

ANALYSIS OF JANUARY EFFECT ON BIG STOCK COMPANIES AND SMALL STOCK COMPANIES AT INDONESIA STOCK EXCHANGE

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Abstract

January Effect is one of market anomaly where the stock returns in January are higher than other months. Some of causes the January Effect are the actions of investor who carry out tax-loss selling and windows dressing. In addition, investors have different views to choose stocks, based on market capitalization dan risk. This study is purposed to find the January Effect in the Indonesia Stock Exchange and January Effect on small company stock is stronger than large company stock. The data is normally distributed using the One-Sample Kolmogorov-Smirnov test. The test using the OLS method with dummy variable at five percent significance level. By using a sample of 30 large company stocks and 30 small company stocks based on market capitalization during period 2013-2017, the result of this study found a January Effect in the Indonesia Stock Exchange. But the January Effect doesn't occur on small company stock, except on large company stock during that periode.

Keywords: Market Anomaly, January Effect, Small Stock.

INTRODUCTION

The purpose of investors to invest in the capital market is to obtain expected return in the future with funds or other resources used. One of the important factors to invest is information which is obtained by investors. This information can be used by investors to reduce risk when they invest. The return is in line with the risks. The greater risk is faced by investors, the investors will get more expected return.

Efficiency Market Hypothesis was first introduced by Fama in 1970. The efficient markets classified into three parts; weak form, semi strong form, and strong form [1]. In an efficient market, the information available in the capital market reflects real market prices. This information causes the market to react. The sooner the information arrives, the faster the market will react.

At present, the efficiency market hypothesis which is introduced by Fama in 1970 is not entirely perfect. Some investors can't get fast, complete, and accurate information so that stock prices in the market no longer reflect the information circulating. One of the conditions for an efficient market is rationality of investor behavior. However, not all investors behave rationally. This causes a phenomenon in the capital market, called the market anomaly.

January Effect is a market anomaly where the return in January are higher than other trading months. Investors can use the January Effect anomaly to get abnormal returns. One of the causes of the January Effect is that investors and investment managers are intend to sell stocks that are projected to experience losses to secure their capital, and to avoid taxes that will be paid by investors and investment managers. Then, investors

and investment managers buy back stocks that are projected to strengthen in the beginning of the month until mid-January.

Investors and other market participants have different views on the company based on the value of market capitalization and risk. Investors who choose to avoid or dislike risk will choose a company with large capitalized shares because the company have a good performance and fundamentals that can be used as an excuse to invest. Although the company's growth potential is low, large companies are relatively stable and have high stock liquidity. This is because the growth of large companies has reached maturity. The higher the liquidity of the stock, the more easily it will be traded. But stock prices with market capitalization tend to be high.

Investors who prefer risk will choose small-cap stocks. The share price of companies with small capitalization is relatively cheaper so investors and other market participants do not experience obstacles to investing with limited capital. Although investors who invest in small capitalized stocks could get high returns compared to large-cap stocks, small-cap stocks are more risky than large-cap stocks. This is due to higher stock volatility than large stocks. If a stock has high volatility, the stock will be difficult to predict. Therefore, investors could speculate on small stocks will be greater than large stocks.

1. Capital Market

According to [2], the capital market is "the activity concerned with public offerings and securities trading, public companies relating to the securities issued, as well as institutions and professions related to securities". The capital market serves to bridge between those who have excess funds (investors) and those who need funds in the form of securities. There are three transactions in the stock market; the secondary market, the primary market, and the IPO (Initial Public Offering) market [3]

2. Efficient Market

The efficient market concept was introduced by Fama in 1970. The concept of efficient markets became one of the theories used to invest. In general, the concept of efficient markets is defined as market conditions where the price of securities in the market has reflected relevant information. The latest information on an efficient market will result in securities prices adjusting so quickly [4]. If the market is efficiently applied to the capital market, investors will get information quickly and easily, at a relatively low cost. The assumptions used in the efficient market concept are that investors have rational thinking about information that they consider relevant and in accordance with their expectations. If the information is considered enough, investors will react to the market together.

3. Behavioral Finance

Behavioral finance is needed in order to help explain the irregularities that occur in irrational investment decisions. In addition, behavioral finance also studies market anomalies that occur (such as the January Effect), speculative bubble markets, and market crises [5]. The definition of behavioral finance consists of two important aspects, called micro behavioral finance and macro behavioral finance [6]. Micro behavioral finance analyzes the behavior of investors in making investment decisions. Macro behavioral finance analyzes about anomalies that occur in efficient markets which can be explained by a model of investor behavior. Behavioral finance has two building blocks, called cognitive psychology and arbitrage assumptions [7]. Cognitive refers to how people think. Many studies document that people make mistakes how they think. One of them, people are too confident (overconfident). Limits to arbitrage refer to predictions of how strong arbitrage will be effective.

4. Market Anomaly

The presence of an efficient market concept raises debate between those who support and those who reject the concept. Those who do not support, they assume that in this world there is no efficient market, so there is a phenomenon of irregularities. The movement of stock price are not only determined by the information available in

the market, but also influenced by several other variables [4]. One example of this variable is the psychology of the investor. This phenomenon is called market anomaly. Market anomalies are formed because the market is not efficient. The more market anomalies that occur in a capital market, it indicates that the market is no longer efficient. Market anomalies create imperfections in the efficient market concept where stock prices reflect relevant information.

The factors that cause market anomalies are structural factors and behavioral factors [4]. Structural factors involve unfair competition in companies that influence information. For example, lack of information transparency, barriers to accessing information, and so on. Behavioral factors (behavioral) are more related to human behavior in understanding and responding to information. Some investors feel that the information is enough to make an investment decision, but some other investors still do not have enough information to collect so that it affects the investment decisions made.

5. January Effect

The January Effect is one of the market anomalies that occur in the capital market where the January return is higher than other trading months. One of the causes of the January Effect is tax-loss selling. When approaching the end of the year, investors

sell their securities that suffer losses or perform poorly. Investors have a benefit from the loss of capital loss to income on federal tax revenues [8]. In addition, Windows dressing is also the reason investors make a strategy by selling shares at the end of the year so that the portfolio. This strategy is often used also by investment managers and other companies before meeting with their shareholders or clients

According [9] found a difference in the average return between trading months, and the largest return occurred in January on the NYSE exchange from 1901 to 1974. There is a January Effect through the period of observation on the money market in India [10]. According [11] found the January Effect phenomenon on the KSE 100 Index in the Karachi Capital Market using the OLS, GARCH, EGARCH, and TGARCH regression models. The January Effect was strong in the NYSE market using CRSP data from 1926 to 1993 [12]. But other studies showed different results. There is no January Effect or April Effect on large-cap stocks and small-cap stocks in the New Zealand Capital Market [13].

In Indonesia, it was found an increase in small capitalized shares on the performance of SMB (Small Minus Big) portfolios using the Fama-French model in the Indonesian Capital Market period 2003 to 2006 [14]. The January Effect was found with a cash balances approach on stock return on the

NYSE [15]. However, there are no indications that the shares of small companies had better performance than the shares of large companies in the Indonesian Capital Market from the period of 2010 to 2016 [16].

Therefore, the hypothesis proposed in this study is:

H1: There is a January Effect on the Indonesia Stock Exchange

H2: January Effect is stronger than smaller capitalized stocks than large capitalized stocks.

RESEARCH METHOD

This research is a quantitative research where the data used is secondary data. The data used in this study comes from the stock prices of companies listed on the Indonesia Stock Exchange (IDX) for the 2013-2017 period. Sampling in this study uses purposive sampling. Sample performance criteria include:

- a. The company is listed on the Indonesia Stock Exchange during the period 2013-2017.
- b. The company did not have a experience delisting during the study period.
- c. During the period, the company never experienced a suspend.
- d. The company's shares are classified as active shares with a minimum of

178 days of trading days (75% of the total trading hours of the year).

The company's stock data to be sampled has been formed, researchers rank the company's market capitalization from the largest to the smallest based on idx statistics in 2017. Furthermore, researchers took 30 of the largest and smallest market capitalized shares.

The variable used in the study is the company's monthly stock return variable. The stock price used to calculate stock returns is the monthly closing price of shares. The formula for finding the company's stock return can be done as follows:

$$r_t = (P_t / P_{t-1}) - 1 \dots\dots(1)$$

Where:

- r_t : monthly stock return on period t
- P_t : closing stock price on period t
- P_{t-1} : closing stock price on period t-1

The normality test in this study uses the One-Sample Kolmogorov-Smirnov test. The normality test is done by comparing the specified significance value of 5 percent or 0.05. If the probability value obtained is more than 0,05, the data is normally distributed. Regression model to test the first hypothesis is done by dummy variable regression test. Here is the dummy variable regression model:

$$r_{it} = \alpha_i + \beta_i DJan_{it} + \epsilon_{it} \dots\dots\dots(2)$$

Where:

- r_{it} : company's stock return on period t
- α_i, β_i : coefficient

$DJan_{it}$: a dummy variable where the value is 1 for January and 0 for another month

Hypothesis testing results will be accepted, if the probability value is less than the level of significance (0,05). However, the hypothesis is rejected, if the probability value is more than the level of significance (0,05).

The second hypothesis, the method used is almost the same as testing the first hypothesis, but this test will be done twice. The testing is carried out separately between samples of large capitalized stocks, and small capitalized stocks. The regression model uses formula number 2 with the same test results criteria.

RESEARCH RESULT AND STUDY

Based on descriptive statistics in table 1, the highest average monthly stock return was in February at 0,037. The lowest average stock return was in June at -0,020.

Table 1. Descriptive Statistics of All Stocks for the period 2013-2017

Month	Mean	Max	Min	Std.dev
January	0,025	0,700	-0,500	0,108
February	0,037	1,000	-0,410	0,111
March	0,033	1,000	-0,500	0,130
April	0,002	1,413	-0,587	0,148
May	0,020	1,409	-0,298	0,144
June	-0,020	0,890	-0,338	0,103
July	0,008	0,733	-0,380	0,101
August	-0,005	1,309	-0,312	0,148
September	-0,009	0,423	-0,257	0,088
October	0,018	0,435	-0,500	0,095
November	-0,016	0,474	-0,420	0,103
December	0,008	1,000	-0,256	0,102

Based on descriptive statistics in table 2 shows the highest average monthly stock

return was in February at 0,051. The lowest average stock returns are in August at -0,023.

Table 2. Descriptive Statistics of Large-cap Stocks for period 2013-2017

Month	Mean	Max	Min	Std.dev
January	0,035	0,333	-0,174	0,088
February	0,051	0,318	-0,108	0,080
March	0,035	0,655	-0,166	0,095
April	0,003	1,413	-0,225	0,140
May	0,017	0,932	-0,244	0,103
June	-0,006	0,890	-0,267	0,105
July	0,016	0,733	-0,224	0,107
August	-0,023	0,329	-0,312	0,098
September	-0,016	0,208	-0,257	0,073
October	0,039	0,315	-0,186	0,091
November	-0,018	0,266	-0,242	0,084
December	0,037	0,407	-0,179	0,078

Based on descriptive statistics in table 3, the highest average monthly stock return was in March at 0,032. The lowest average stock return was in June at -0,034.

Table 3. Descriptive Statistics of Small-cap Stocks for period 2013-2017

Month	Mean	Max	Min	Std.dev
January	0,015	0,700	-0,500	0,124
February	0,023	1,000	-0,410	0,134
March	0,032	1,000	-0,500	0,157
April	0,000	0,481	-0,587	0,130
May	0,023	1,409	-0,298	0,177
June	-0,034	0,387	-0,338	0,100
July	-0,001	0,338	-0,380	0,096
August	0,012	1,309	-0,311	0,183
September	-0,001	0,528	-0,226	0,109
October	-0,002	0,423	-0,226	0,100
November	-0,013	0,474	-0,420	0,119
December	-0,021	1,000	-0,256	0,115

Based on tables 4, 5 and 6, the test statistic values for all shares are above 0,05. Therefore, the regression model used in this study is normally distributed so that it can be tested in the first hypothesis and the second hypothesis.

Table 4. Normality Test Results for All Stocks period 2013-2017

	Test Statistic
January_February	0,130
January_March	0,133
January_April	0,133
January_May	0,162
January_June	0,118
January_July	0,096
January_August	0,120
January_September	0,104
January_October	0,101
January_November	0,127
January_December	0,105

Table 5. Normality Test Results for Large-cap Stocks period 2013-2017

	Test Statistic
January_February	0,092
January_March	0,104
January_April	0,143
January_May	0,115
January_June	0,110
January_July	0,092
January_August	0,068
January_September	0,069
January_October	0,090
January_November	0,070
January_December	0,081

Table 6. Normality Test Results for Small-cap Stocks period 2013-2017

	Test Statistic
January_February	0,190
January_March	0,161
January_April	0,145
January_May	0,204
January_June	0,140
January_July	0,137
January_August	0,160
January_September	0,141
January_October	0,128
January_November	0,180
January_December	0,159

Table 7. Results of Regression Models for All Stocks period 2013-2017

	Koefisien	Std. Error	Probability
Djan	0,019	0,007	0,009
C	0,007	0,002	0,0008
Variabel Dependen: Return Saham All Sampel: 3600 R-squared: 0,002 Adjusted R-squared: 0,002			

Based on the results of regression testing in table 7 shows that the first hypothesis is accepted because the DJan probability of 0,009 is smaller than the 5 percent significance level. Then, there is a January Effect on the Indonesia Stock Exchange.

One of the causes of the January Effect is to avoid taxes paid. Investor will do sell action which results in a decrease in stock prices because investors want to realize tax losses during December [17]. In addition, investors sell for the purpose of making their portfolios at the end of the year better, the top is often referred to as windows dressing. Especially investment managers and companies do windows dressing so that their portfolios get better and can be given to other clients, so they get a good impression of their portfolio. Then, investors and other market participants buy back shares which causes the stock price to rise.

Based on the results of regression testing in table 8, shows that the January Effect occurs in large capitalized stocks. However, based on the results of regression tests in table 9, shows that there is no January Effect on small capitalized stocks. This caused the

second hypothesis to be rejected. The occurrence of January Effect in large-cap stocks can be because investors in Indonesia feel safer to invest in large-cap stocks compared to small-capitalized stocks. Although the stock price has high capitalization, the stock has a smaller risk and high liquidity compared to small capitalized stocks. The higher the liquidity of the company's shares, the easier the shares will be traded.

Table 8. Results of Regression Models for Large-cap Stocks period 2013-2017

	Koefisien	Std. Error	Probability
Djan	0,023	0,008	0,007
C	0,012	4,924	0,000
Variabel Dependen: Big_cap Sampel: 1800 R-squared: 0,002 Adjusted R-squared: 0,002			

Table 9. Results of Regression Models for Small-cap Stocks period 2013-2017

	Koefisien	Std. Error	Probability
Djan	0,014	0,011	0,224
C	0,002	0,003	0,609
Variabel Dependen: Small_cap Sampel: 1800 R-squared: 0,0008 Adjusted R-squared: 0,0003			

In addition, information which is received by investors, can influence decision making. Investors in Indonesia are more aware of information in the capital market. Information attached to small capitalized stocks contains uncertainty at the close of the fiscal year [18]. The uncertainty of the information causes the risk to invest in smaller small-cap stocks. Conversely, large

capitalized stocks have information that is easier to obtain than small capitalized stocks. Some investors invest in companies that are already known to them. Investors choose stocks not only based on technical, but also fundamentals of the company. This fundamental information can be obtained from the financial statements issued by the company every period.

In addition, the capital market in Indonesia is a growing market, or emerging market. The market in Indonesia is categorized as a frontier market where the market characteristics are almost the same as a developing market [16]. This market condition occurs when a country has a large level of potential economic growth. Investors can also take advantage of developing market conditions. Because of the high growth rate, the expected return for investors who invest in the market is also high. But the growth potential is followed by a high investment risk due to several factors. One of these factors is whether the market is efficient or not. There is an indication that the Indonesian capital market is an efficient market for weak forms [19]. The efficient market in the weak form will be an opportunity for investors to get more profits.

CLOSING

Conclusion

Based on the findings of this study, there are two conclusions. First, there is the

January Effect at Indonesia Stock Exchange. The first hypothesis is accepted. Second, if we look at the size of the company, there is no January Effect on small-cap stocks on the Indonesia Stock Exchange but the large-cap stocks. The second hypothesis is rejected.

Suggestion

There are limitations of this study. This research was only conducted for five periods, namely the period of 2013 until 2017. The samples selected were only categorized into two types, namely large capitalized stocks and small capitalized shares. This study only uses a dummy variable regression test method. This study still can't project the occurrence of the January Effect in the future. Therefore, further research can extend the observation period so that it can be seen clearly the January Effect phenomenon on the Indonesia Stock Exchange. In addition, researchers can categorize the company's shares used in research based on sectors such as the financial sector, agriculture, mining, basic and chemical industries, various industries, consumer goods industries, property, real estate and building construction, infrastructure, utilities and transportation and trade, services and investment. Other studies are expected to use other test methods to complement the results of the January Effect phenomenon on market anomalies.

Investors need to reconsider their investment strategy because of the discovery of the January Effect phenomenon on the Indonesia Stock Exchange. The strategy that can be used is the market timing strategy. The strategy gives a decision when investors will enter and exit the stock exchange. Because there is no guarantee that the January Effect will occur in the future, investors need to pay attention to past and fundamental trading patterns of the company's shares.

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