JANUARY EFFECT ANALYSIS, AND STOCK RISK ON STOCK RETURN IN COAL COMPANIES LISTED ON THE INDONESIA STOCK EXCHANGE 2017 - 2022

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Abstract

The purpose of this research study is to test whether coal stock prices have an influence relationship with stock return volatility during the Covid-19 pandemic. The sampling technique in this research use the purposive sampling technique, where the object of research used is sharing, which are shares of coal companies. The research data processing was carried out using Excel. Results showed that in the period of the research conducted by the researcher, it was found that the January Effect occurred in 2017, 2018, 2019 and 2022. The benefit of this research is to find out whether there is a January effect in the research period, which begins from 2017 – to 2022, so that investors are aware of the information and know the right time when they want to buy coal shares.

Keywords: Abnormal return; Coal Stock; January Effect; Stock Return.

Introduction

The Ministry of energy and Mineral resources has adopted a policy to ban coal exports from 1 to 31 January 2022 for license holders of mining business. This policy is expected to have an impact on the increase in coal prices, and this is also accompanied by a reasonably high price in early 2022 because there are still many requests for coal transportation prices. From previous research from an investor perspective, this phenomenon is quite interesting because coal stock prices will rise. The month of January does have its characteristics in the capital market.

A capital market is a place that brings together those who have excess funds are known as investors. Investors who invest expect optimal profits from the funds that will be invested. Therefore, investors can take advantage of the information circulating, and this is done so that optimal profits will be obtained. In the capital market, there are standard returns and abnormal returns. In abnormal returns, there is something called the January Effect, which is one of the inefficient markets, including seasonal anomalies, where the market is not always based on theory and calculations. As previously mentioned, the January effect is one of the abnormal returns whose on human psychological characteristics (Handayani & Suartana, 2015; Silva, 2010; Vo et al., 2020), which is a seasonal anomaly observed when the sign of January stock returns is predicted in returns in the next 11 month (Cooper et al., 2006).

This is illustrated in a previous study where the January effect on the US stock market with investors asset allocation results driven by investor sentiment in January (Chen & Craig, 2018). The January effect is one of the in efficient markets, including the seasonal anomaly, where the inefficient market results in stock returns are not always based on theories and calculations that have been commonly done before. The January effect is one of the abnormal returns whose returns can be based on the nature of the return. Human psychology (Handayani & Suartana, 2015; Silva, 2010; Vo et al., 2020).

LITERATURE REVIEW

The studies conducted in this study have a close relationship with the season in the stock market, including research conducted by Fama (Fama, 1970) which defines that an efficient market is defined by how efficiency, there are three forms

of market efficiency and there is an efficient market in a weak from which means that all information reflects pas information, investors cannot use historical data to predict future stock prices (Fama, 1970), the market of semi strong form is the current information which the public will the use regarding the company's prospects which should be reflected in the stock price.

The information in question includes pas prices and the company's fundamentals, where is the quality of management. Financial statements, announcements of dividend payments, and so on (Malkiel, 1989), while the strong form market has a definition that the price formed in the market is consistent with the assumption that the use of information. This is usually done by buying and selling securities before they are marketed out (published) so that is means that there is information coming from insiders (Fama, 1970; Gumanti & Utami, 2002).

It was especially regarding the January effect (Cooper et al., 2006). Cooper found that there was a positive return that occurred in January. This illustrates that stock returns that will occur in the following month are likely to have more profits than in January. If it is evaluated from the portfolio that has been created by the business cycle and presidential sentiment, the occurrence of the effect in January may not find the reason (Chen & Craig, 2018).

There is substantial research on the impact of investor sentiment on asset prices in investor sentiment. In this case using various measures as proxies for investor sentiment, including research on investor sentiment using the stock market as a proxy for investor sentiment (Bouteska, 2020; Gao & Süss, 2015; Kumar & Lee, 2006; Stambaugh et al., 2012).

If more specifically, in terms of investor sentiment used in this study, baker and wugler conducted research by developing an investor sentiment index when the found predictive stock returns that occurred in the future (Gao & Süss, 2015).

Another recent study, which wanted to find out whether the stock market as a whole could be mispriced, in this case, examined the possibility of stock returns that cannot be justified by fundamental volatility where there are other ways to find out the average return of shares as a result, as well as the predictability of returns

using the dividend ratio fot the stock market value (Baker & Wurgler, 2006, 2007)

Took of advances in behavioural finance, this theory aims to obtain sharper results regarding investor sentiment; several tests were conducted to determine sentiment result. When viewed specifically, many models of securities market behavior are inspired by Delong, Sheilefer, Summers and Waldmann (Shleifer & Summers, 1990).

Some of the models from these studies are changes in sentiment that occur on the part of irrational traders and arbitrage limits from rational ones. If we look further at investor sentiment only as optimism or pessimism about stocks in general, this is illustrated by previous research, which found that arbitrage tends to have a high risk (D'Avolio, 2002). From the theoretical definitions and previous research that has been described.

RESEARCH METHOD

This research is included in quantitative, where later the portfolio results obtained by each will be explained. The population in this study is stock coal companies; the shares have taken are the shares of new coal companies listed on the Indonesia Stock Exchange from January 2017 to January 2022. This period was taken because, in coal companies, there are several exciting phenomena to study.

It is based on previous research, which says the stock market can overreact to existing phenomena. It has become a reference for researches to empirically examine January Effect because not all January in the period conducted by researchers have satisfactory stock returns for investors, sometimes stock returns in January can be positive, but this is not enough to satisfy investors because Africa has asymmetric advantages, but in America, this is less stand out for comparison (Page & Way, 1992). Meanwhile, other studies regarding the January Effect have research results that not all stock returns on the January Effect have a positive return.

The study found that the variables in the measured weather were carried out in the research period January 2 to December 31, 2015, had research results those deviations from the

weather can cause the January effect to be negative.

This is done statistically on stock returns in south Africa, which shows a significant negative effect. From the theoretical definitions and previous research described, the researcher regarding new coal companies, whether the stock return of coal during the research period has a positive return or vice versa. The stock returns consist of several types.

- Actual returns.

Description:

$Rit = (Pit – Pit-1)/Pit-1$

Rit: Actual return of security i at time t.

Pit: The price of security i at time t

Pit-1: The price of security I at time t-1

- Expected returns. Previous studies have widely researched the return expected by investors. For example, in research conducted by W. Lee (Lee et al., 2002), trading noise can affect expected return, which can also be influenced by market risk. The return that investors expect to occur in the future, with the formula:

- Market returns. Stock returns whose calculation is based on the condition of the These coal mining companies are:

capital market combined stock index (JCI) with the formula:

$Rmt = (JCI – JCI-1)/JCIt-1$

Description:

Rmt ; Market return.

JCI : JCI value at time t

JCI-1 : JCI value at t-1

- Abnormal return.

Abnormal returns is the difference between the level of profit that occurs with the expected level of profit, the calculation of abnormal returns is carried out by the formula:

$ARit = Rit – E(Rit)$

Description:

ARit : Abnormal return

Rit : Actual return of security t at time t

E(Rit) : Expected return of security i at time t.

Hypothesis

In research conducted by many previous studies and based on the phenomena and definitions described, the researcher wants to find out whether coal-stock returns affect stock return volatility. The research is based on coal stocks for the period December 2019 to January 2022.

| INDY | CNKO | BYAN | ITMG | BUMI | DSSA | ITMA | GEMS | ADRO | HRUM | MBAP |
| BSSR | SMMT | MYOH | KKGI | TOBA | AIMS | DOID | DEWA | PTBA | ARII | UNTR |

The results contained in previous studies have several that describe the effect of stock returns in January being higher when compared to other months. When entering January, the psychology of people is the January effect; the January effect was proven in previous research conducted by Mehdian (Mehdian & Perry, 2002).

Which described that the January effect was positive. Positive results in the research conducted by Beyer, whose research results illustrate that finding of evidence showing that there is a strategy that targets small stocks that are not favoured, allows investors to predict that

January stock returns will be high (Beyer et al., 2013).

The January effect occurs in many studies that describe the January effect provides predictive power that the stock returns will be optimal for investors over the next 11 month (Cooper et al., 2006). Based on the studies above, a hypothesis is made:

H1: There was a January effect in January stocks on the Indonesia stock Exchange during the January 2017 – January 2022 research period.

Abnormal return studies are defined as the intercept (which usually represented by alpha) from the regression of the factor I, which the usually done using stocks in the last month. This case used the traditional CAPM model Fama and French, called the three-factor model (Drew & Veeraraghavan, 2003).

Previous research on abnormal returns was obtained in research conducted by Joshua (Hall et al., 2017). Abnormal returns were not period of research, namely in the second year, this is indicated by the return which is not expected at the congress in the second year, in another previous study conducted by Docherty and Melia found that (Docherty et al., 2018; Melia et al., 2019) it was found that to determine the return required conditions on a stock, the price of which increases Feller's diffusion and then use it to show how the correct probability is to know stock returns, before people, in this case, the researcher finds a systematic bias that causes abnormal returns to be generated.

H2: There is a difference in abnormal return in January with months other than January on coal stocks on the Indonesia Stock Exchange during 2021.

Stock Risk is divided into two there is systematic risk and unsystematic risk. A systematic risk is a form of risk that cannot be eliminated by diversifying; this is because fluctuations in this risk can affect the market as a whole. Meanwhile, unsystematic risk can be interpreted as a risk that can be eliminated by diversifying because this risk only exists in one company which varies from one stock to one particular company or industry. The fluctuations that occur in this risk differ from one stock to another, this causes each stock to have different sensitivity level.

Previous research on stock risk stated that stock investment risk is reflected in the variability of stock earnings, both individual stock earnings and stock earnings in the aggregate. The total stock investment risk size can be measured by finding the standard deviation of the stocks earning.

H3: there is difference in risk in January with months other than January on Indonesian Stock Exchange coal stocks during the January 2017 – January 2022 research period.
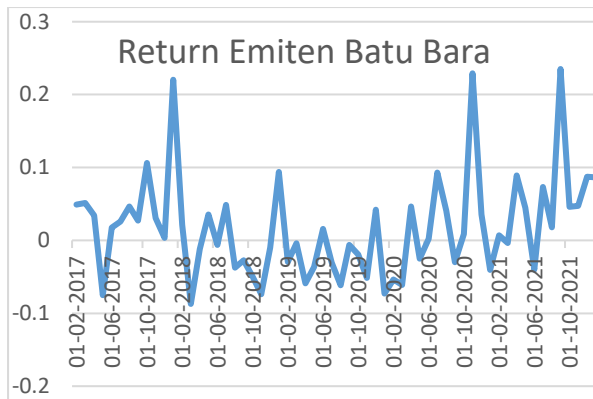
An expected return is the return that investors expect to occur in the future, but its nature is uncertain. Expected returns in previous research can be described by also obtaining the risk to obtain optimal results for investors.

H4: There is a difference in expected stock returns in January with months other that January on Indonesian Stock Exchange coal stocks during the January 2017 – January 2022 research period. Research results and discussion

January Effect.

In the research result that have been obtained, it can be seen in the figure that the effect in January is seen in most of the years of the research period, namely 2017, 2018, 2019, and 2022. January effect is not visible from 2020 and 2021 this can be caused because in 2019 and 2020, most countries this is illustrated in previous studies that the unprecedented coronavirus has shaken the economy in countries whose impact has occurred throughout the world, this is significant unforeseen events from the supply and demand side forcing the economy and reducing the prospects of the existing economic growth. This resulted in a downward spiral in all economic sectors of countries affected by the coronavirus, namely in the world the economy was hit by the coronavirus (P. K. Mishra & Mishra, 2020; Pabitra Kumar Mishra & Mishra, 2021). In other previous studies that examined whether there was a significant relationship between the pandemic covid-19 with market performance, it was found that stock returns in the UK were quite influenced by covid-19 (Sherif & Lusyana, 2017).

From the previous research that has been described, it can be seen that when the new corona pandemic began until the vaccine was not found, the economic situation, especially in the capital market, did not go well, and even tended to be destroyed which resulted in minus stock prices.

Abnormal return.

Abnormal return is the excess of the actual return on the standard return. In standard returns, returns are better known as expectations or, in other words, returns expected by investors. Thus, it can be illustrated that the abnormal return value is the difference between the actual return and the expected return. In the research results on abnormal returns, it appears that those with positive abnormal returns have the highest results in January 2018, November 2020, and September 2021. This illustrates that events that occur in Indonesia can cause abnormal returns to be positive and optimal, such as; in September 2021, it is estimated that most Indonesians have been vaccinated, so this will make investors more enthusiastic when conducting stock trading activities (Ang & Rabo, 2021).
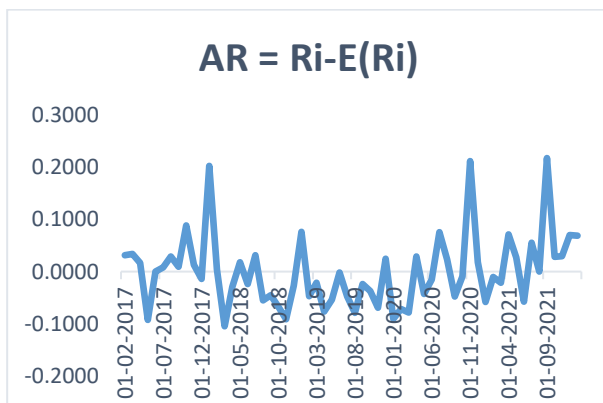
Based on the picture results of the second hypothesis. Regarding the difference in abnormal returns between January in 2017 and January in the following years, it can be concluded that the movement of abnormal returns in this study in 2017, 2018, 2019 anormal returns had a positive value, while in January 2020, and January 2021 abnormal returns have negative value, this illustrates that the phenomena that occur can also affect stock returns, but also abnormal returns are affected.

Stock Risk.

Stock risk analysis when investing is two things that are very closely related. When carring out investment activities, considering when investing is something that investors must do. When investors make the decision to invest, it cannot be separated from the benefits and risks that exist. Risk and return are closely related because in finance, it is known that if investors want a significant return, then investors must be prepared with a considerable risk behind it, and vice versa, if investors want a return that is not large, then the risk is also not considerable (Ananta & Desmawan, 2017). In research conducted by researchers, it was found that HRUM's shares have the highest risk compared to other coal stocks. This can illustrate that HRUM issuers are likely to have optimal returns for their investors.
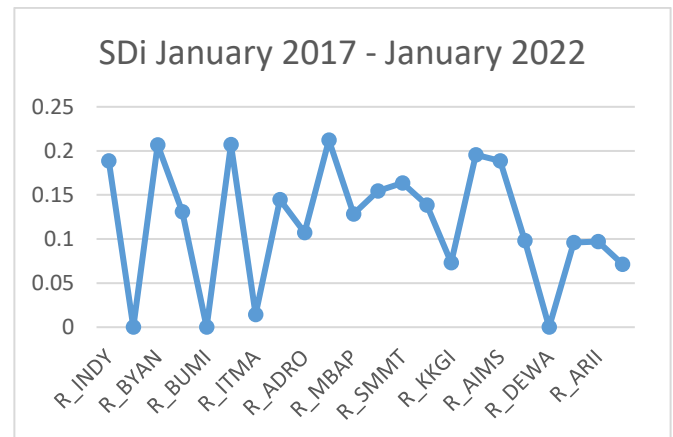
The difference in risk between one coal company's stock another coal company is clearly seen in the curve picture above, and this indicates that some risk factors from one company to another company which has a risk, an optimal price accompanies this in the market compared to the shares of other coal companies.

The risk factors at Harum Energy include the risk of coal prices that fluctuate significantly, the risk of a highly competitive coal market, the risk of mining permits owned by subsidiaries related to data being limited by the government, the risk of losing key employees, the risk of natural disasters in the future.

Coal mining, the risk of losing a trusted employee in the company, as well as the risk of oversupply of coal. In addition to the risk from the psychological nature of investors that can affect the stock returns of energy companies, internal risks that occur also have the

opportunity to make fluctuations on stock price (Burnett, 2017; Wang et al., 2021; Yudanto & Santoso, 2003).

Expected Return.

Expected return can be defined as the return expected by investors to occur in the future. In the expected return, the calculation is done by means of an event study that can use a market-adjusted model. The market-adjusted model has meaning regarding how to perform calculations. And to estimate the return that will occur in security by using the market index return at the time.

$$E(Ri) = R \text{ January 2017 - January 2022}$$
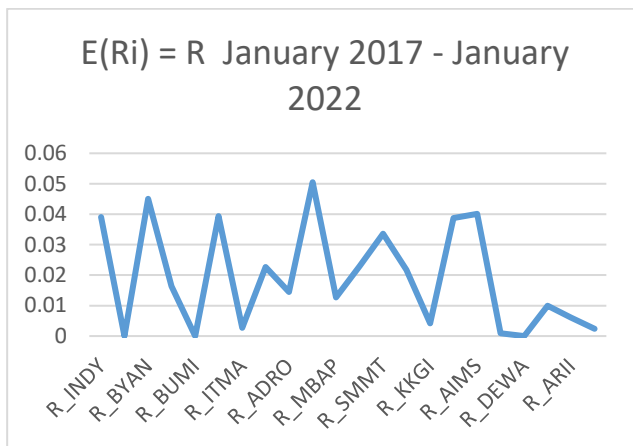
Conclusion.

The rising coal-stock price at the beginning of 2022 could be due to the previous government's policy of preventing coal from being shipped overseas, so that, in the future this phenomenon will make the stock price higher than before while the final results are based on research and based on the explanations described above, it can be concluded that in the January effect test, that:

-   January effect.

In the research result that have been obtained, it can be seen in the figure that the effect January is seen most of the years of the research period, namely 2017, 2018, 2019, and 2022.

-   Abnormal returns.

-        It appears that abnormal returns are an illustration of the difference between the actual return and the expected return. Which have a positive abnormal return value, are with the

highest result in January 2018, November 2020, and September 2021.

This illustrates that events that occur in Indonesia can cause the abnormal return to be positive and optimal, as in September 2021, which is estimated that most Indonesians have been vaccinated, so this will make investors more enthusiastic when conducting stock trading activities (Ang & Rabo, 2021; Simamora, 2021; Thomas & Grady, 2020).

-   Risk.

In terms of risk, research shows that shares of HRUM have the highest risk compared to other coal stocks. This is vital information for investors so that it becomes the basis for buying shares from Harum Energy.

-   Expected return.

It can be described that the grafgnant energy company, in addition to having a high risk, but in terms of return expectations have a high level, so it can be described that the Harum Energy company is a stock that is quite optimal for trading.

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