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Stock Price Volatility Out of LQ45 February-July 2022 Period

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A B S T R A C T

Volatility is the fluctuation of returns in a certain period, if the fluctuations in returns have a large variation, then the possibility of a risk that will occur is greater, and vice versa if the fluctuation of risk is smaller, the probability that the risk that will occur will be smaller. Analysis of stock price volatility from stock indexes is needed to facilitate investors in making investment decisions. This study aims to provide an overview of the volatility of securities owned by investors towards shares owned in the LQ45 stock index group which have the potential to receive expected returnsor have risk potential. Also knowing how much value can be generated from profits and how much risk will be borne by investors. This study uses descriptive comparative and quantitative research methods using secondary data, and the model used to assess stock volatility is the Baskin method (1989). Based on the research results, there is a difference in the volatility of the stock prices of companies that enter and leave LQ45 for the period 1 February – 31 July 2022. The scope of the research is only companies that enter and leave LQ45 for the period 1 February to 31 July 2022, so the number of samples used is limited and the research results cannot be generalized, and. The model used to assess stock volatility is the Baskin method (1989). Novelty is the uniqueness of the research is volatility of stocks leaving LQ 45 duringFebruary-July 2022

1. INTRODUCTION

The capital market is a meeting place for investors who have excess funds to invest with issuers (companies) who need funds to develop the company (Tandelilin, 2010). The place where securities are traded in Indonesia is called the Indonesia Stock Exchange (IDX). Investors as one of the capital market players expect returns on the investments they make, because investors have the courage to take risks on these investments. On the IDX various types of securities are traded from various sectors and various types of stock indexes. The stock index that has been around for a long time after the JCI and the sector index is the LQ45 Index. Recently, on 25 January 2022, the IDX announced that five companies had left and five had just entered from LQ45 for the period February – July 2022. The five companies that left the LQ45 group are: a). PT. Ace Hardware Indonesia Tbk (ACES), b). PT. AKR Corporindo Tbk (AKRA), c). PT. Bumi Serpong Damai Tbk (BSDE), d). PT. Jasa Marga Tbk (JSMR), dan e). PT. Pakuwon Jati Tbk (PAWON) (Wahyu Tri Rahmawati, 2022). While the five companies that join the LQ45 group are: a) PT. Sumber Alfaria Trijaya Tbk (AMRT), b) PT. BFI Finance Indonesia Tbk (BFIN), c). PT. Elang Mahkota Teknologi Tbk (EMTK), d). PT. Harum Energy Tbk (HRUM), e). PT. Waskita Karya Tbk (WSKT), (Wahyu Tri Rahmawati, 2022). For the details, it seen at Table 1.

Table 1. Companies Joining dan Leaving LQ45 February – July 2022 Period

No.	Companies that Joining the LQ45 Group
1.	PT. Sumber Alfaria Trijaya Tbk (AMRT)
2.	PT. BFI Finance Indonesia Tbk (BFIN)
3.	PT. Elang Mahkota Teknologi Tbk (EMTK)
4.	PT. Harum Energy Tbk (HRUM)
5.	PT. Waskita Karya Tbk (WSKT)
	Companies that Left the LQ45 Group
1.	PT. Ace Hardware Indonesia Tbk (ACES)
2.	PT. AKR Corporindo Tbk (AKRA)
3.	PT. Bumi Serpong Damai Tbk (BSDE)
4.	PT. Jasa Marga Tbk (JSMR)
5.	PT. Pakuwon Jati Tbk (PAWON)

Source: IDX (2022)

With a company leaving the LQ45 group list for the February-July 2022 period, it does mean that the company's liquidity level has decreased, this will affect the desire of investors to invest. Investors will feel insecure about their funds if they keep the portfolio in hand, because for the next 6 months whether the portfolio will provide the expected profit according to investor predictions. To reduce the anxiety experienced by investors, one way that can be done is to analyze the volatility of the stock price (Bodie, Keane, and Marcus, 2011). Volatility is the fluctuation of returns in a certain period, if the fluctuations in returns have a

large variation, then the possibility of risks that will occur is greater, and vice versa if the fluctuations in risk are smaller, the probability that risks will occur will be smaller (Carolina, 2016). Thus, it can be seenwhether the portfolio owned by the investor has the potential to get the expected profit or the potential risk.

It is necessary to analyze the volatility of the prices of shares that have come out andthose that have just joined the LQ45 group for the period February – July 2022, because knowing the level of volatility in stock prices can predict the expected profit potential and risks that willbe borne by an investor (Carolina, 2016). So that it can help investors in making stock investment decisions, therefore it is necessary to do this research.

Theoretical Review

Signaling Theory

Signal theory states that companies will provide signals through actions and communications. Companies will adopt signals that reveal hidden attributes to stakeholders (Malewar, 2008). Meanwhile, Brigham and Houston (2009) revealed that the signaling theory isa theory that investors perceive changes in dividends as a signal of earnings management forecasts. Besley and Brigham (2008), Signals are company management actions that provide investors with evidence about how management views the company's prospects. Signal theory assumes that the information received by the parties is not the same.

This theory is related to information asymmetry, which indicates the existence of asymmetry information between company management and parties with an interest in the information. To do this, managers need to provide information to stakeholders by issuing financial reports. Signaling theory is based on asymmetry information between management information (well-informed) and shareholder information (well-informed). This theory is based on the idea that when investors or shareholders get good information about a company (such as adding value to the company), management will provide them with information (Ross, 2020). However, investors do not trust this information because managers are interested parties. In this way, high value companies will signal the company's financial policies, which are different from those of low value companies.

Signaling is a process in the form of deadweight costing designed to convince investors about the value of the company. A good signal is one that cannot be imitated by other companies and is of little value due to the cost factor.

Stick Price Volatility

Volatility is a statistical measure that determines how stock prices fluctuate at any given time (Carolina, 2016). This measurement is designed to see changes in stock price changes from one period to the next. In price volatility, prices move up and down from a certain time. The distance between the lowest price and the highest price at a certain time, and fluctuations in shareprices are related to the distance between the highest and lowest prices of a share on the capital market within a certain period (Budiman R, 2021). Greater stock price volatility indicates higher gains and losses in the short term. Stock prices with high volatility can change at any time andare difficult to predict. Stock price volatility is a systemic risk for investors.

Efficient Market Hypothesis (EMH)

The definition of the efficient market hypothesis is the assumption that stock prices perfectly describe information (Bodie et al. 2011). An efficient capital market is a market where the prices of all traded securities reflect all available information (Tandelilin, 2010). A more volatile stock price indicates higher short-term gains and losses. Very volatile stock prices can change at any time and are difficult to predict. Stock price volatility is a systemic risk for investors. This can explain that the greater the volatility, the greater the short-term profit or loss (Bodie et al., 2011). An important characteristic of market efficiency is the random walk of stockmarket prices. Based on Fama (1970) that the efficient market hypothesis is divided into three forms, namely: This past information is information that happened.

The weak form of market efficiency is related to the random walk theory, which states that past data is irrelevant to present values.

Forms of Market Efficiency Selling Strong, a market is said to be very efficient if the price of a security fully reflects all publicly available information, including information contained in the financial statements of major issuers.

Strong Market Efficiency, a market is said to be very efficient if the price of a security fully reflects all available information, including personal information.

Returns

Tandelilin (2001) considers the rate of return as a return on investment, either through interest or dividends. Investors invest in companies to earn profits. Keane et.al (1983) suggests that abnormal return is the portion of actual returns that exceeds normal returns. Normal return is the expected return (what investors expect). Thus, the abnormal return is the difference between the actual return that occurs and the expected return.

2. RESEARCH METHODS

The approach used in this research is descriptive comparative and quantitative research. Descriptive comparative research is a method that explains and compares one event and another, while the quantitative method is a statistical method (Sugiyono 2005:21). This research is used to determine the volatility of the prices of shares leaving and joining the LQ45 group for the period February-July 2022, and to find out the difference in the volatility levels of both.

The population used in this research is all companies that enter and leave the LQ45 group for the period February – July 2022, there are 10 companies. The technique used is the census method, because the number of samples is the same as the number of populations. (Henderson, 2016).

Generally, the variables used in this research model consist of:

1. Returns

   According to Hartono (2010: 207) the equation used is the following formula:

$$R_{it} = \frac{(P_{it} - P_{it-1})}{P_{it-1}} \quad \text{.....(1)}$$

   Description

   R_{it}= Return at the expected time

   P_{it} = Stock price at the beginning of the period
   P_{it-1} = Stock price at the ending of the period
   D_1 = Dividend

2. Stock Price Volatility

   Stock price volatility is the distance between fluctuations or ups and downs of stock prices that are influenced by information in the capital market. Volatility is a statistical measurement of stock price fluctuations over a certain period (Firmansyah in Irma, 2017). Stock price volatility is a concern for market players to determine the right investment strategy. In this study, stock price volatility was measured using the

$$Price\ Vol = \sqrt{\frac{\sum_{i=1}^{n}(H1 - L1)/\left[\frac{(H1 - L1)}{2}\right]\text{^}2}{n}} \quad \text{.....(2)}$$

   Baskin method (1989) in (Raudhatul and Musfiari, 2016), namely:

   Description:
   Price Vol = Stock price volatility
   H_1 = The highest price at i period
   L_1 = The lowest price at i period
   n = Number of days

This research uses a descriptive-comparative method with a quantitative approach. Comparative research is research that compares two or more symptoms (Silahi Ulber, 2005). Comparative research can be either descriptive comparative or correlational comparative. Descriptive comparative compares the same variable to different samples. Comparative analysis or comparison is a statistical procedure to test the differences between two groups of data (variables) or more (Hasan 2002:126-127).

3. RESULTS AND DISCUSSION

This study aims to analyze price volatility to be able to find out the returns and risks of securities that investors will buy (Bodie, et al, 2016), for companies that join and leave the LQ45group for the period 1 February- 31 July 2022. Total population is 10 companies the sampling technique used is a saturated sample, namely the entire population is used as a sample (Gajarati, 2019). Where the five companies that left and five companies that are joined the LQ45 group for the period 1 February- 31 July 2022. The type of data used in this research is secondary data taken from the *yahoofinance.com* website, and the IDX. The data used is the daily stock price and JCI at closing time.

Table 2. Companies Joining dan Leaving LQ45 February – July 2022 Period

Code	Companies that Leaving the LQ45 Group	Code	Companies that Joining the LQ45 Group
ACES	PT. Ace Hardware Indonesia Tbk	AMRT	PT. Sumber Alfaria Trijaya Tbk
AKRA	PT. AKR Corporindo Tbk	BFIN	PT. BFI Finance Indonesia Tbk
BSDE	PT. Bumi Serpong Damai Tbk	EMTK	PT. Elang Mahkota Teknologi Tbk
JSMR	PT. Jasa Marga Tbk	HRUM	PT. Harum Energy Tbk
PWON	PT. Pakuwon Jati Tbk	WSKT	PT. Waskita Karya Tbk

Source: IDX (2022)

Descriptive analysis consists of the maximum, minimum, average, and standard deviation values of stock price volatility for companies that enter and leave LQ45 for the period February 1to July 31, 2022. The results of the descriptive analysis can be seen in Table 3. Based on Table 3,it can be seen that the maximum value for companies leaving LQ45 is 0.2519, the minimumvalue is 0.2266, the mean value is 0.2419, and the standard deviation is 0.129. Whereas for companies that enter LQ45 the value of the results of the descriptive analysis is greater than that of companies that leave LQ45, with a maximum value of 0.3351, a minimum value of 0.2505, a mean value of 0.3033, and a standard deviation value of 0.0319.

Table 3. Descriptive Analysis Results

Information	Volatility value of leaving company's`	Volatility value of joining company's`
Maximum	0.2519	0.3351
Minimum	0.2266	0.2505
Mean	0.2419	0.3033
Standard deviation	0.0127	0.0319

Source: IDX and analysis result (2022)

The results of the volatility value assessment of companies that enter and leave LQ45 forthe period 1 February- 31 July 2022 using the Baskin method (1989) which can be seen in Table 4.

Table 4. Price Volatility of Companies Joining dan Leaving LQ45 February – July 2022 Period

Companies that Leaving the LQ45 Group			Companies that Joining the LQ45 Group		
Code	**Price Volatility**	**Percentage**	**Code**	**Price Volatility**	**Percentage**
ACES	0.2296	22.96	AMRT	0.2858	28.58
AKRA	0.2509	25.09	BFIN	0.3140	31.40
BSDE	0.2519	25.19	EMTK	0.3158	31.58
JSMR	0.2266	22.66	HRUM	0.3351	33.51
PWON	0.2505	25.05	WSKT	0.3012	30.12
Composite index	0.14407	14.41			

Source: IDX and analysis result (2022)

Table 4 describes the results of evaluating the value of stock volatility for companies leaving and joining LQ45, where the volatility value of incoming stock prices is greater than that of companies leaving LQ45 for the period 1 February-31 July 2022. The volatility values of companies leaving are as follows; ACES, AKRA, BSDE, JSMR, and PWON company volatility values are 0.2296, 0.2509, 0.2519, 0.2266, and 0.2505. But when compared with the JCI volatility value, the volatility value of the company that comes out is above the JCI volatility value. This means that the variance of the outgoing stock price is greater than the JCI variance.In other words, the return expected by investors is still good. However, when compared with the volatility values of companies entering LQ45, it is below or smaller than the volatility of companies entering AMRT, BFIN, EMTK, HRUM, and WSTK with volatility values; 0.2858, 0.3140, 0.3158, 0.3351 and 0.3012. With the highest volatility value HRUM company. The higher the volatility value will show the greater the profit expected by investors, and vice versa, the smaller the volatility value of a security, the smaller the level of profit that investors will get (Tandelilin, 2011). The level of expected profit is directly proportional to the level of risk that will be borne by investors. Where the higher the volatility value of a security, the risk that will beborne by investors will also be higher, and vice versa, if the volatility value is lower, then therisk that will be borne by investors will also be smaller (Bodie, et al, 2010).

4. CONCLUSION AND RECOMMENDATION

Based on data analysis, here are a several research conclusions can be made: The volatility value of companies that leave is smaller than companies that join LQ45 for the period 1 February to 31 July 2022. However, compared to the JCI volatility is greater.

The results of this study can be used by investors to determine the level of expected profitand the amount of risk that will be borne by investors in making investment decisions. From the results of the analysis, investors can choose securities that enter LQ45 as a consideration in investment decisions because the volatility value of stocks that join is greater than those that leave LQ45 February 1 to July 31, 2022.

Based on the conclusions, the limitations of the research can be made:

a. The scope of the research is only companies that join and leave LQ45 for the period 1 February to 31 July 2022, so the number of samples used is limited and the research results cannot be generalized. It is recommended for future researchers to expand the scope of research.

b. The model used to assess stock volatility is the Baskin method (1989), it is recommended for future researchers to use other methods such as the *Arch* and *EGarch* methods.

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