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January Effect Phenomenon on the Indonesian Stock Exchange, America, Germany, Japan, and China for the Period 2019-2023

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Abstract: *There are many factors that can affect stock price movements in the capital market. These factors can be used as a reference by investors in making investment decisions. One of them is Market Anomaly. Based on existing anomalies, seasonal anomalies are the most frequently studied anomalies in their influence on company stock returns and one of the categories of seasonal anomalies is the January Effect. This study aims to determine the January Effect phenomenon on the Indonesian, American, German, Japanese and Chinese Stock Exchanges before and after Covid-19 (2019-2023 period). In addition, to find out whether there is a difference in stock returns between January and other months, and to find out whether there is a difference in stock returns on the Indonesian, American, German, Japanese and Chinese stock exchanges during the study period. The data used is the daily main stock price index data from January 2019 to December 2023. The research method used is the comparative method and event study. Previous research results in 2019-2021 showed that there was no January effect on the Indonesian, American, German and Japanese Stock Exchanges because there was no significant difference in the average value of stock returns between January and other months. Furthermore, more in-depth research will be conducted to test whether there is an anomalous January Effect phenomenon on the Indonesian, American, German, Japanese and Chinese Stock Exchanges after the Covid-19 pandemic (case study in the 2022-2023 period)*

Keywords: *Stock Returns, January Effect January Effect on the Indonesian, American, German, Japanese and Chinese Stock Exchange*

Introduction

In conducting investment activities, investors will certainly be dealing with market conditions where a market is said to be efficient if no one, whether individual investors or institutional investors, can achieve abnormal returns, after adjusting for risk, and using existing trading strategies (Windarsih, 2020). However, this concept of an efficient capital market often becomes an issue among investors. This is due to several research findings that provide supporting evidence for the validity of the efficient market concept, but on the other hand, there are studies that find deviations from this concept of market efficiency. These deviations are then referred to as market anomalies. An anomaly is a pattern of stock returns that is usually inconsistent with prevailing asset price behavior models. Based on existing anomalies, seasonal anomalies are the most frequently studied anomalies in their impact on a company's stock Returns. The occurrence of a seasonal pattern in past prices allows investors to obtain Abnormal Returns. One category of seasonal anomalies is the January Effect. (Sari & Sisdyani, 2014) Meanwhile, the January Effect in the domestic stock market was seen again after two years of not strengthening significantly until the end of January 2022, where the Composite Stock Price Index (IHSG) managed to strengthen by 0.97% to a position of 6,645.51 during January 2022. (Data from the Indonesia Stock Exchange (IDX)). Additionally, the January Effect is also triggered by psychological factors, namely investors' assumption that January is the best month to start an investment program. There are also members of the public realizing their New Year's resolutions to start investing, which increases buying pressure in the stock market and causes prices to rise. The January Effect phenomenon in the US then spread to the stock market in the homeland. It can even be said that January is a sweet month for stock investors in Indonesia. According to data collected over the last 10 years (2012-2021), the IDX Composite (IHSG) succeeded in strengthening seven times during January, while the other three ended in the red (CNBC Indonesia Research Team, 2022). This January Effect phenomenon itself is a seasonal positive belief phenomenon at the beginning of the year that causes the IHSG to tend to rise. There are two things that will influence the occurrence of the January Effect, namely the issuance of derivative regulations of Law No. 11-2020 concerning Job Creation and the implementation of tax amnesty policies (Maximilianus Nico Demus, 2022). This proves that the January Effect has a positive impact on increasing the benchmark interest rate. In this study, a new variable is added, namely the China Stock Exchange (SSEC) and an additional research period of 2022-2023 to test whether the post-Covid-19 pandemic period, where the economy has improved, will change the January Effect occurring in several countries in this study, especially in China, which was the first country affected by the Covid-19 virus. For the selection of the exchange itself, the researcher chose the Chinese exchange because China is one of the major countries in Asia and the first country to be affected by the Covid-19 virus. Thus, the choice of the SSEC exchange can provide a sharper assessment.

Research Method

The method used in this study is a comparative descriptive method with a quantitative approach aimed at explaining the January Effect phenomenon in LQ45, DJIA, DAX, and TSE during the period of 2019-2021. Comparative studies are a form of research that compares variables that are related by explaining the differences or similarities in a policy or research. In addition, this study uses the event study method. An event study can be used to understand the reaction of the capital market (using stock price movements) to a particular event. The units of analysis are the Composite Stock Price Index (IHSG), Dow Jones Industrial Average (DJI), Deutscher Aktien Index (DAX), and Tokyo Stock Exchange (TSE). The data used is secondary data obtained from the websites www.investing.com and www.finance.yahoo.com, which is daily index data from January 2019 to December 2021. The variables used in this study are stock returns on the stock exchanges of four countries (Indonesia, America, Germany, Japan, and Chinese), using the following formula:

$$Ri = \frac{P_t - P_{t-1}}{P_{t-1}} x\ 100$$

Ri = Stock Return
Pt = Stock Price (closing price) for stock i at the end of the investment period.
P(t−1) = Stock Price (closing price) for stock i at the beginning of the investment.

The data analysis used includes Descriptive Statistical Test, Normality Test, Homogeneity Test, Analysis of Variance (ANOVA), Post Hoc Test, and Difference Test. (1) Descriptive statistics serve to describe or provide an overview of the object being studied through sample or population data (Sugiyono, 2007). (2) The normality test is conducted to examine whether in a regression model, an independent variable and a dependent variable or both have a normal or non-normal distribution. If a variable is not normally distributed, the results of the statistical test will be diminished (Ghozali, 2016). The normality test used in this study is the One Sample Kolmogorov-Smirnov Test. (3) The homogeneity test is a statistical test procedure conducted to show that two or more samples taken come from populations with the same variance. This test is called Levene's test of Homogeneity of variance. (4) ANOVA is a statistical analysis that tests the differences in means among groups being tested. ANOVA is used as an analytical tool to test research hypotheses that assess whether there are differences in means among groups. In this study, the Independent Sample T-test is used. In this independent difference test, it includes Group Statistics testing aimed at testing the differences in average values and the Independent Samples Test aimed at examining whether there are significant differences between the average stock returns on the Indonesia Stock Exchange, Dow Jones Industrial Average, Deutscher Aktien Index Nikkei, and SSEC during the period of 2019 – 2023 statistically.

Result and Discussion

The January Effect is a phenomenon based on the observation that returns in January appear to be higher compared to returns in other months. This indicates that investors who buy stocks at the beginning of January and then sell them at the end of January will have a higher chance of generating returns compared to doing the same in other months. Below is an overview of the January Effect phenomenon in the Indonesia Indonesia Stock Exchange, Dow Jones Industrial Average, Deutscher Aktien Index Nikkei, and SSEC during the period of 2019 – 2023:

Stock Returns in January (First Week) of 2019 – 2023

Date		DJIA	LQ45	DAX	NIKKEI	SSEC
		RETURN				
Week-1	2019	3,29%	1,09%	4,03%	-0,20%	-1,15%
Week-1	2020	0,24%	-1,10%	-0,91%	1,60%	1,15%
Week-1	2021	-1,25%	2,54%	0,26%	-0,68%	0,86%
Week-1	2022	0.59%	1.28%	0.86%	1.77%	-0.20%
Week-1	2023	-0.03%	-0.22%	1.05%	-1.45%	0.88%

Source: www.investing.com & www.finance.yahoo.com (data processed)

Normality Test

The normality test aims to examine whether in the regression model, the dependent variable and the independent variable or both are normally distributed. The normality test in this research uses the Kolmogorov-Smirnov test. Based on the results of the normality test on stock returns in the Indonesia, America, Germany, Japan, and Chinese stock exchanges during the period of 2019 – 2023, the results are as follows:

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		485
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	.00844843
Most Extreme Differences	Absolute	.042
	Positive	.032
	Negative	-.042
Test Statistic		.042
Asymp. Sig. (2-tailed)		.038[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		500
Normal Parameters[a,b]	Mean	.0000004
	Std. Deviation	18107662.66
Most Extreme Differences	Absolute	.065
	Positive	.065
	Negative	-.063
Test Statistic		.065
Asymp. Sig. (2-tailed)		.000[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		511
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	.01187202
Most Extreme Differences	Absolute	.073
	Positive	.060
	Negative	-.073
Test Statistic		.073
Asymp. Sig. (2-tailed)		.000[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		489
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	.01155008
Most Extreme Differences	Absolute	.038
	Positive	.030
	Negative	-.038
Test Statistic		.038
Asymp. Sig. (2-tailed)		.094[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		483
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	36.06021751
Most Extreme Differences	Absolute	.467
	Positive	.467
	Negative	-.292
Test Statistic		.467
Asymp. Sig. (2-tailed)		.000[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

Based on the output above, it can be seen that the significance value is < 0.05, which means it does not pass the normality test, thus Central Limit Theorem can be used. According to Damodar N Gujarati (2006:148), the Central Limit Theorem states that if the sample size is large (n > 30), the sample distribution will be considered normal. Therefore, it can be concluded that even though the results of the normality test show that some data are not normally distributed, since the sample in this study is more than 30 (n > 30) in accordance with the Central Limit Theorem, the data is considered to be normally distributed.

Homogeneity Test

Levene's test of homogeneity of variance aims to test the ANOVA assumption that each group (category) of the independent variable has the same variance. The homogeneity test in this study uses Levene's test. Based on the results of the homogeneity test in Indonesia, America, Germany, Japan, and Chinese stock exchanges during the period of 2019 – 2023, the following results were obtained:

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Return Saham	Based on Mean	5.981	4	31	.001
	Based on Median	1.090	4	31	.379
	Based on Median and with adjusted df	1.090	4	6.000	.440
	Based on trimmed mean	3.804	4	31	.013

Test of Homogeneity of Variances based on median shows that the test results indicate that the variances of the four market indices are not the same (P-value = 0.013), thus the ANOVA test is not valid for testing the relationship between the four market indices. Additionally, by comparing the significance value with an alpha of 5%, it can be concluded that the data variances of Returns on the four market indices are different or heterogeneous.

Based on the results of the homogeneity test on the Indonesia Stock Exchange for the period of January 2019 - December 2023, the following results were obtained:

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Return Saham	Based on Mean	1.938	11	473	.033
	Based on Median	1.775	11	473	.056
	Based on Median and with adjusted df	1.775	11	277.492	.058
	Based on trimmed mean	1.849	11	473	.044

The Test of Homogeneity of Variances shows that the test results indicate that the variances of the three groups are not equal (P-value = 0.044), so the ANOVA test is not valid for examining the relationship between these periods. Additionally, by using the comparison of significance values with an alpha of 5%, it can be concluded that the return data variances in the twelve periods are different or heterogeneous.

ANOVA Test

The Analysis of Variance (ANOVA) test aims to compare the average values of the dependent variable across all groups being compared. Based on the results of the ANOVA test on stock returns in the Indonesia, America, Germany, Japan, and Chinese stock exchanges during the period of 2019 – 2023, the following results were obtained:

ANOVA

Return Saham

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.001	11	.000	.669	.768
Within Groups	.034	473	.000		
Total	.035	484			

The ANOVA table shows that in the Sig. column, the P-value is 0.768. Thus, at a significance level of 0.05, we accept Ho, leading to the conclusion that there is no significant difference in the average return based on the indices. This proves that among the five countries, namely Indonesia, America, Germany, Japan, and Chinese there is no significant difference in returns in January, indicating that there is no January Effect in these five countries as the average returns do not have significant differences.

Discussion

Based on the research findings observed on the Indonesian Stock Exchange, there was a positive Return at the beginning of the years 2019, 2021, and 2022, while negative Returns occurred in 2020 and 2023. However, a significant increase in Return only happened in 2021. On the American and German Stock Exchanges, the highest Return increase occurred in 2019. The Japanese Stock Exchange tends to be negative, with positive Returns only in 2020 and 2022, but these did not increase significantly. The Chinese Stock Exchange tends to be positive, with negative Returns only in 2019 and 2022. Thus, during the research years, the January effect phenomenon only occurred in two years: in 2021 on the Indonesian Stock Exchange, and in 2019 for the American and German Stock Exchanges. However, when averaging all stock Returns during the research period, the January Effect phenomenon did not occur.

Conclusion

Based on the discussions above, it can be concluded that the research results indicate that there are differences in stock price movement patterns on the Indonesia Stock Exchange compared to those in America, Germany, and Japan. Regarding the phenomenon of the January Effect, it can be concluded that on average, there is no January Effect phenomenon found in the Indonesia, America, Germany, Japan, and Chinese stock exchanges during the period of 2019 – 2023. This can be seen from the absence of returns in January that are higher than returns in other months, where returns in January tend to be the same as in other months. As for the differences in returns, it can be concluded that there are no differences in returns between January and other months on the Indonesia, America, Germany, Japan, and Chinese stock exchanges during the period of 2019 – 2023. For investors, it is recommended to continue conducting both technical and fundamental analysis in deciding to engage in stock investment activities, especially at the end of the year and the beginning of the year. It is recommended because many investor attitudes occur during the end and beginning of the year. It is better for investors to process the information obtained in the market first so that the decision-making for stock purchases will be more accurate. In addition, investors are also urged not to be influenced by phenomena that will occur. Because in reality, the January Effect will not always happen every year.

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