parsial Minggu pertama ( $NFM_1$ ) Minggu ketiga ( $NFM_2$ ) Minggu keempat ( $NFM_4$ ) Minggu kelima ( $NFM_5$ )	$H_0$ can not rejected  $H_0$ can not rejected $H_0$ can not rejected $H_0$ can not rejected $H_0$ can not rejected
4.	<b>Rogalski Effect</b> Simultan Parsial Senin (S) Selasa (M) Kamis (Th) Jum'at (F)	$H_0$ can not rejected  $H_0$ can not rejected $H_0$ can not rejected $H_0$ can not rejected $H_0$ can not rejected

Based on the results of such studies then the investor cannot take advantage of day trading for profit that is not normal in a given day. The results of this research are not in accordance with the research of Anggraini (2011) declaring that day of the week effect, week-four effect, friday bad effect and rogalski effect not affect the yield stake in bej. It showed that anomalous calendar not occurred in indonesia in the period research. A few things that could be the reason why the day of the week effect did not occur in Indonesia Stock Exchange:

1. Composition between individual investor with an institution.  
On the BEI, individual investors are fewer in number when compared to institutional investors, so that the sales made investors less influential by taking action against individual return shares.
2. Capital market broker recommendations  
The Broker always give advice to institutional investors in trade professionally and continuously in the trade, so that the level of knowledge caused investors to share investment masalah is too low, then the investors tend to follow recommendations from their brokers, this has resulted in a dynamic trading

forming rapidly changing information and do not follow the patterns of the past.

### 3. Data used

The Data used in this research is the blue chips stocks, i.e. stocks which always traded every day because it has a high level of liquidity. Shares of blue chips is very quick to respond to the information coming into the market and lead to higher volatility. According to Liu, and Schulman Brusa (2000), symptoms of the day of the week effect always related to firm size, the Monday effect occurred in stocks of companies with small market capitalization, while for stocks with large capitalization does not occur any day of the week effect. Thus, based on research conducted concluded that if investors continue to use past stock price data, then chances are it will be hard to get a profit above the norm for the development of these prices do not follow a particular pattern or trend.

In addition, day of the week effect does not occur in the capital markets in countries that are developing as BEI. For the second regression analysis, i.e. week-four effect gives the same result with the day of the week effect. According to the study, Li and Wang Erickson (1997) the significant effects occurred Monday on the fourth Sunday of each month, while the return Monday of first to third are statistically no different to zero. In Indonesia stock exchange, H0 is not be rejected on Sunday the first, third, fourth and fifth. It indicates that the week-four effect did not occur in Indonesia stock exchange. This is in accordance with the research done by Anggraini in 2011 that week – four effect did not occur in Indonesia stock exchange. Week-four effects associated with individual investor liquidity demands.

No occurrence of the week – four effect in Indonesia stock exchange could happen due to the demands of liquidity are not related to investments in the stock market or in other words the funds invested in the stock market not used to issue demands for liquidity (Cahyaningdyah, 2005). Lakonishok and Maberly (1990) States that week – four effect occurs as a result of institutional investors did a little transaction when compared to individual investors. This pattern occurs because the individual is seasonal trading pattern, i.e., investors tend to buy stocks at the beginning of the month and selling it at the end of the month. No occurrence of the week – four effect in Indonesia stock exchange can indicate the amount of transaction investors individual less when compared to institutional investors.

Bad Friday effect did not occur in Indonesia stock exchange. With a level of significance of 5% on research, simultaneous and partial hypothesis on the Indonesia Stock Exchange showed results that bad Friday effect no effect significantly to stock returns. Factors causing occurrence of bad Friday effect is due to the difference in the behavior of individual and institutional investors the stock exchange. The low return on Monday.

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stock exchange. Low return Monday identified that a sales order more from the purchase order. Based on the results of the research, results obtained showed  $F_{hitung}$  smaller than  $F_{tabel}$  or if viewed from the value of the p-value is greater than  $\alpha=0,05$  so obtained degree test confusion decision 5% ( $\alpha=0,05$ ) that  $H_0$  is rejected. This does not indicate the onset of bad Friday effect in Indonesia stock exchange. This is due to a sales order is less than the purchase order.

Testing was done by separating Rogalski Effect observation in January and non January (month excluding January), then each diregresikan to see the significance of the day trading stock yields. The month of January was chosen based on research done Rogalski. The research results revealed Monday effect occurs in January and February, associated with the effect. Results of the regression output indicates that the regression models for both January and February in a non stock exchange Indonesia is not significant. The results showed that the day of the week effect, four-week effect and Rogalski effect does not occur during the research period. Not the occurrence of the effect could be due to Rogalski not relevannya January effect. Rogalski effect in Indonesia did not happen in January but in April. The existence of profit management practices undertaken by the company in Indonesia with respect to the financial statements which led to return in April, higher than other months.

This is caused by conditions set out by the capital market Supervisory Agency no. 80/PM/1996, which provides that the annual report should be accompanied by a report of the accountant with the unorthodox opinions and submitted to Bapepam 120 days after the date of closing the book company. This means that the maximum financial reports submitted in April (Hendi and Darmadji, 2001). Therefore before April and at the beginning of April, many companies that delivered the annual financial reports (Usman and Riphath, 1997). Management practices with the existence of profit made by the company against its financial report led to positive sentiment for the company.

## CONCLUSION

The test results showed the phenomenon does not occur the day of the week effect data LQ 45 on Jakarta Stock Exchange during the period of the study. The results of this research show the day of the week effect has no effect on the yield stocks.

1. The test results demonstrate the phenomenon does not occur Saturday effect on data LQ 45 in Jakarta Stock Exchange during the period of the study. The results of this research show no proven effect occurred Monday on Monday fourth week (week four effect).
2. The test results showed the bad phenomenon didn't happen Friday data effect pada LQ 45 in Jakarta Stock Exchange during the period of the study. The results of this research menunjukkan hari Fri u2019at not proven% have an impact on stock returns in the context of bad Friday effect.
3. Ttest results show no data effect pada Rogalski phenomenon occurs LQ 45 in Jakarta Stock Exchange during the period of the study. The results of this research have proven not January menunjukkan bulan influence on stock returns in the context of Rogalski effect.

4. Test results showed no difference in return shares on the phenomenon of day of the week effect effect, week four effect, bad Friday effect, and effect on data Rogalski LQ 45 in Jakarta Stock Exchange during the period of the study.

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