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January Effect and Size Effect Market Anomalies on Banking Companies in Indonesia Stock Exchange

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Abstract

In the capital market, each stock price must reflect all available and relevant information or commonly known as the efficient market. In an efficient market, market anomalies should not occur to affect abnormal returns. This study aims to test whether the Indonesia Stock Exchange (IDX) exhibits January Effect and Size Effect anomalies, which could indicate inefficiencies in the capital market. The population includes all banking stocks listed on the IDX from 2018 to 2022, with a final sample of 38 banks after excluding incomplete data. The method involves examining both the January Effect with the Wilcoxon Signed Rank Test and the Size Effect with the Paired Samples T-test. The results indicate no significant January Effect during the 2018-2022 period, except in 2021, and no Size Effect anomalies for banking stocks during the same period.

Keywords: bank; january effect; size effect; abnormal return; average cumulative

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INTRODUCTION

In stocks investment, there are many business sectors that can be chosen, which one of them is the banking sector. According to Bhegawati & Utama (2020) banks financial institutions whose main business is to collect funds and channel these funds back to the public in the form of credit and provide services in payment and money circulation. Various studies found that there is a pattern of size anomalies in stock returns, especially stocks of financial institutions such as banks. In stocks investment, the main goal of investors is to make a profit. According to Guvenen et al., (2023) capital gain or capital loss is the difference in profit (loss) from the current investment price to the price of the past period.

According to Tannady et al., (2023) stock return is the rate of profit received by investors from their investment. In addition, in stock investment, expecting a return involves facing a certain level of risk. The relationship between return and risk is closely interconnected and influences each other. There is a principle of "high risk high return", namely profit and risk are directly proportional, if the profit is high it means the risk is also high, otherwise if the profit is low, the risk will also be low (Bhegawati & Utama, 2020). Returns in the capital market do not always reflect information in the capital market (Akhmetov, 2023; Komalasari & Nasih, 2023). Sometimes investment also depends on the investor's financial literacy and financial inclusion, such as in research of (Fitriah et al., 2021; Saputro & Lestari, 2019). Sometimes abnormal returns can occur due to events such as mergers and acquisitions or also due to market anomalies (Minović, 2016). Abnormal return is the excess of actual return over normal return. Normal returns are expected returns or returns investors expect (Kucukcolak et al., 2023). A good market is an efficient market where prices reflect all available information. Likewise, in the capital market, it is believed that the capital market is efficient if the stock prices reflect all available information within a certain period.

The efficient capital market hypothesis is a market with many actively competing rational profit maximizers, each trying to forecast the future market value of individual securities, and where important current information is freely available to all participants (Brown, 2020). If the market is inefficient then there is a possibility that there will be an abnormal rate of return on stocks in the capital market. This abnormal return can occur due to market anomalies. There are many market anomalies, such as Size Effect, January effect, Weekend effect, Day of the Week effect, End of month effect, and many more. In this study, the Size Effect and January effect are the main focus to test whether stock prices and returns, especially bank stocks in Indonesia, have these market anomalies. January effect is a condition where the average stock return tends to be higher than in other months. This anomaly is believed to occur due to tax loss harvesting, consumer sentiment, bonuses earned at the end of the year, and others. Tax loss harvesting is the sale of securities at a loss to offset capital gains tax liability. Then there is the influence of consumer sentiment, investors believe that the beginning of the year is the right time to invest to start the new year cleanly.

The bonuses that workers get at the end of the year are also potential additional funds for investors to invest in January. The January effect is also believed to occur more often in companies that have small-cap stocks than large-cap stocks. One reason for this is that the liquidity level of small companies is lower than medium or large companies (Elizabeth et al., 2019; Mahdi et al., 2023). Therefore, it appears that there is a relationship between the January effect and the Size Effect where the size of a company affects stock returns where stock returns in small companies are greater than stock returns in large risk-adjusted companies. Another market anomaly that will be examined in this study is the Size Effect. Size anomaly or Size Effect is one of the anomalies that contradicts the theory of market efficiency. Many studies have found that smaller companies with smaller market capitalization tend to

outperform larger companies. Therefore, large companies provide lower returns than small companies, so it can be said that small companies offer better performance than large companies (Mehrotra et al., 2023). Bank financial institutions with large company sizes tend to have smaller stock returns with adjusted risks than banks with smaller company sizes (Li et al., 2024; Murdock et al., 2023). Researchers chose banking sector companies as research objects because banking is one of the most important sectors in Indonesia's finance and economy. Banks have a vital role in the Indonesian economy as a public and customer fund circulation sector.

LITERATURE REVIEW

The theory used in this research is Efficient Market Hypothesis (EMH). Efficient Market Hypothesis is a market with many actively competing rational profit maximizers, each trying to predict the future market value of individual securities, and where important current information is freely available to all participants (Brown, 2020; Xu, 2023). According to Delcey & Sergi (2023) the Efficient Market Hypothesis is an efficient market condition in which the prices of all traded securities reflect all available information. EMH is a concept that has been accepted in finance, especially capital markets, but several studies state otherwise. Some of these studies found events contradicting the Efficient Market Hypothesis theory making the market inefficient (John, 2022; Leesi et al., 2023; Xie, 2023). The factor that makes the market inefficient is because of market anomalies, such as Day of the Week Effect, End of the Month Effect, January effect, and Size Effect.

According to the concept of capital market efficiency stock prices are expected to reflect all available information. But sometimes there are irregularities and oddities in this capital market where stock prices do not reflect the available information or market anomalies. Azevedo et al., (2023) states that "market anomaly as techniques or strategies that are contrary to the concept of an efficient market". Then according to Yan et al., (2023) "market anomaly is an exception of rule or model", it is a phenomenon that deviates from the model and concept of market efficiency. Fareed & Hasan (2023) divides these market anomalies into four categories: event anomalies, seasonal anomalies, firm anomalies, and accounting anomalies. There are studies on anomalies in the stock market Singgih et al., (2019). The anomalies examined in this study are the Size and January effects. Using these categories, the Size Effect can be categorized as a firm anomaly, while the January Effect can be classified as a seasonal anomaly.

The January effect is also one of the market anomalies that can be categorized as seasonal anomalies. Broadly speaking, the meaning of the January effect is that security prices tend to rise in January, especially the first days. According to Naz et al. (2023) the January effect is a form of calendar in the year or commonly known as the month of the year effect, where stock returns tend to rise in the early weeks of January. Many found the existence of the January effect based on similar research results such as Cheema et al., (2023) found a significant January effect of small company returns compared to large companies that occurred on the first few days in January.

Size Effect is one of the market anomalies that can be categorized into firm anomalies. According to Aharon & Qadan (2019) large companies provide lower returns than small companies, so it can be said that small companies provide better performance than large companies. Some other explanations such as in the research of Salur & Ekinci (2023) explain the Size Effect is an anomaly that shows small companies produce risk adjusted returns higher than large companies. Then Chen et al., (2023) also stated that small company stocks are able to produce the highest returns from large stocks, not always every year but at certain times. Companies with small market capitalization (small cap) tend

to have a higher level of risk than companies with large market capitalization (large cap). The higher the risk level, the higher the return opportunity that can be received. This is better known as the high-risk high-return concept. Therefore, small market capitalization companies tend to provide higher returns than large capitalization companies or better known as the Size Effect anomaly. A significant difference between abnormal returns in January and abnormal returns in other months in the 2018-2022 period.

According to Pradnyaparamita & Rahyuda (2017) they found a January effect that occurred in the Indonesia Stock Exchange, especially in LQ45 companies. The study shows a significant difference in abnormal stock returns in January with other months. Meanwhile, in Hendrawaty & Huzaimah (2019) research based on the results of their data analysis, they did not find January effect happening on LQ45 companies in the Indonesia Stock Exchange. According to Naz et al., (2023) the January effect is a form of calendar in the year or commonly known as the month of the year effect where stock returns tend to rise in the early weeks of January. Therefore, the first conceptual hypothesis is formulated as follows:
H1: There is a significant difference between abnormal returns in January and abnormal returns in other months in the 2018-2022 period.

A significant difference between the Average Cumulative Abnormal Return (ACAR) of large market capitalization stocks with medium and small market capitalization stocks in January in the 2018-2022 period. According to Gandhi & Lustig (2015) they found the stocks of the largest commercial banks, sorted by total balance sheet size, have significantly lower risk-adjusted returns than the stocks of small and medium-sized banks, even though large banks use significantly more borrowed funds. They found a Size Effect anomaly in US bank stocks. But in domestic research such as Yani et al., (2014) stated that they did not find the Size Effect anomaly in the Indonesia Stock Exchange in the 2007-2012 period due to cultural differences. According to Chen et al., (2023) large companies provide lower returns than small companies, so it can be said that small companies provide better performance than large companies. Therefore, the second conceptual hypothesis is formulated as follows:
H2: There is a significant difference between ACAR of large market capitalization stocks with medium and small market capitalization stocks in January in the 2018-2022 period.

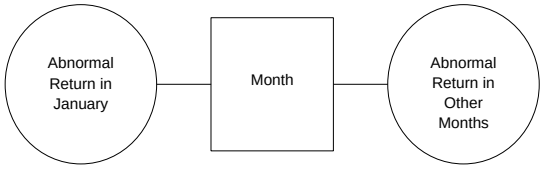

Figure 1. Conceptual Framework of the First Research

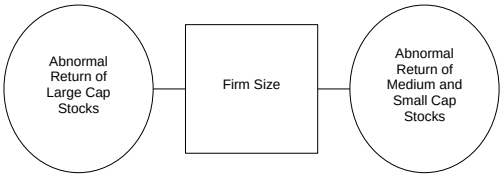

Figure 2. Conceptual Framework of the Second Research

METHODS

This research will examine the influence of the January effect and Size Effect anomalies on banking stock returns listed on the Indonesia Stock Exchange (BEI) in the 2018-2022 period. Therefore, the variable used in this research is Abnormal Return. This January effect is that security prices tend to rise and have higher returns in January, especially the first days, compared to other months. Size Effect is a market anomaly where small market capitalization companies tend to produce greater abnormal returns than large market capitalization companies. This research used the Wilcoxon Signed Rank Test is a non-parametric statistical test used to compare two related samples or repeated measurements on a single sample to assess whether their population mean ranks differ (Garren & Davenport, 2022; Yanyan, 2022). The variable of this study is Abnormal Return, which can be calculated using the formula for the Actual Return value minus the Expected Return value. According to Hanafi (2020) abnormal return is the excess of actual return over normal return.

The data used is secondary data obtained and accessible through the Yahoo Finance website (finance.yahoo.com) and the Indonesia Stock Exchange (www.idx.co.id) to obtain stock closing price data, market capitalization data, and Indonesia Composite Index (ICI) data for the 2018-2022 period. The population of this research is all banking sector securities listed on the IDX during the 2018-2022 period. To determine the research sample, several conditions must be met, namely: Banking securities registered and conducting an IPO on the IDX before January 2018; Having complete historical stock data; This is a conventional bank and not a Sharia bank. of the total population of 47 banks registered on the IDX as of 2023, there are four Sharia banks, three banks that were only registered on the IDX after January 2018, and two banks with incomplete historical data. Therefore, these banks did not meet the requirements, so the sample that met the criteria was 38 banks.

To examine the January effect in this study, researchers compared the January abnormal return with other month abnormal returns every year for five periods from 2018-2022. To measure the Size Effect, the bank stocks to be studied must first be categorized into several portfolios of small, medium and large market capitalization stocks. The large market capitalization stock category is a company that has a Market Cap (Market Capitalization) above 10 trillion IDR. Then, medium-capitalization stocks are companies that have a Market Cap between 1 trillion IDR and 10 trillion IDR. Small capitalization stocks are companies with a market cap below 1 trillion IDR.

This research is divided into two parts, namely, the first study to examine the January effect and the second study to explore the Size Effect on banking stocks for the 2018-2022 period. The data analysis methods used in these two studies are descriptive analysis techniques, normality tests, non-parametric tests and parametric tests. Researchers conducted a normality test with the Shapiro-Wilk method for both studies because the number of samples studied was less than 50. If the data is normally distributed, the next step is to conduct a parametric test using the Paired Samples T-test. Instead, if the data is not normally distributed, then a non-parametric test must be carried out using the Wilcoxon Signed Rank Test method.

RESULT

The first study examines whether there is an anomaly of the January effect on banking stocks listed on the IDX in the 2018-2022 period. Researchers conducted an analysis related to abnormal returns, expected returns, and market returns to test whether there were differences in abnormal returns in January with abnormal returns in other months (February, March, April, May, June, July, August, September, October, November, and December). To examine whether there is an anomaly of the January

effect on banking stocks on the IDX, it is necessary to calculate the abnormal monthly return from 2018-2022. The following are descriptive statistics for abnormal returns from 2018-2022:

Scenario for 2018

Descriptive statistical analysis in Table 1 on abnormal returns shows that in January, the minimum value is BBYB (PT Bank Neo Commerce Tbk), and the maximum value is BGTG (PT Bank Ganesha Tbk). Then in other months, the minimum value is BBKP (PT Bank KB Bukopin Tbk) and the maximum value is MAYA (PT Bank Mayapada Internasional Tbk). In addition, the mean (average) and standard deviation of abnormal return data are also listed.

Table 1. Descriptive Statistics of Abnormal Return in 2018

	N	Mean	Std Deviation	Minimum	Maximum
AR-JAN	38	0.0199003	0.1524392	-0.2193314	0.4425962
AR OTHER	38	0.0000538	0.0263161	-0.0630714	0.0785791

Scenario for 2019

The descriptive statistical analysis in Table 2 on abnormal returns shows that in January, the minimum value is BMAS (PT Bank Maspion Indonesia Tbk), and the maximum value is AGRS (PT Bank IBK Indonesia Tbk). Then, in other months, the minimum value is AGRS (PT Bank IBK Indonesia Tbk), and the maximum value is ARTO (PT Bank Jago Tbk). In addition, the mean (average) and standard deviation of abnormal return data are also listed.

Table 2. Descriptive Statistics of Abnormal Return in 2019

	N	Mean	Std Deviation	Minimum	Maximum
AR-JAN	38	0.0392445	0.1738327	-0.2013797	0.6344350
AR OTHER	38	0.0109124	0.0939782	-0.0887034	0.5461697

Scenario for 2020

Descriptive statistical analysis in Table 3 on abnormal returns shows that in January, the minimum value is BKSW (PT Bank QNB Indonesia Tbk), and the maximum value is AGRS (PT Bank IBK Indonesia Tbk). Then in other months, the minimum value is MAYA (PT Bank Mayapada Internasional Tbk) and the maximum value is AGRO (PT Bank Raya Indonesia Tbk). In addition, the mean (average) and standard deviation of abnormal return data are also listed.

Table 3. Descriptive Statistics of Abnormal Return in 2020

	N	Mean	Std Deviation	Minimum	Maximum
AR-JAN	38	-0.0110499	0.0971738	-0.2151559	0.2200292
AR OTHER	38	0.0300501	0.0582306	-0.0435298	0.2486153

Scenario for 2021

Descriptive statistical analysis in Table 4 on abnormal returns shows that in January, the minimum value is MAYA (PT Bank Mayapada Internasional Tbk), and the maximum value is BBHI (PT Allo Bank Indonesia Tbk). Then in other months, the minimum value is MAYA (PT Bank Mayapada Internasional Tbk) and the maximum value is BNBA (PT Bank Bumi Arta Tbk). In addition, the mean (average) and standard deviation of abnormal return data are also listed.

Table 4. Descriptive Statistics of Abnormal Return in 2021

	N	Mean	Std Deviation	Minimum	Maximum
AR-JAN	38	-0.0443901	0.1870143	-0.3281908	0.6115027
AR OTHER	38	0.0588584	0.1159600	-0.1170674	0.4145525

Scenario for 2022

The descriptive statistical analysis in Table 5 on abnormal returns shows that in January, the minimum value is AGRO (PT Bank Raya Indonesia Tbk), and the maximum value is BBHI (PT Allo Bank Indonesia Tbk). Then, in other months, the minimum value is ARTO (PT Bank Jago Tbk), and the maximum value is PNBN (PT Bank Pan Indonesia Tbk). In addition, the mean (average) and standard deviation of abnormal return data are also listed.

Table 5. Descriptive Statistics of Abnormal Return in 2022.

	N	Mean	Std Deviation	Minimum	Maximum
AR-JAN	38	-0.0628620	0.1284218	-0.3031268	0.4073741
AR OTHER	38	0.0238364	0.0420172	-0.1226253	0.0802576

Based on the descriptive statistics table below, the lowest large market capitalization Average Cumulative Abnormal return (ACAR) value was -0.010403 in January 2018. The highest large capitalization ACAR value is 0.017379, namely in the January 2022 period. Then the lowest ACAR value of medium and small market capitalization is -0.29831, namely in the January 2022 period. Then the highest ACAR value of medium and small market capitalization is 0.003291, in January 2021. The largest market capitalization value is owned by PT Bank Central Asia Tbk, which is 1,127.97 IDR trillion, while the smallest market capitalization value is owned by PT Bank Pembangunan Daerah Banten Tbk with a market capitalization value of 320,547 billion IDR.

Table 6. Descriptive Statistics Average Cumulative Abnormal Return (ACAR) in 2018-2022.

	N	Mean	Std Deviation	Minimum	Maximum
ACAR Large Cap	5	-0.010403	0.017379	0.00170878	0.010347528
ACAR Mid & Small Cap	5	0.029831	0.003201	-0.00702553	0.013267398

First Research

The formula actual return minus expected return calculates abnormal return. Expected return is calculated using the market-adjusted return method. Then, after the abnormal return is calculated, the researcher groups the abnormal return into two variables: abnormal return in January and abnormal return in other months (February, March, April, May, June, July, August, September, October, November, and December). The statistical test in the first study was to test whether there was a significant difference between the abnormal return in January and the abnormal return values for other months. The researcher decided to use the Shapiro-Wilk method to test the normality of the data because the Shapiro-Wilk method is more suitable for sample data that totals less than 50. If the data is normally distributed, the next test is the Paired Sample T-Test. Conversely, suppose the data is not normally distributed. In that case, it is necessary to test the hypothesis using the non-parametric test method, one of which is the Wilcoxon Signed Rank Test or Sign Test. All tests were carried out with IBM SPSS Statistics 25 software. The result is in Table 7.

Table 7. Shapiro-Wilk Test Results in 2018-2022

	2018	2019	2020	2021	2022
AR-Jan	0.000	0.000	0.000	0.000	0.11
AR-other	0.001	0.000	0.000	0.000	0.202

Based on the Shapiro-Wilk Normality Test results in Table 7, if the abnormal return p-value for January and the abnormal return for other months are smaller than the alpha value, namely 0.05 or 5% (0.000<0.05 & 0.000<0.05). Therefore, the researcher's conclusion rejects H0, namely that the data is not normally distributed. The normality test results for all periods except 2022 showed that the data was not normally distributed, so the researchers used non-parametric analysis, namely the Wilcoxon Signed Rank Test method. Meanwhile, for 2022, researchers used a parametric test, namely the Paired Samples T-test method.

Table 8. Wilcoxon Signed Rank Test Results in 2018-2021

	2018	2019	2020	2021
Z value - AR	-0.051	-0.573	-1.951	-2.821
P-Value (Asymp. Sig. 2 tailed)	0.96	0.567	0.051	0.005

The hypotheses in this study are:
H0: There is no significant difference between abnormal returns in January and abnormal returns in other months in 2018.
H1: There is a significant difference between the abnormal return in January and the abnormal return in other months in 2018.

Based on the Wilcoxon Signed Rank Test results above in Table 8, the Z value obtained in 2018 is -0.051 with a p-value (Asymp. Sig. 2 tailed) of 0.811. The p-value obtained is greater than alpha 5% (0.960>0.05). So, the hypothesis conclusion is that H0 is accepted, which means that there is no significant difference between the abnormal return in January and the abnormal return in other months in 2018. This indicates that there is no anomaly of the January effect in 2018. The Z value obtained in 2019 is -0.573 with a p-value (Asymp. Sig. 2 tailed) of 0.567. The p-value obtained is greater than alpha 5% (0.567>0.05). So, the hypothesis conclusion is that H0 is accepted, which means there is no significant difference between the abnormal return in January and the abnormal return in other months in 2019. This indicates that there is no anomaly of the January effect in 2019. The Z value obtained in 2020 is -1.951 with a p-value (Asymp. Sig. 2 tailed) of 0.051. The p-value obtained is more significant than 5% alpha (0.051>0.05). So, the hypothesis conclusion is that H0 is accepted, which means that there is no significant difference between the abnormal return in January and the abnormal return in other months in 2020. This indicates that there is no anomaly of the January effect in 2020. The Z value obtained in 2021 is -2.821 with a p-value (Asymp. Sig. 2 tailed) of 0.005. The p-value obtained is smaller than alpha 5% (0.005 <0.05). So, the hypothesis conclusion is to reject H0, which means that there is a significant difference between the abnormal return in January and the abnormal return in other months in 2021. This indicates there is an anomaly of the January effect in 2021.

Table 9. Results of Paired Samples T-test in 2022.

	T - statistic	P-Value (Asymp. Sig. 2 tailed)
Pair 1 - AR	-1.812	0.078

The hypotheses in this study are:
H0: There is no significant difference between abnormal returns in January and abnormal returns in other months in 2022.
H1: There is a significant difference between the abnormal return in January and the abnormal return in other months in 2022.

Based on the Paired Samples' T-test results above in Table 9, the p-value (Sig. 2-tailed) is 0.078. The p-value obtained is greater than alpha 5% (0.078>0.05). So, the hypothesis conclusion is that H0 is accepted, which means there is no significant difference between the abnormal return in January and the abnormal return in other months in 2022. This indicates that there is no anomaly of the January effect in 2022.

Table 10. Summary of the First Research Hypotheses

Year	Conclusion
2018	H0 accepted
2019	H0 accepted
2020	H0 accepted
2021	H0 rejected
2022	H0 accepted

Description:
H0: There is no significant difference between abnormal returns in January and abnormal returns in other months.
H1: There is a significant difference between abnormal returns in January and in other months.

Second Research

Statistical test in the second study is to test whether there is a significant difference between the Average Cumulative Abnormal return (ACAR) value of banking companies with large market capitalization and the Average Cumulative Abnormal return (ACAR) value of banking companies with medium and small market capitalization. The research period is in every January from 2018-2022. The first step requires a normality test with one of the methods, namely Kolmogorov Smirnov or Shapiro-Wilk. Researchers decided to use the Shapiro-Wilk method to test the normality of the data because the Shapiro-Wilk method is more suitable for sample data that is less than 50. If the data is normally distributed, then the next test is to use the Paired Sample T-Test. Instead, suppose the data is not normally distributed. In that case, it is necessary to test the hypothesis with non-parametric test methods, including the Wilcoxon Signed Rank Test or Sign Test.

Table 11. Shapiro-Wilk Normality Test Results

	T - statistic	P-Value (Asymp. Sig. 2 tailed)
ACAR Large Cap	0.971	0.879
ACAR Mid & Small Cap	0.800	0.081

Based on the table of Shapiro-Wilk normality test results above in Table 11, the calculated probability value or p-value of ACAR of large capitalization stocks is greater than the level of significance or alpha value of 5% (0.0879>0.05). Then, the p-value of ACAR of small-capitalization stocks is also greater than the alpha value of 5% (0.081>0.05). The hypothesis conclusion from this normality test is to accept H0, meaning the data is normally distributed. Therefore, the next step can be done, which is conducting a parametric test with the Paired Samples T-test method.

Table 12. Calculation of ACAR for the 2018-2022

Year	Large Market Cap	Mid & Small Market Cap
2018	-0.010403048	-0.006284278
2019	-0.003553706	0.000850259
2020	0.000705367	-0.003153414
2021	0.004416186	0.003290921
2022	0.017379081	-0.029831131

Based on the table of ACAR calculation results above in Table 12, in the 2018 and 2019 periods, large market capitalization companies have smaller returns than medium and small market capitalization companies. However, in 2020, 2021, and 2022 large market capitalization companies have greater returns than medium and small. From all the 5 periods, there are 2 years that show a tendency of Size Effect anomaly but the other 3 years show no Size Effect anomaly. Therefore, to be sure, researchers will conduct statistical analysis with parametric tests, which is the Paired Samples T-test method.

Table 13. Paired Samples T-test Results

	T - statistic	P-Value (Asymp. Sig. 2 tailed)
Pair 1 – ACAR Large Cap	0.896	0.421

The research hypotheses are:
H0: There is no significant difference between the Average Cumulative Abnormal return (ACAR) of large market capitalization stocks with medium and small market capitalization stocks in January.
H1: There is a significant difference between the Average Cumulative Abnormal return (ACAR) of large market capitalization stocks with medium and small market capitalization stocks in January.

Based on the Paired Samples T-test results above in Table 13, the p-value obtained is 0.421, so the p-value is greater than the alpha value of 5% (0.421>0.05). Therefore, the conclusion of the hypothesis of this study is to accept H0, which means that there is no significant difference between the Average Cumulative Abnormal Return (ACAR) of large market capitalization stocks with medium and small market capitalization stocks in January. This shows that there is no anomaly in the size effect on banking companies listed in the IDX in the 2018-2022 period.

DISCUSSION

Based on the research that has been conducted, the results show that from the 2018-2020 period and the year 2022, researchers found no significant difference between January's abnormal returns and other months' abnormal returns. On the contrary, in 2021, researchers found a significant difference between January and additional months' abnormal returns. Therefore, there was no January effect

anomaly on banking stocks listed in the IDX in 2018-2022, except for 2021. This result may be the same research before (Ullah, 2022; Akhmetov, 2023). The results confirm that the new Covid-19 daily cases and deaths adversely impact daily market returns around the globe. The positive rate of new Covid-19 cases has also negatively influenced market returns. So, in 2021, investor confidence in the government's handling of the Covid-19 problem will be restored. So, there were abnormal returns in the stock market in 2021.

The January effect can occur due to several factors. First, at the end of the year, many investors sell underperforming stocks to reduce their income tax. Then, they will buy back shares in January of the following year so that stock prices rise and the January effect arises. However, in Indonesia, the tax year is in March, unlike overseas, so Indonesian investors feel no need to sell their stocks at the end of the year. They prefer to hold their investments and will only sell them before March of the following year. Another factor is that due to the Christmas and New Year celebrations at the end of the year, many investors hold back their investments or even sell their shares to fund the Christmas and New Year holidays, and they will only buy back their shares at the beginning of the following year. Christmas and New Year culture is celebrated more in Western countries such as Europe and America. Then, because the majority religion of Indonesian citizens is Muslim, Christmas and New Year celebrations are not celebrated as much. Indonesian investors do not need to hold their investments or sell their shares at the end of the year to meet the Christmas and New Year vacation funds. This cultural difference can cause the absence of the January effect on stocks listed on the Indonesia Stock Exchange.

The results of this study align with research conducted by Hestiningsih et al., (2021); Hendrawaty & Huzaimah (2019); Xie (2023). Research by Hestiningsih et al., (2021) states that the January effect phenomenon does not occur in the IDX, unlike in other developed countries. They also said that cultural differences, such as celebrating Christmas and New Year's Day, were one of the reasons the January effect did not occur. Then, in research by Hendrawaty & Huzaimah (2019) the January effect was also not found in LQ45 stocks in the IDX. Based on the research that has been conducted, the results show that there is no significant difference between the average cumulative abnormal return (ACAR) of large market capitalization stocks and medium and small market capitalization stocks in January. Therefore, no size effect anomaly exists on banking stocks listed on the Indonesia Stock Exchange in January 2018-2022.

Company size does not affect the abnormal return investors receive because the difference between the odd return values of large, medium, and small capitalization firms is similar. Investors must also be more careful and not depend on the company's size when choosing the stocks they want to buy. Sometimes, investors are tempted to invest in stocks of small capitalization firms to expect greater abnormal returns. The results of this study align with research by Hartoyo & Purbawangsa (2018); Yani et al., (2014). According to research by Hartoyo & Purbawangsa (2018) the Size Effect was not found in the IDX in the January-July 2017 period. The analysis by Yani et al., (2014) states that the amount of abnormal return does not depend on company size and does not find any Size Effect anomaly in the IDX in the 2007-2012 period.

CONCLUSION

There is no January effect anomaly on banking stocks listed on the Indonesia Stock Exchange (IDX) from 2018 to 2022, except for 2021. There is also no Size Effect anomaly on banking stocks listed on the IDX during this period. In making investment decisions, investors should continue to consider fundamental and technical analysis and not rely solely on expecting significant abnormal returns from

the January effect and Size Effect anomalies. Investors are advised to be cautious and consider the risks of investing in small market capitalization firms, as the abnormal return received is not necessarily more significant than that of large capitalization firms. Therefore, investors should pay less attention to company size and timing when making investment decisions. Investments can be made in other months and in both large or small firms; the most important thing is to continue doing fundamental and technical analysis.

LIMITATION

Researchers suggest that future research, in addition to the January effect and Size Effect anomalies, can examine other market anomalies, such as the Day of the Week Effect and End of Month Effect. Then, the company's stock sector studied cannot be limited to banking companies but can study other sector companies such as industry, infrastructure, health, and LQ45 stocks. Then, this Size Effect study is limited to January only, so future research can examine more periods in other months or the whole year to get more accurate and precise research results. Researchers suggest that for further research, apart from the January effect and Size Effect anomalies, they can examine other market anomalies such as the Day of the Week Effect and the End of Month Effect. Then, the stock sector of the company being researched can also not be limited to banking companies but can examine companies in other sectors such as industry, infrastructure, health, or LQ45 shares. Then, this Size Effect research is limited to January only so that future researchers can research more periods in other months or the whole year to get more accurate and precise research results.

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