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**TESTING THE DAY OF THE WEEK EFFECT AND WEEK FOUR EFFECT ON  
STOCK RETURNS OF COMPANIES INCLUDED IN THE COMPASS 100 FOR THE  
PERIOD 2018-2022 LISTED ON THE INDONESIAN STOCK EXCHANGE**

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**ABSTRACT**

The purpose of this study is to obtain empirical evidence about testing trading day, whether there are differences in stock returns on Monday and other days, and whether testing negative returns on Monday 1,2,3 week and 4.5 weeks whether significant or not in the index KOMPAS 100 on the Indonesia Stock Exchange. The sampling method in this study uses a purposive sampling technique. The study sample consisted of 65 companies listed in the index KOMPAS 100 during January 2018 - December 2022 respectively. The analysis method used is descriptive analysis, paired sample t-test, and one sample t-test. The results of the study indicate there are differences in stock returns on Monday and other days or the day-week effect but the study failed to prove the anomaly Weekfour effect because negative returns on Monday 1,2,3 week and 4,5 weeks are significant in the index KOMPAS 100 on the Indonesia Stock Exchange.

**Keywords:** *Stock Return, The Day of Week Effect, Weekfour Effect.*

**INTRODUCTION**

Nowadays, many people are starting to think about the importance of investing. The increasing needs of life and the need for old age security make people start to selectively choose the type of investment to be made. Investments in the long term and short term offer advantages and disadvantages of each. One of the investments made by the community is buying and selling shares in the capital market (Darmadji & Fakhrudin, 2011).

Conceptually, there is a capital market called the efficient capital market, which according to (Tandelilin, 2010) the theory is where the market whose security prices reflect all relevant information. Where the faster new information is reflected in security prices, the more efficient the market. Several studies related to efficient capital markets show the existence of efficient capital market anomalies, especially capital markets in weak form. These anomalies include the phenomenon of The day of week effect and the weak-four effect. According to (Desak Nyoman S, W: 2012) The day of the day-the-week effect phenomenon states that there is a significant difference in returns between Monday and other days. Usually, significant negative returns occur on Monday, while positive returns occur on other days. The week-four Effect reveals that the Monday Effect only occurs in the fourth week of each month while Monday's return in the first week to the third week is considered insignificantly negative or equal to zero (Mamba et al., 2023).

Stock returns that are supposed to be random and unpredictable following the weak form efficient market hypothesis will become contradictory due to these anomalies. Anomalies that occur in the capital market can be caused by the influence of days and months in the calendar.

Various previous research results on the day-of-week effect and the pattern of return changes in the capital market are very diverse, including In Indonesia (IDX), research (Bagaskara & Khairunnisa, 2019) shows the existence of the day-week effect phenomenon and the absence of the week four Effect phenomenon on the LQ-45 index market return in 2013-2017. Meanwhile (Dharmawan et al., 2020) shows that there is no day-of-week effect on the JII index market return in 2015-2019. Meanwhile (Mattarocci & Mattarocci, 2014) found the day-of-week effect, on the Indonesia Stock Exchange for the period February 2015 - August 2016 (Yolanda et al., 2022) show the existence of The day of weak effect phenomenon of the IDX80 index in 2019-2020. (Suyanto, 2019) shows the absence of The day of weak effect phenomenon of the JCI and LQ45 indices in 2010-2016.

The diversity of previous research results on the Monday effect and the existence of anomalies in almost all capital market exchanges are the main reasons I raise this title because the existence of this anomaly will cause an increase and decrease in stock prices with implications for profits/returns (Wibowo & Djojo, 2012). The patterns of stock return movements can be predicted due to the influence of calendar anomalies. This return movement pattern can be observed by investors so that they can take advantage of it to get abnormal (greater) returns.

Based on this, in the preparation of this article, the researcher wants to conduct research with the title "testing the day-of-week effect and week-four effect on stock returns of companies including KOMPAS 100 for the 2018-2022 period listed on the Indonesian stock exchange" to know whether there is a difference in return on Monday with other days' returns (Tuesday, Wednesday, Thursday, Friday) for companies including KOMPAS 100 for the period 2018 - 2022 listed on the IDX (The day of Week Effect), and to find out whether the average negative return on Monday in weeks 1,2,3 and weeks 4,5 is significant or not for companies including KOMPAS 100 for the period 2018 - 2022 listed on the IDX? (Week Four Effect)

## **METHODS**

### **Hypothesis**

Hypotheses are temporary answers to research whose existence must be tested empirically. In this case, the relationship between the independent variable and the dependent variable, the hypothesis can be formulated as follows:

- H<sub>0</sub> There is no difference in return on Monday with other days' return (Tuesday, Wednesday, Thursday, Friday) Companies included in KOMPAS 100 on the IDX for 2018 - 2022.
- H<sub>1</sub> There is a difference in return on Monday with the return on other days (Tuesday, Wednesday, Thursday, Friday) Companies included in KOMPAS 100 on the IDX for 2018 - 2022.
- H<sub>0</sub> There is no significant average negative return on Monday in weeks 1,2,3 and week 4,5 for companies included in KOMPAS 100 for the period 2018 - 2022.
- H<sub>2</sub> There is a significant average negative return on Monday in weeks 1,2,3 and weeks 4,5 for companies included in KOMPAS 100 for the period 2018 - 2022.

### **Variables and Data Collection**

Stock return is the rate of return received by investors, which can be positive or negative. Stock returns can be calculated from the closing price minus the opening price and then divided by the opening price. To calculate stock returns can be done with the following formula:

$$R_t = \frac{P_t - P_{t-1}}{P_{t-1}}$$

Where:

$R_t$ : *Stock Return*

$P_t$ : Closing stock price

$P_{t-1}$ : Opening Share Price

### **Data Collection Methods**

The data collection method in this research is the documentation method. Data collection begins with the preliminary research stage, namely conducting a literature study by studying books and literature, economic and business journals, and other readings related to the capital market. At this stage, an assessment of the data required, the availability of data, and an overview of how to obtain the data were also carried out. The data is secondary data because the data is obtained by taking data from the Indonesia Stock Exchange (IDX) and the Internet (Soewadji, 2012).

### **Data Type**

The type of data used in this study is secondary data obtained from the Indonesia Stock Exchange regarding the financial statement data of companies included in Kompas 100 from January 2018 to December 2022, reference books, the internet, and other scientific literature related to the research topic.

### **Population and Sample**

The population used in this study are companies listed in the Kompas 100 stock index on the Indonesia stock exchange for the period 2018-2022 in a row. The sampling technique in this study used purposive sampling. Purposive Sampling is a sample selection using certain criteria.

### **Data Analysis Method**

Tests carried out using parametric statistical tests, namely:

- a. With a test for two paired samples (paired sample t-test) with a significance level of 5%. This test is generated by the Statistical Program for Social Sciences (SPSS). A paired sample t-test is a statistical test to test two paired samples.
- b. The t-test for one sample in other terms is usually called the One Sample t-test Method, which is a t-test procedure for a single sample if the average of a single variable is compared to a certain constant value.

## **RESULTS AND DISCUSSION**

**Descriptive Analysis**

**Table 1**  
**Descriptive Statistics of Stock Returns Monday to Friday KOMPAS 100 index**

<b>Descriptive Statistics</b>				
	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>
Monday Return	130	-.0164025	.0061372	-.003956951
Tuesday return	130	-.0058760	.0114194	.001978905
Wednesday return	130	-.0075343	.0144978	.003984693
Return Thursday	130	-.0075478	.0118681	-.000789043
Return Friday	130	-.0088176	.0090445	.000019258
Valid N (listwise)	130			

Source: SPSS v.16.0 Processing Results

The results of the descriptive statistical calculation of the KOMPAS 100 index on the IDX as found in Table 1 above show that the average return on Monday is -0.003956951, meaning capital loss, because the closing price is -0.3956% lower than the open price. The average return on Tuesday 0.001978905 means capital gain because the closing price is 0.1978% higher than the open price. The average return on Wednesday was 0.003984693, meaning capital gain, because the closing price is 0.3985% higher than the open price. The average return on Thursday was -0.000789043, meaning capital loss, because the closing price is -0.0789% lower than the open price. The average return on Friday is 0.000019258. meaning capital gain, because the closing price is 0.00193% higher than the open price. So the smallest average return is on Monday with a minimum value of -0.0164025 and a maximum value of 0.0061372 and the largest average return is on Wednesday with a minimum value of -0.0075343 and a maximum value of 0.0144978.

**Table 2**  
**Descriptive Statistics of stock returns Monday week 1 to 5 KOMPAS 100 index**

<b>Descriptive Statistics</b>				
	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>
Week 1	130	-.0199850	.0120036	-.003392786
Week 2	130	-.0308658	.0138246	-.003731789
Week 3	130	-.0145104	.0150358	-.000417751
Week 4	130	-.0411224	.0057207	-.006125688
Week 5	130	-.0342997	.0087515	-.009255295
Valid N (listwise)	130			

Source: SPSS v.16.0 Processing Results

From the results of the descriptive calculation of negative Monday stock returns for weeks 1 to 5 as found in Table 5 above, it can be seen that the average value of negative returns on Monday in week 1 is -0.003392786, meaning capital loss, because the closing price becomes lower -0.3393% of the open price. the average value of negative returns on Monday in week 2-

0.003731789, meaning capital loss, because the closing price becomes lower -0.3732% of the open price. the average value of negative returns on Monday in week 3-0.000417751, meaning capital loss, because the closing price becomes lower -0.04178% of the open price. the average value of negative returns on Monday in week 4-0.006125688 means capital loss, because the closing price becomes lower -0.6127% of the open price, and the average value of negative returns on Monday in week 5 -0.009255295 means capital loss, because the closing price becomes lower -0.9255% of the open price. So the smallest number of average negative returns on Monday is in week 5 with a minimum value of -0.0342997 and a maximum value of 0.0087515 and the largest average negative return on Monday is in week 3 with a minimum value of -0.0145104 and a maximum value of 0.0150358.

### Data Analysis and Interpretation

**Table 3**  
**Kolmogorov-Smirnov Normality Test Results**

Tests of Normality			
	Statistic	df	Sig.
Monday Return	.076	130	.061
Return Tuesday to Friday	.043	130	.200*
Return_senin123	.064	130	.200*
Return_senin45	.066	130	.200*

Source: SPSS v.16.0 Processing Results

Based on the results of the normality test shown in Table 3 Kolmogorov-Smirnov above, it can be seen from the Significance column with the specified convince level of (0.05). If the significance value is greater than (0.05) then the data is said to be normally distributed. And if the Significance value is smaller than (0.05) then the data is said to be not normally distributed.

From Table 3 Kolmogorov-Smirnov above for Monday returns the significance value is 0.061 for Tuesday to Friday returns the significance value is 0.200 for Monday returns Week 1,2,3 the significance value is 0.200 and for Monday returns Week 4,5, the significance value is 0.200 which all show numbers greater than 0.05 so it can be concluded that statistically the data is normally distributed. So all samples are suitable for use as research data.

**Table 4**  
**Statistik Sampel Berpasangan**

The day of the week effect				
Pair 1	Mean	N	Std. Deviation	Std. Error Mean
Monday Return	-.003956951	130	.0035289890	.0003095128
Return Tuesday to Friday	.001298453	130	.0015926630	.0001396858

Source: SPSS v.16.0 Processing Results

**Tabel 5**  
**Uji Sampel Berpasangan**

Pair	Paired Differences					
	Mean	Std. Deviation	Std. Error Mean	T	df	Sig. (2-tailed)
1 Return Monday - Return Tuesday to Friday	-.0052554039	.0036340390	.0003187263	-16.489	129	.000

Source: SPSS v.16.0 Processing Results

If the probability  $> 0.05$  then  $H_0$  is accepted and  $H_a$  is rejected and if the probability  $< 0.05$  then  $H_0$  is rejected and  $H_a$  is accepted.

Looking significance in Table 5 shows the results of 0.000, which is smaller than 0.05, which means that  $H_0$  is rejected and  $H_1$  is accepted, meaning that there is a difference in returns on Monday with other days' returns (Tuesday, and Wednesday, Thursday, Friday) for the 2011-2012 period because the probability value is  $< 0.05$  with a confidence level of 95%. This is also shown in Table 4.6, namely from the average return column on Monday which is negative at -0.003956951, and on other days (Tuesday, Wednesday, Thursday, and Friday) is positive at 0.001298453.

The assumption that arises according to (Ambarwati, 2009) The Monday effect phenomenon is caused by the delay of unpleasant information for investors (unfavorable information) until Friday and the market will automatically respond on Monday. Another reason is the psychological behavior of investors who have a tendency to dislike Monday, which is the beginning of the working day, besides that investors and potential investors have not received information from anywhere, so they only use existing information.

**Table 6**  
**Statistik Satu Sampel**

	N	Mean	Std. Deviation	Std. Error Mean
Monday week 1,2,3	130	-.002514109	.0038548650	.0003380940
Monday week 4,5	130	-.007690492	.0060378310	.0005295528

Source: SPSS v.16.0 Processing Results

**Table 7**  
**One-Sample Test**

<b>Test Value = -0.0051023</b>					
	<b>T</b>	<b>Df</b>	<b>Sig. (2-tailed)</b>	<b>95% Confidence Interval of the Difference</b>	
				<b>Lower</b>	<b>Upper</b>
Monday week 1,2,3	7.655	129	.000	.001919264	.003257119
Monday week 4,5	-4.888	129	.000	-.003635925	-.001540459

**Source: SPSS v.16.0 Processing Results**

If the probability  $> 0.05$  then  $H_0$  is accepted and  $H_a$  is rejected and if the probability  $< 0.05$  then  $H_0$  is rejected and  $H_a$  is accepted. When viewed in the Sig. (2-tailed) column in table 4.17 above that week 1,2,3 and 4.5 are significant because they show the number  $0.000 < 0.05$ , meaning that  $H_0$  is rejected and  $H_2$  is accepted, meaning that there is a significant average negative return on Monday in weeks 1,2,3 and week 4.5 for companies included in KOMPAS 100 for the period 2018 - 2022 with a confidence level of 95%.

## **Discussion of Results**

### **Research Results with Theoretical Foundations**

Based on the results of this study, the first hypothesis aims to see whether there is an anomaly The day-of-week effect on the IDX for the 2018-2022 period which theoretically returns on Monday always negative, and other days (Tuesday, Wednesday, Thursday, Friday) are always positive. This strongly deviates from the theory of the efficient market hypothesis, especially in the weak form because it uses historical data which should not differ (positive/negative) stock returns on each trading day.

The results of the first hypothesis test in this study show that Monday trading days and other than Monday (Tuesday, Wednesday, Thursday, Friday) have differences in the KOMPAS 100 index stock returns on the Indonesia Stock Exchange so that the first hypothesis ( $H_1$ ) is accepted, namely that there are differences in returns on Monday and days other than Monday (Tuesday, Wednesday, Thursday, Friday), which shows that Monday returns are lower than other days' returns. This shows that there is a phenomenon of The day of weak effect on the KOMPAS 100 index for the period 2018-2022 in the Indonesian Stock Exchange.

The second hypothesis uses the One-sample t-test, which is to see whether there is a significant negative average return or not on Monday of weeks 1,2,3, and 4,5.

The second hypothesis aims to see whether there is a weakfour effect anomaly on the IDX for the 2018-2022 period which theoretically, a significant monday effect occurs in weeks 4,5 while weeks 1,2,3 are statistically insignificant or equal to zero. The results of the second hypothesis test in this study show that Monday trading days weeks 1,2,3 and 4.5 are equally significant because the probability value is  $< 0.05$ , so  $H_2$  is accepted, which means that there is a

significant average negative return on Monday in weeks 1,2,3 and week 4,5 for companies included in KOMPAS 100 for the period 2018 - 2022.

This deviates from the week effect anomaly phenomenon which should be negative returns on Monday Weeks 1,2,3 are not significant and weeks 4,5 are significant So it is said that there is no week effect phenomenon on the Indonesia Stock Exchange. But even though it deviates from the weak effect anomaly, this research is by the theory of the Efficient Market Hypothesis, especially in the weak form. because it uses historical data which states that today's stock return value is influenced or equal (positive/negative) to the previous day's return. In the results of this study, the return values of Monday weeks 1,2,3 and 4,5 are both negative.

### **Research Results with Previous Research**

In the first hypothesis, the results of this study are consistent with other studies conducted by (Iramani & Mahdi, 2006), (Ambarwati, 2009), and (Maria & Syahyunan, 2013) who found the day-of-week effect phenomenon on the Indonesia Stock Exchange.

However, the results of this study are inconsistent with research conducted by (Pratiwi & Thoyibi, 2017) who did not find the phenomenon of The day of weak effect on the Indonesia Stock Exchange. According to previous research conducted by (Ambarwati, 2008), the Monday effect phenomenon is caused by the existence of unfavorable information for investors (unfavorable information) that enters more when stock trading is closed (weekends). Another reason is the psychological behavior of investors who have a tendency to dislike Monday, which is the beginning of the working day, resulting in Monday being a boring day and considering Friday the best day because it is the last working day and they feel pessimistic on Monday and optimistic on Friday.

In the second hypothesis, the results of this study are consistent with other studies conducted by (Ambarwati, 2009), (Arieyani, 2012), and (Maria & Syahyunan, 2013) who did not find the Weekfour effect phenomenon on the Indonesia Stock Exchange.

However, the results of this study are inconsistent with research conducted by Iramani and Mahdi (2006) who found the Week four effect phenomenon on the Indonesia Stock Exchange.

### **CONCLUSION**

The conclusions contained in this research are about the difference in returns on Monday with other days' returns (Tuesday, Wednesday, Thursday, Friday) for companies including Kompas 100 for the period 2018 - 2022 listed on the IDX. There is a significant average negative return on Monday in weeks 1,2,3 and weeks 4,5 for companies included in the KOMPAS 100 period 2018 - 2022 listed on the IDX.

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