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Impact of Noise on Investment and Price Behavior

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Abstract: This study aims to determine the impact of the noise phenomenon on investment and price behavior. The research was conducted by means of a literature study, namely by reviewing the concepts and theories used based on the available literature, especially from published articles, journals and scientific studies. Based on the research results, noise has a significant influence on investment decision making for stock investors, which means that the higher the noise, the more frequent investment decisions will be made. The concept and theory which states that the possibility of noise is less for large companies than small companies is not proven valid and consistent.

Keywords: Investment, Information, Noise, Price

INTRODUCTION

Stock prices reflect information or the arrival of information, both past and current information, as well as information that is opinionated or rational opinion circulating in the market. All of this information can affect changes in stock prices (Sumiyana, 2007). In stock trading, prices can describe the existence of information. The shorter the time between events in the firm and the formation of new prices, the more efficient the market. If the spread of the arrival of information goes well then market participants can immediately form a new price. So that none of the market participants can take advantage of the analysis to get extra profits, which are greater than the profits earned by other market participants.

Information is divided into two, namely public information and private information (Huang et al., 2000). Investors use publicly available information to influence stock prices when information is provided to all investors. While private information is information that is only owned by a small number of investors. Stock price movements not only reflect information, but also noise (Sumiyana 2007). Noise also affects security prices through inaccurate perceptions or investor confidence in the true value of securities. Finally, these three factors affect the price of securities but are highly dependent on the period in which the shares are traded on the exchange. Noise is a rumor or a momentary issue that affects stock price fluctuations where the rumor or issue is not necessarily proven to be true. Noise is seen

with the inaccuracy of investors' perceptions or beliefs about the true value of securities. The difference in noise and information is indicated by the difference in the correlation value between the opening price and the following periods. Noise can cause the price of a security to deviate from its fundamental value.

In fact, each individual develops by having different psychological behaviors that cause us to take a certain action against an event. These behaviors also affect the way we use and interpret this information in making decisions. However, what often happens in the capital market is that there are symptoms that contradict this concept. This is based on the behavior of investors as individuals in general who take different attitudes or actions in responding to information, both in buying shares. On the other hand, various studies state that there are some deviations that occur that can affect stock prices. These deviations include the implications of the overreaction phenomenon, namely that market participants are not all rational and unemotional people. Because it is necessary to know that the process of delivering information cannot be separated from interference (Noise) or rumors. In the process of delivering information, noise or rumors that can occur are the information received by the receiver is not the same as the information issued by the source.

Optimal investment decisions can only be achieved if investors make the right decisions. The right decision is a decision that is in accordance with the effect of events on the value of the company. For this reason, the market should react positively to events that result in an increase in the value of the company or react negatively to events that result in a decrease in the value of the company. The value of information that is useful to investors is empirically investigated through the relationship between data to the public and changes in the price of a company's securities. If the relationship is significant, then the evidence indicates that the information is useful to the company's valuation. To be useful, the presentation of information must be able to help investors predict future returns on investment. It is hoped that based on this information, rational investors can make an optimal investment decision. Broadly speaking, noise is related to the condition of the company (microeconomics), macroeconomics and politics. This often results in an increase in stock trading transactions and moves stock prices. Based on the description of the background, the problem that can be raised is how the impact of the Noise phenomenon on investment and price behavior is.

The study was conducted to study the impact of noise on investments made by investors and the behavior of stock prices, to examine how information influences prices and firm size.

LITERATURE REVIEW

Arrival Information

Stock prices reflect all available information, including previous prices, public information and private information (Fama, 1970). Private information is rare and only affects prices through trading by informed investors. Investors usually trade based on information for more than a day. Public information is information that is recognized at the same time as it affects prices, before investors can use it as a basis for trading. Investors who have information or who do not have information trade only if there is new information on expected future cash flows of stocks or other variables such as wealth, preferences, and investment opportunities.

Behavioral Finance *(*Financial Behavior*)*

According to Ricciardi & Simon (2000), the pattern of investors in the decision-making process is influenced by various aspects, including the emotional aspect. Financial behavior is

described in more detail to provide answers from a human point of view to various questions about finance and investment.

Barberis & Thaler (2003) provide an explanation of the rational aspects that investors have to make business decisions when facing economic and financial uncertainty. However, because humans are believed to always be unable to escape from the aspect of bias during the decision-making process, experts argue that the use of rationality assumptions may lead to a misunderstanding of the true mechanism of financial anomalies. It was argued by experts that many mistakes were made during decision-making both in order of the judgments made. For example, there are not a few individuals who are too sure of their beliefs or abilities when faced with decision making, individuals who behave conservatively, rationally and irrationally.

*Behavioral finance*is part of the behavioral economics branch of finance with the help of other behavioral science theories, especially psychology and sociology, trying to find and explain inconsistent events.

Noise

Stock prices not only reflect information from information-based traders but also reflect noise from noise traders. The position of noise in the noise trader is actually able to make stock price movements reverse to their original values. The movement of stock prices away from the value will move inversely to the original value (Black, 1986). Phenomena that occur in financial markets, including excessive movement and mean reversion in stock market prices, can be explained by the noise trader's notion. Professional arbitrage behavior is a response to noise trading rather than fundamentals-based trading. Most arbitrage professionals spend resources to check and predict false signals followed by noise traders (Harsono, 2003).

*Noise*or noise are fluctuations in price and volume that do not provide valuable information about the direction of the market at that time. Noise traders appear to act as contrarian irrational traders. Always consistent with such behavior, adding trader noise dramatically increases market trading volume. Especially when the basic security value is far from the previously expected value.

The term noise is used in various activities in financial markets, but one thing to understand is that noise is the opposite of information in financial markets. Rational traders will make decisions based on news such as facts and logical forecasts. However, noise traders make decisions based on anything that might not make sense.

*Noise*is one of the important factors that investors pay attention to because high levels of noise can have negative values for the capital market and the economy, such as less informative securities prices, less efficient capital allocation, increased risk, and asset bubbles. If noise is placed on the cumulative stock price, the stock price will move back to its original value. The faster the stock price reverses in value, the faster the stock price moves away (Black, 1986).

Investment

The definition of investment according to Tandelilin (2001) is a commitment to a number of funds or other resources carried out at this time, with the aim of obtaining a number of benefits in the future. The capital market is a place for buying and selling products that are abstract, such as money. The form of products in the capital market is in the form of securities. The amount of money invested in real assets in the form of land, gold, machinery and financial assets, namely deposits, stocks and bonds is a common form of investment in society. Investors who dare to take higher risks choose to invest in other forms such as warrants, options, futures and various international equities.

RESEARCH METHODS

The research was conducted using the literature study method, which contains theories relevant to the research problem. The issues raised for research are the impact of the noise phenomenon on investment and price behavior. This research was conducted by reviewing various concepts and theories that are widely used in the existing literature, both articles, journals and scientific studies that have been published. Literature review or literature study must be carried out in research, the method chosen can facilitate the resolution of research problems. The type of research used is library research, namely research conducted through library data collection or studies carried out as problem solving. The nature of the research is descriptive research,

RESULTS AND DISCUSSION

The use of greater noise is used in making larger investment decisions as well. That is, if there is more noise trading, it can be ascertained that the use of noise will be more because market participants do not have the ability to make decisions to filter noise (Black, 1986). The accumulation of noise that occurs in the market is caused by the inability of investors to distinguish between noise and information. The same is true if investors deliberately consider noise in their decisions because they may want to indulge in speculative trading (Orlitzky, 2013). In general, information distortion can be easily entrenched and institutionalized among public investors. So, the general implication is that whatever the source of the noise may always be in the equity market.

On a smaller psychological level, it is easy to understand why Noise and Noise Trading are expected to persist i.e., why noise (about other organizational actions unrelated to business fundamentals) is not filtered out by investors. Market participants (decision makers) tend to avoid rational utility calculations for the sake of making decisions quickly because usually obtaining valid data will require more expensive costs so that incorrect noise can be ignored.

Noise and Volatility Stock price

The existence of noise that continues to rise in the equity market illustrates that half the price of securities represents a social phenomenon that is not related to economic value. In other words, the equity price is expected to deviate from the fundamental economic value because it reflects noise. Generally, noise traders have been shown to trade stocks more frequently than investors are based on calculations of utility. An increase in noise trading results in an increase in the number of trades and results in an increase in excess volatility in the stock market if judged by the condition of business information used by investors in making decisions (Orlitzky, 2013).

There are different perspectives from market participants about business consequences. Due to investor disagreements there is an increase in trading volume and stock prices will vary more than they actually are. In fact, the greater the proportion of traders who respond to corporate social responsibility signals, the more volatile stock prices will be. Generally, the more noise traders, the greater the market volatility.

Influence *Noise* Regarding Investment Decision Making

Stock price movements reflect two things, namely information and noise (Huang, Liu & Fu, 2000). Noise is seen by the inaccurate perception or belief of investors on the true value of securities. The difference between noise and information is indicated by the difference in the autocorrelation value between the opening price and the following periods.

According to research conducted by Caprianto (2015) shows that the Noise relationship has a significant positive effect on investment decision making. This proves that in making

decisions, someone who has noise cannot control what they decide because the results are not necessarily in accordance with what has been imagined. If someone has high noise in an activity, that person is less careful in his actions.

This is possible because the stock market in Indonesia is an efficient market in a weak form (Husnan, 1996). Fama (1970) explains that a weak efficient capital market is where the current stock price reflects all historical information, therefore the historical information cannot directly predict future changes because it is already reflected in the current stock price. So even though someone has high noise they are still careful in making their investment decisions.

Testing Price Behavior Based on Information Arrival or*Noise*

Stock price movements are driven by the arrival of information and noise. Noise is indicated by the return correction for the next period. Sumiyana's research (2007) constructs the occurrence of noise by testing the existence of a return reversal between trading periods. Price movements that are not caused by noise tend to return to their original prices in the next period. Therefore, the return series is negatively correlated (negative autocorrelation). Meanwhile, stock price movements driven by the arrival of information detected with positive autocorrelation or inferential conclusions indicate that the presence of noise for trading and non-trading period returns in correlation with certain intervals of the previous period is proven valid. In early evidence, Sumiyana's research (2007) supports the concept of Black (1986), Amihud & Mendelson (1991), and Harsono (2002). Likewise, Sumiyana's research (2007) proves that noise occurs more for the return of the afternoon trading period (R4) than the return of the morning trading period (R2).

Testing Price Movement Based on Firm Size

The benchmarks that show the size of a company include total sales, average sales levels and total assets (Ferry & Jones, 1979 in Hadinugroho, 2002). The size of the company is based on the total assets owned by the company regulated by the provisions of BABEPAM no. 11/PM/1997, which states that a medium or small company is a company that has total assets of not more than 100 billion rupiah. While large companies generally have large total assets so that they can attract investors to invest in the company. The size (size) of the company can be measured by using the total assets, sales, or capital of the company.

Theoretically, larger companies have greater certainty than small companies so that it will reduce the level of uncertainty regarding the company's prospects in the future (Yolana & Dwi, 2005). Companies with small size are very risky to changes in economic conditions and tend to be less profitable than large companies, therefore noise tends to occur in small size companies. The results of Weni's research (2014) show that stock price movements are not sensitive to company size. This supports Sumiyana (2007) which states that the occurrence of noise for a market that has a small company size is higher than that for a company that has a large company size.

Company Size Based Control

Firm size and return have a significant relationship. Stocks from smaller companies tend to have higher returns than stocks from larger companies. Shares of companies with small company sizes have a trading frequency level that is not as fast and not as easy as shares of companies with large company sizes. In addition, companies with small size companies are very risky to changes in economic conditions and tend to be less profitable than large companies. In addition, noise tends to occur more in small companies. This is because investors lack information on small companies (Elfakhani, 1991). Therefore, there is an indication that the high volatility in small companies is caused by noise which tends to be

more in small companies compared to large companies. Thus, the research of Huang et al. (2000) and Hadinugroho (2002) which state that the behavior of stock prices and noise is more sensitive to the size of a small company in comparison to the size of a large company.

Trading Volume Based Control

Trading volume provides an indication of the intensity of a price movement that occurs. Low volume levels are characteristic of indecisive expectations that typically occur during periods of consolidation (periods in which prices move from each side of a trading sphere). High volume levels occur when there is a strong consensus that the price level is moving to a higher level. In other words, trading volume is directly related to the information released (Karpoff, 1987).

Informed investors make transactions based on the private information they get, and the more transactions they make, the higher the volatility caused by the emergence of new information. When informed investors trade more actively, return volatility increases due to the spread of information (Admati & Pflederer, 1988).

Sumiyana (2007) concludes that the noise hypothesis controlled on the basis of trading volume proved invalid and inconsistent. The proof is that noise occurs in both high-volume and low-volume market conditions. Therefore, the hypothesis which states that noise is likely to occur for a high trading volume market in comparison to a low trading volume market is proven to be incorrect and consistent. Thus, in contrast to the research of Huang et al. (2000) which states that the behavior of stock prices is sensitive to up market conditions.

CONCLUSION AND SUGGESTIONS

Conclusion

Noisecan have a significant influence on investment decision making on stock investors. This means that the higher a person's noise, the more frequent investment decisions are made, this is possible because the stock market in Indonesia is a weak efficient market (Husnan, 1996). Fama (1970) explains that a weak efficient capital market is where the current stock price reflects all historical information (such as prices and trading volumes in the past), therefore the historical information cannot directly predict future changes because it is already reflected in the stock market. current stock price. And according to several studies, the concept and theory of the presence of noise for trading and non-trading period returns in the correlation has been proven valid. So that empirical evidence at first, several studies support the concept and theory. Likewise, several studies have shown that noise is more common for returns in the afternoon trading period than returns for the morning trading period. The concept and theory which states that the possibility of noise is less for large companies than small companies is not proven valid and consistent.

Suggestions

Investors or potential investors should be more careful in the first 30 minutes of trading. Prices that occur during the opening period not only contain information collected during the non-trading period but also contain noise and an overreaction.

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