

# JANUARY EFFECT ON THE INDONESIAN STOCK MARKET<sup>35</sup>

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## Abstract

This study examines the January Effect, by not only comparing returns per year with returns in January, but also comparing returns per year with returns in other months. Thus, this study can determine whether there is a significant difference in January (January effect) on LQ45 company shares, or there is no significant difference in January, but there is a significant difference in other months. In order for this research to be *ceteris paribus* (isolating the effects of other factors beyond what was studied), this research will eliminate events that occur in companies that affect stock returns. When there is an event that affects return, the 1 week period is omitted. This study aims to test whether there is a January effect in Indonesia, by comparing the daily average return each month with the daily average return a year, using the Mann Whitney U Test analysis method, which is a non-parametric test where the dependent variable data scale is the interval / ratio or ordinal that is not normally distributed. This test can determine the median of 2 independent groups. By testing the average return per month, this study can prove whether there is a significant difference in January, or whether there is a significant difference in other months. The results of data processing in this study stated that there were 4 months where the results were significant, namely January, September, November, and December. Of these four months with significant results, January and December had significantly higher yields. Meanwhile, September and November had significantly lower results. From these results, it can be concluded that a significantly higher result in January indicates that there is a January Effect in Indonesia. In December, the yield was significantly higher due to Window dressing.

**Keywords:** stock return, daily average return, annual average return

## 1. Background

People in Indonesia are no longer familiar with the word "investment". The open mindset of the Indonesian people has led to a shift in people's lifestyle in financial management from "Saving Society" to "Investment Society". There are many types of investments that are generally often offered, such as property investment, gold, foreign exchange, stocks, and many more. One of the most common types of investment and the most widely recognized by the Indonesian public is stocks. Stocks can be said to be a popular investment product because they are liquid and easy to buy and sell. Stocks and stock returns have an effect on a good capital market. A good capital market is an efficient capital market. The capital market can be said to be an efficient capital market when the price of securities has shown the overall available information. But in an efficient market there can also be deviations which are called market anomalies. Market anomalies that often occur are seasonal anomalies, one of which is the January effect.

There are several studies that say that the January effect does not apply in Indonesia, such as research by Fitriyani and Ratn (2012) which states that looking at stock returns and abnormal returns will have a "monthly effect" phenomenon on the IDX, but in terms of trading volume activity, a " securities monthly "will not occur on the Indonesian stock exchange. Another study by Yoga (2010) shows that the "January effect" phenomenon occurred during the study period, characterized by high and significant market returns for a sector in the sector index in January. Kamaludin (2010) found a significant January effect. January Securities only occur in two exchanges, namely Pakistan and Indonesia.

But there are also many studies that say that the January effect applies in Indonesia, such as research according to Cahyaningdyah and Dhany Kurniawan (2013) which states that on the Indonesia Stock Exchange the period 2011-2012 there was no January effect. Ardhani (2014) states that in 2012 there was no January effect on the Indonesian capital market. Sheryl Kadir and Suramaya Suci (2014) stated that there was no January effect phenomenon on companies listed on LQ 45 on the Indonesia Stock Exchange in 2010-2013.

Therefore this study aims to prove whether the January effect occurs on LQ45 company shares on the Indonesia Stock Exchange for the period 2016-2020. In this study, the data used were average return per month for 5 years, and annual average return for 5 years. These data are then compared. Calculations used to compare returns per month and annual returns, using the Mann Whitney Test.

This study examines the January Effect, by not only comparing returns per year with returns in January, but also comparing returns per year with returns in other months. This is done to determine whether there is a significant difference in LQ45

shares in January (January effect), or there is no significant difference in January, but there is a significant difference in other months.

In order for this research to be *ceteris paribus* (isolating the effects of other factors beyond what was studied), this research will eliminate events that occur in companies that affect stock returns (dividend distribution). When an event that affects return occurs, what is omitted is the 1 week period (3 days after and 3 days before the event).

## 2. Literature Review

### 2.1 Shares

In a capital market, stocks are one of the most common types of investment and are widely recognized by Indonesians. Stocks can be said to be a popular investment product because they are liquid and easy to buy and sell. This stock investment also offers higher returns than other investments. (Dermawan, 2014). Shares are securities which prove individual or institutional ownership or proof of participation issued by a company in the form of PT. (Sunariyah, 2011)

***H1: There is a January effect on LQ45 company shares***

### 2.2 Stock Return

According to Dermawan (2014), Stock Return is the rate of return which can be in the form of losses or profits made by investors on the value invested. Stocks are known to have a high level of risk and return. This means that stocks are securities that provide great profit opportunities but also have high potential risks. Stocks allow investors to get large capital gains in a short time. However, along with stock price fluctuations, shares can also cause big losses for investors in the short term (Anwar, 2009)

***H2: There is a significant difference in return in January***

### 2.3 Market Efficiency

According to Tandelilin (2017), the market can be said to be efficient if the price at which a security is traded reflects all available information. The information here is relevant information, such as the company's past profits, or dividend increase plans for that year, etc. So, an efficient market is a condition where all price information can be obtained openly.

### 2.4 Market Anomalies

Market anomalies occur due to irregularities in the capital market that are persistent and have a significant impact. This is the opposite of an efficient capital market. (Jones, 1998). According to Alteza (2007), market anomaly is a deviation from the concept or model of the efficient market. Some of the things that support this concept are there are certain patterns in stock trading days, there are insider trading in the capital market, opportunities for abnormal profits by investors, asymmetric information, and so on. In this financial theory, there are several types of market anomalies, namely firm anomalies, seasonal anomalies, event anomalies, and accounting anomalies. Of the four anomalies, the common anomalies are seasonal anomalies. This is due to the past seasonal price patterns.

### 2.5 January effect

The January effect is the tendency for an increase in stock prices in the first week of January (Tandelilin, 2010). The January Effect itself is a capital market anomaly where stock prices tend to increase or increase in January in the first two weeks. The increase in share prices is due to the fact that at the end of the year investors or fund managers have a tendency to sell their shares so that they can secure funds and so they can reduce the company's tax burden. Then at the beginning of the year, investors or fund managers will return to the market with new funds, optimism and outlook analysis. Their analysis does not project a different share price from the previous year, and in general their share price projections will tend to be higher. At that time, investors bought back shares. Usually the rally is quite high in the first week to the third week in January. However, in the fourth week, in January, investors started to take profit so that usually the index experienced correction until mid-February. (Sugianto, 2019)

***H3: The average daily return in January is greater than the average return throughout the year***

***H4: The average daily return in February is the same as the average return throughout the year***

***H5: The average daily return in March is the same as the average return throughout the year***

**H6: The average daily return in April is the same as the average return throughout the year**

**H7: The average daily return in May is the same as the average return throughout the year**

**H8: The average daily return in June is the same as the average return throughout the year**

**H9: The average daily return in July is the same as the average return throughout the year**

**H10: The average daily return in August is the same as the average return throughout the year**

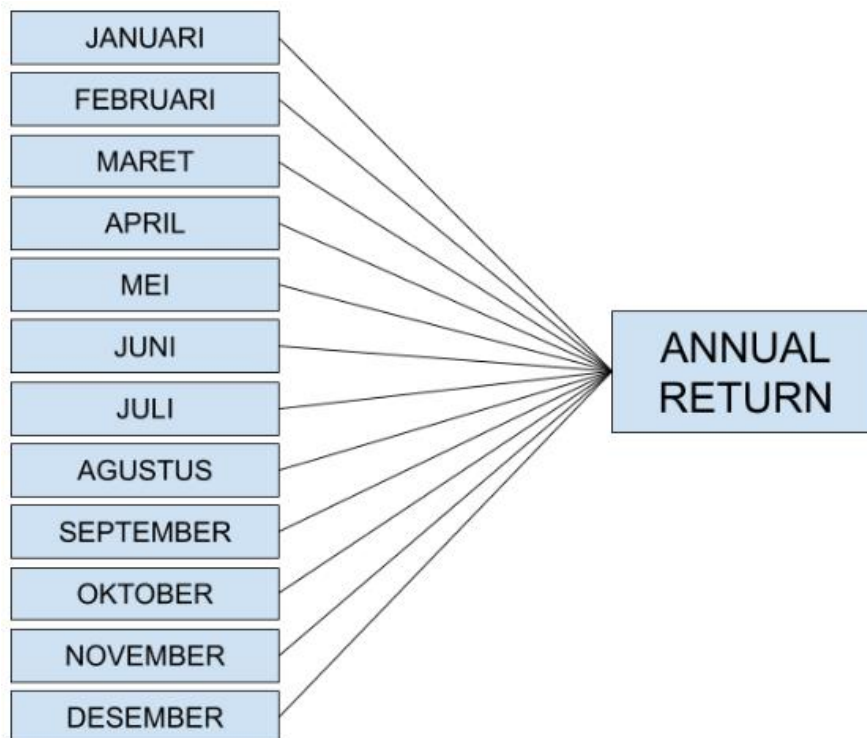
**H11: The average daily return in September is the same as the average return throughout the year**

**H12: The average daily return in October is the same as the average return throughout the year**

**H13: The average daily return in November is the same as the average return throughout the year**

**H14: The average daily return in December is the same as the average return throughout the year**

### 3. Research Model



**Figure 3.1 Research Model**

Qualitative method is the method used in this study, because this study aims to test whether the "January Effect" occurs in Indonesia or there is another "effect" in Indonesia, by comparing the daily return every month with the average daily return per year, and testing its normality.

The calculation process in this research is the LQ45 average return in January compared to the LQ45 annual average return, then the LQ45 return in February compared to the LQ45 annual average return, as well as the following months. And this calculation is carried out for a period of 5 years. This study examines the January Effect, by not only comparing returns per year with returns in January, but also comparing returns per year with returns in other months. This is done to determine whether there is a significant difference in January (January effect) on LQ45 company shares, or there is no significant difference in January, but there is a significant difference in other months.

The method of data analysis in this study used the Mann Whitney U test, which is a non-parametric test used to determine the median difference between the 2 independent groups if the data scale of the dependent variable is ordinal or interval / coefficient but is not normally distributed. The Mann Whitney U test requires data on an ordinal, interval, or ratio scale. If the

data is in the form of ranges or coefficients, then the distribution is not normal. Data sources are two distinct groups<sup>8</sup> for example class A and class B, in which the people or test objects differ from each other.

## 4. Results and Discussion

### 4.1 Descriptive statistics

**Table 4.1 Descriptive statistics**

Bulan	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
January	176	.1967	.65233	.04917	.0997	.2938	-3.37	2.77
February	176	.0235	.47336	.03568	-.0470	.0939	-1.87	2.38
March	176	-.1039	.82201	.06196	-.2262	.0183	-5.61	1.98
April	176	-.2656	1.75603	.13237	-.5268	-.0043	-13.14	2.48
May	176	-.0526	.43360	.03268	-.1171	.0119	-1.49	1.24
June	176	.0255	.66680	.05026	-.0737	.1247	-5.13	2.62
July	176	.0921	.50453	.03803	.0171	.1672	-1.28	2.26
August	176	-.0174	.47614	.03589	-.0883	.0534	-1.70	1.57
September	176	-.1261	.36269	.02734	-.1801	-.0722	-1.36	1.02
October	176	-.0011	.51207	.03860	-.0773	.0750	-2.02	2.75
November	176	-.1124	.61709	.04651	-.2042	-.0206	-2.36	1.79
December	176	.1647	.43855	.03306	.0995	.2299	-1.27	1.59
Annual	176	-.0121	.22993	.01733	-.0463	.0221	-1.54	0.49

Based on the table above, it can be seen that the object under study was in the 2016 to 2019 observation period and it can also be seen that the minimum, maximum and mean and standard deviation of each variable. In the table above, it can be seen that April has the smallest return compared to other returns, while January has the largest return with an average return of 0.1977.

### 4.2 Normality test

The normality test is carried out to check the level of normality of the data used. The level of data normality is very important because for normally distributed data the data is considered representative. Normality test as a prerequisite that must be met when using an independent sample t-test. The Kolmogorov Smirnov method calculated in the SPSS program was used in the normality test. Tests were performed on each data group.

The test criteria:

- If the significance value > 0.05, then  $H_0$  is accepted (normally distributed data).
- If the significance value < 0.05, then  $H_0$  is rejected (data are not normally distributed).

**Table 4.2 Normality test (kolmogorov-smirnov) - monthly**

One-Sample Kolmogorov-Smirnov Test												
	January	February	Maret	April	Mei	Junii	Juli	Agustus	September	Oktober	November	Desember
N	176	176	176	176	176	176	176	176	176	176	176	176
Normal Parameters <sup>a</sup>	Mean	.1967	.0235	-.1039	-.2656	-.0526	.0255	.0921	-.0174	-.1261	-.0011	-.1124
	Std. Deviation	.65233	.47336	.82201	1.75603	.43360	.66680	.50453	.47614	.36269	.51207	.61709
Most Extreme Differences	Absolute	.119	.114	.166	.338	.069	.146	.068	.082	.051	.103	.095
	Positive	.119	.114	.127	.270	.054	.111	.065	.082	.043	.100	.095
	Negative	-.117	-.090	-.166	-.338	-.069	-.146	-.068	-.061	-.051	-.103	-.051
Kolmogorov-Smirnov Z	1.582	1.513	2.204	4.491	.910	1.935	.897	1.089	.674	1.366	1.254	.702
Asymp. Sig. (2-tailed)	.013	.021	.000	.000	.380	.001	.397	.187	.754	.048	.086	.708
a. Test distribution is Normal.												

**Table 4.3 Normality test (kolmogorov-smirnov) – annually**

One-Sample Kolmogorov-Smirnov Test			Annual
N			176
Normal Parameters <sup>a</sup>	Mean		-.0121
	Std. Deviation		.22993
Most Extreme Differences	Absolute		.190
	Positive		.134
	Negative		-.190
Kolmogorov-Smirnov Z			2.515
Asymp. Sig. (2-tailed)			.000
a. Test distribution is Normal.			

Table 4.2 is the result of the normality test on the average stock returns per month. From this table we can see that in the months of March, April, and June, the significance value is  $<0.05$ , so it can be concluded that in these three months the data were not normally distributed.

Whereas in table 4.3, is the result of normality test on the average annual stock return (Annual). From this table we can see that the significance value is 0.000 ( $<0.05$ ), so it can be concluded that the data are not normally distributed.

Because the annual stock return data is not normal, the hypothesis test (different test) in this study uses a non-parametric analysis, namely the Mann Whitney test.

#### 4.3 Homogeneity Test

The main purpose of the homogeneity test is to ensure that the number of populations to be measured is homogeneous. In other words, diversity is not that different. The homogeneity test is needed before other tests such as the T test and Anova are carried out.

Decision-making:

- If the significance (Sig)  $> 0.05$  then  $H_0$  is accepted (same variant)
- If the significance (Sig)  $< 0.05$  then  $H_0$  is rejected (different variants)

**Table 4.4 Homogeneity Test**

Bulan	Levene Statistic	df1	df2	Sig.
January	55.469	1	350	.000
February	39.287	1	350	.000
March	38.632	1	350	.000
April	15.441	1	350	.000
May	57.543	1	350	.000
June	38.603	1	350	.000
July	65.145	1	350	.000
August	69.119	1	350	.000
September	41.837	1	350	.000
October	44.946	1	350	.000
November	101.211	1	350	.000
December	62.408	1	350	.000

From the table above, we can see that there is no homogeneous data.

#### 4.4 Hypothesis Testing Results (Mann Whitney Test)

The Mann Whitney test was used to test the average of two unequal sized samples. In this study, at the time of the normality test, there were several variables with an abnormal distribution, both aspects of risk, return, and stock prices in the mining sector and the consumer goods industry sector, the authors used the Mann Whitney test for hypothesis testing, and the average difference test for two unpaired samples. .

Decision-making

- If the significance  $< 0.05$  then  $H_0$  is rejected (there is a difference)
- If the significance  $> 0.05$  then  $H_0$  is accepted (no difference)

The results of the Mann Whitney Difference Test in this study are as follows:

**Table 4.5 Mann Whitney Test**

Bulan	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
January	1,07E+07	2,63E+07	- 5.020	.000
February	1,52E+07	3,08E+07	-.282	.778
March	1,45E+07	3,00E+07	-1.084	.278
April	1,44E+07	3,00E+07	-1.143	.253
May	1,45E+07	3,01E+07	-1.049	.294
June	1,40E+07	2,95E+07	-1.612	.107
July	1,38E+07	2,93E+07	-1.819	.069
August	1,41E+07	2,97E+07	-1.436	.151
September	11.134.000	26.710.000	-4.561	.000
October	1,52E+07	3,07E+07	-.355	.722
November	1,16E+07	2,72E+07	-4.076	.000
December	10.601.000	26.177.000	-5.120	.000

From the table of Mann Whitney test results above, it can be concluded that there is a significant difference in January, September, November and December. This is due to the significance result  $< 0.05$ .

**Table 4.6 Comparison of average returns**

Month	Mean	Comparison with the average annual return	Asymp. Sig. (2-tailed)
January	.1967	Higher (significant)	.000
February	.0235	Higher	.778
March	-.1039	Lower	.278
April	-.2656	Lower	.253
May	-.0526	Lower	.294
June	.0255	Higher	.107
July	.0921	Higher	.069
August	-.0174	Lower	.151
September	-.1261	Lower (significant)	.000
October	-.0011	Higher	.722
November	-.1124	Lower (significant)	.000
December	.1647	Higher (significant)	.000
Annual	-.0121		

From table 4.6 above, we can conclude the Summary of Testing Results below



**Table 4.7 Summary of Testing Result**

<b>HYPOTHESIS</b>	<b>KETERANGAN</b>
H1: There is a January effect on LQ45 company shares	ACCEPTED
H2: There is a significant difference in return in January	ACCEPTED
H3: The average daily return in January is greater than the average return throughout the year	ACCEPTED
H4: The average daily return in February is the same as the average return throughout the year	ACCEPTED
H5: The average daily return in March is the same as the average return throughout the year	ACCEPTED
H6: The average daily return in April is the same as the average return throughout the year	ACCEPTED
H7: The average daily return in May is the same as the average return throughout the year	ACCEPTED
H8: The average daily return in June is the same as the average return throughout the year	ACCEPTED
H9: The average daily return in July is the same as the average return throughout the year	ACCEPTED
H10: The average daily return in August is the same as the average return throughout the year	ACCEPTED
H11: The average daily return in September is the same as the average return throughout the year	NOT ACCEPTED
H12: The average daily return in October is the same as the average return throughout the year	ACCEPTED
H13: The average daily return in November is the same as the average return throughout the year	NOT ACCEPTED
H14: The average daily return in December is the same as the average return throughout the year	NOT ACCEPTED

**There is a January effect on LQ45 company shares (H1)**

**There is a significant difference in return in January (H2)**

**The average daily return in January is greater than the average return throughout the year (H3)**

There is a significant difference between the average January stock return and the annual stock return. This is because the significance value is 0.000 (less than 0.05). Judging from the mean value (table 4.8), it can be seen that the mean value of January stock returns was higher (amounting to 0.1967%) than annual (amounting to -0.0121%). So it can be concluded that the average daily return in January is greater than the average return throughout the year. From these results, **H1, H2, and H3 is accepted.**

**The average daily return in February is the same as the average return throughout the year (H4)**

There is no significant difference between the average February stock returns and the annual stock returns. This is because the significance value is 0.778 (more than 0.05). Judging from the mean value (table 4.8), it can be seen that the mean value of February stock returns is higher (by 0.0235%) than annual (amounting to -0.0121%). So it can be concluded that the average daily return in February is the same as the average return throughout the year. From these results, **H4 is accepted.**

**The average daily return in March is the same as the average return throughout the year (H5)**

There is no significant difference between the average March stock returns and the annual stock returns. This is because the significance value is 0.278 (more than 0.05). Judging from the mean value (table 4.8), it can be seen that the mean value of March stock returns is lower (equal to -0.1039%) than annual (amounting to -0.0121%). So it can be concluded that the average daily return in March is the same as the average return throughout the year. From the results of this study, **H5 is accepted.**

**The average daily return in April is the same as the average return throughout the year (H6)**

There is no significant difference between the average April stock return and the annual stock return. This is because the significance value is 0.253 (more than 0.05). Judging from the mean value (table 4.8), it can be seen that the mean value of April stock returns is lower (equal to -0.2656%) than annual (amounting to -0.0121%). So it can be concluded that the average daily return in April is the same as the average return throughout the year. From these results, **H6 is accepted.**

**The average daily return in May is the same as the average return throughout the year (H7)**

There is no significant difference between the average May stock return and the annual stock return. This is because the significance value is 0.294 (more than 0.05). Judging from the mean value (table 4.8), it can be seen that the mean value of stock returns in May is lower (equal to -0.0526%) than annual (amounting to -0.0121%). So it can be concluded that the average daily return in May is the same as the average return throughout the year. From these results, **H7 is accepted.**

**The average daily return in June is the same as the average return throughout the year (H8)**

There is no significant difference between the average June stock return and the annual stock return. This is because the significance value is 0.107 (more than 0.05). Judging from the mean value (table 4.8), it can be seen that the mean value of

June stock return is higher (amounting to 0.0255%) than annual (amounting to -0.0121%). So it can be concluded that the average daily return in June is the same as the average return throughout the year. From the results of these studies, **H8 is accepted.**

**The average daily return in July is the same as the average return throughout the year (H9)**

There is no significant difference between the average July stock return and the annual stock return. This is because the significance value is 0.069 (more than 0.05). Judging from the mean value (table 4.8), it can be seen that the mean value of July stock returns was higher (amounting to 0.0921%) than annual (amounting to -0.0121%). So it can be concluded that the average daily return in July is the same as the average return throughout the year. From the results of this study, **H9 is accepted.**

**The average daily return in August is the same as the average return throughout the year (H10)**

There is no significant difference between the average August stock return and the annual stock return. This is because the significance value is 0.151 (more than 0.05). Judging from the mean value (table 4.8), it can be seen that the mean value of August stock returns is lower (equal to -0.0174%) than annual (amounting to -0.0121%). So it can be concluded that the average daily return in August is the same as the average return throughout the year. From the results of these studies, **H10 is accepted.**

**The average daily return in September is the same as the average return throughout the year (H11)**

There is a significant difference between the average September stock return and the annual stock return. This is because the significance value is 0.000 (less than 0.05). Judging from the mean value (table 4.8), it can be seen that the mean value of September stock returns is lower (equal to -0.1261%) than annual (amounting to -0.0121%). So it can be concluded that the average daily return in September is the same as the average return throughout the year. From the results of these studies, **H11 is not accepted.** The significant difference in September is likely due to the window dressing phenomenon at the end of the 3rd quarter.

**The average daily return in October is the same as the average return throughout the year (H12)**

There is no significant difference between the average October stock return and the annual stock return. This is because the significance value is 0.722 (more than 0.05). Judging from the mean value (table 4.8), it can be seen that the mean value of October stock returns is higher (equal to -0.0011%) than annual (amounting to -0.0121%). So it can be concluded that the average daily return in October is the same as the average return throughout the year. From the results of these studies, **H12 is accepted.**

**The average daily return in November is the same as the average return throughout the year (H13)**

There is a significant difference between the average November stock return and the annual stock return. This is because the significance value is 0.000 (less than 0.05). Judging from the mean value (table 4.8), it can be seen that the mean value of September stock returns is lower (equal to -0.1124%) than annual (amounting to -0.0121%). So it can be concluded that the average daily return in September is the same as the average return throughout the year. From the results of these studies, **H13 is not accepted.**

The significant difference in November was due to the preparation of investors for window dressing, namely activities carried out by fund managers to improve the performance of their portfolios. Therefore, market players (investors) must be really careful. Because historically November has been an unfriendly month for the Indonesian stock market.

**The average daily return in December is the same as the average return throughout the year (H14)**

There is a significant difference between the average December stock return and the annual stock return. This is because the significance value is 0.000 (less than 0.05). Judging from the mean value (table 4.8), it can be seen that the mean value of December stock return is higher (amounting to 0.1647%) than annual (amounting to -0.0121%). So it can be concluded that the average daily return in December is greater than the average return throughout the year. From the results of this study, **H14 is not accepted.**

In December the results were significantly higher, this is most likely due to Window dressing. Window dressing is a strategy used by investment managers (fund managers) at the end of the year to improve the performance of a mutual fund before presenting it to clients or shareholders. In window dressing activities, fund managers sell stocks at big losses and buy stocks at high prices near the end of the quarter. This effect is then reported as part of the ownership of the fund.



## 5. Conclusion

This study examines the January Effect, by not only comparing returns per year with returns in January, but also comparing returns per year with returns in other months. This is done to determine whether there is a significant difference in January (January effect) on LQ45 company shares, or there is no significant difference in January, but there is a significant difference in other months.

In order for this research to be *ceteris paribus* (isolating the effects of other factors beyond what was studied), this research will eliminate events that occur in companies that affect stock returns. When there is an event that affects return, the 1 week period is omitted.

This study aims to test whether there is a January effect in Indonesia, by comparing the daily average return each month with the daily average return a year, using the Mann Whitney U Test analysis method, which is a non-parametric test to determine the difference in median 2 which is not normally distributed.

By analyzing the average monthly return, this study can find out whether there is a significant difference in January or there is a significant difference in other months.

Based on the results of data processing, this study concluded that there were 4 months with significant results, namely January, September, November and December. Of the four months with significant results, January and December showed significantly higher yields. Meanwhile September and November brought much lower yields.

From these results, it can be concluded that a significantly higher result in January indicates that there is a January Effect in Indonesia. In December, the yield was significantly higher due to Window dressing. Window dressing This is the business of institutional investors who sell shares that are considered bad at the end of the year to improve their portfolio at the end of the year, and then buy back those shares. The year-end sales campaign will gradually return to normal in January after the sale ends. The making of this exhibition was mainly carried out by institutional investors, who generated high returns in January.

## RECOMMENDATIONS

### *For Further Researchers:*

The results of this study can provide information and references for other researchers who are involved in research topics related to this research, this research can be continued or added.

### *For potential investors and financial analysts*

Investors can describe what factors affect the status and value of the issuer's shares, especially the effect of variables on the performance of the stock index, so this research can be a reference in implementing the right capital market investment strategy.

### *For the Government and Related Institutions*

As a consideration for the government and all parties wishing to invest in decision-making institutions, these decision-making institutions will continue to apply it in order to be able to create an investment environment that can attract investors to invest in the Indonesian stock exchange.

## APPENDIX

### Stock Return

$$Return = \frac{(P_{i,t} - P_{i,t-1}) + D_{i,t}}{P_{i,t-1}}$$

## REFERENCES

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