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Herding Behavior in the Indonesia Stock Exchange

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Abstract--- *This study aims to detect and analyze the indications of herding behavior on the stock exchange in Indonesia. Herding detection method uses Cross Sectional Absolute Deviation. The data needed is the daily return of actively traded individual stocks and the daily return of the Composite Stock Price Index on the Indonesia Stock Exchange in 2015-2018 The analytical method used to test the hypothesis is multiple regression analysis. Based on the results of the analysis conducted, it was concluded that the results showed that there was a significant and positive relationship between individual stock returns and market returns with the dispersion value (CSAD), as an indication of the absence of herding behavior on the Indonesian stock exchange. This condition can mean market participants can use strategy and be oriented as an investor, both investor growth and value investors. Because there is no indication of herding behavior, the Indonesian stock exchange has an efficient condition, so that market participants can utilize the available information as a reference in conducting transaction strategies.*

Keywords--- *Cross-sectional absolute deviation, financial behaviour, herding behaviour*

I. INTRODUCTION

Investor behavior in behavioral finance explains how emotions and errors in cognition (bias) affect investors in the decision making process. Shiller, 2003 states behavioral finance is an investor's actions that may be irrational and different in processing information processing. This condition causes investors to make wrong investment decisions or rely solely on feeling. Jegadesh and Titman (1993) say that behavioral finance is a branch of financial science that explains market anomalies. This science is starting to get the attention of many financial researchers because it often contradicts the concept of an efficient market.

Herding behavior is the behavior of investors who follow market consensus or follow the behavior of other investors who are more expert when making decisions (Lindhe, 2012). Chriestie, W.G, Huang, 1995 defines herding behavior as the behavior of investors who emphasize their decisions on their personal opinions and make the behavior of other investors and market sentiment as the basis for investment decision making. Investors who conduct herding will ignore the company's fundamental analysis when determining its investment decisions. Herding behavior has been widely reviewed, Kusuma (2013) thinks that the stock market in Indonesia is driven by foreign investors. The dominance of foreign investors can trigger stock price volatility which can be overreacted by the market. The

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dominance can be seen from the net buy and net sell of foreign investors' shares. Herding behavior is also usually seen when the market is deeply corrected and there is a change in the ownership of foreign and local investors.

Herding behavior often occurs when the market is showing unstable conditions or the presence of market stress [3]. Market stress occurs when investors experience uncertainty of information and receive unclear signals about market conditions. The ambiguity and uncertainty lead to asymmetric information which then will be responded differently by investors, one of which is panic. When panicked, investors will ignore fundamental analysis and tend to follow the noise or signal and follow the behavior of investors who are considered more skilled to secure portfolio performance (Lindhe, 2012). Stock exchanges that are detected with perfect herding behavior will cause stock returns to move in the direction of market returns, resulting in a zero dispersion value. Stock markets that are free from herding behavior will be shown by a large dispersion value and different from stock returns.

Based on the phenomena and the results of studies from previous researchers, this study aims to conduct analysis and detection of hedging behavior in the Indonesian stock exchange. One of the reasons this research was conducted at the Indonesia Stock Exchange is the presence of Tan, et al. (2008) which states that the cause of the high intensity of herding behavior on the stock market is due to the lack of knowledge and investment experience compared to market participants in developed countries and those who have better investments. Herding behavior is also often associated with inefficient market conditions, low market regulation, less-educated investors, and low levels of information disclosure of issuers (Lao & Singh, 2011). The results of this study are expected to be very useful for the treasury of science, especially in the field of finance to better understand the concept of herding behavior by investors in the stock market, especially in the Indonesia Stock Exchange. This research is also expected to broaden the horizons of regulators so that it becomes a material consideration for financial authorities to consider the impact of each policy in order to create positive and stable market sentiment. For investors themselves, this study aims to provide an understanding of the concepts of financial behavior, especially herding behavior, so it is expected to always carry out fundamental analysis and in-depth economic analysis before determining investment decisions.

II. METHODS

The sample in this study is that shares are actively traded on the Indonesia Stock Exchange during the period January 2015 to December 2018 and have capitalization above five trillion rupiah. Using a quantitative research design based on multiple regression analysis with standard error correction methods using the Newey-West HAC Error Standard. Herding detection method in this study uses Cross Sectional Absolute Deviation. The variables used are dispersion of returns, absolute market returns and quadratic market returns. This study adopted the Cross-Sectional Absolute Deviation method introduced by Chang, Cheng and Khorana (CCK) in 2000. The variables used in this study were divided into two types namely the dependent variable and the independent variable. The variables used in this study, referring to the Cross-Sectional Absolute Deviation (CSAD) method of Chang, et al (2000), the Independent Variable (X) is absolute market return ($|R_{mt}|$) and quadratic market returns (R^2_{mt}). Whereas Dependent Variable (Y) is the value of stock return dispersion (CSAD). Market return is the difference from the price listed in a composite stock price index at the end of the period with the beginning of the period (Sharpe, et al 1997), the value of the calculation of market returns will be absolute for the independent variable absolute market return ($|R_{mt}|$), and the

value of the calculation of market returns will be squared for the independent variable market squared return (R^2_{mt}). Herding behavior will cause a relationship between CSAD and market return (R^2_{mt}) which was originally linear, will be non-linear. The non-linear relationship then has implications for the coefficients negative R^2_{mt} ($\gamma 2 < 0$). The negative and significant coefficient $\gamma 2$ ($\gamma 2 < 0$), indicates that there is a herding behavior on the stock market, which is reflected in the CSAD value decreases (Chang, 2000).

III. FINDINGS

The classic assumption test is performed on the multicollinearity test, heteroscedasticity test, autocorrelation test and data normality test. Regression analysis is then performed to see the effect of the independent variables used on the dependent variable. Multicollinearity test uses the Variance Inflating Factor (VIF) measurement method with a VIF value of 4.38. Multicollinearity will not occur when the VIF value is more than one and does not exceed ten. White test is used to detect any indication of heteroscedasticity, based on the results of heteroscedasticity test of Obs * R-Square value that follows the chi-square distribution, has a probability value smaller than α 5%, namely 0,000, so there is no element of heteroscedasticity in the regression model used. The autocorrelation test aims to test whether in the regression model there is a correlation between error in period t and error in the previous period (t-1). The autocorrelation test results obtained a probability value smaller than α 5% which is 0,000, it is concluded that there is no autocorrelation in the regression model.

The statistical test t shows how far the influence of one independent variable is individual market return in explaining the variation of the dependent variable to detect herding behavior according to the cross sectional absolute deviation (CSAD) method.

TABLE 1. REGRESSION TEST RESULT

Model	β	t statistic	Sig.
(Constant)	0,01443	42,91989	0,000
Individual Stock Returns	0,25318	6,68516	0,000
Market Return	2,49503	2,75491	0,006
		F	Sig.
		506,760	0,0000
Model Summary	R. square	0,37337	

From the statistical test results shown in Table 1 it can be concluded that the stock market in Indonesia shows that individual and market stock returns have a positive and significant effect on stock disperse return (CSAD) variables. The probability value (p-value) of individual return variables is 0.0000 while the market return is 0.006. In the rational asset pricing model, Chang, et.al (2000) argues that the value of dispersion returns is not only positively related but also significantly related to individual stock returns and market returns, if individual stock returns and market returns increase then the dispersion of returns will also increase, in testing in this study individual stock returns and market returns have a significant positive relationship.

In the CSAD regression model designed by [3] the addition of individual stock variables to prove that the relationship between the value of dispersion returns (CSAD) and market returns is significantly positive. The variable is also used to illustrate the situation when market returns are normal. While Herding's behavior, according to Christy and Huang (1995) occurs when the market is having a movement (volatility) of high prices. According to behavioral finance theory, when there is a movement (volatility) of high prices, investors tend to ignore fundamental analysis and tend to follow market sentiment. When there is herding, the value of individual stock returns will not deviate far from market returns which makes the value of the dispersion of returns smaller. So it can be concluded that the stock market in Indonesia does not occur herding behavior. The results of this study are in line with the results of research conducted by Chandra (2012), Loh and Araral (2013) who found no indication of herding on the Indonesian stock market, but contrasted with the results of research conducted by Chiang and Zheng (2010). The difference in results is due to differences in countries and time periods of the study.

According to [3] herding behavior is closely related to the lack of quantity and quality of information regarding macroeconomics and microeconomics, especially corporate fundamentals. This situation causes market participants to only use macroeconomic information as an information base in investment decision making. Meanwhile, there is no indication of herding, one of which is caused by information about macroeconomic and microeconomic especially about the company's fundamental information that has been well and maximally published by the financial authorities of a country and by issuers. Some information needed by investors in conducting fundamental analysis is the company's financial statements. Information from financial statements that can be used as a basis for investment decision making related to company wealth, company profitability and other economic transactions that can affect the company's wealth and profitability. With the maximum availability of microeconomic information and company fundamentals, investors not only make macroeconomic information the basis of information in making investment decisions, but also make fundamental analysis of the company the most important information base of decision making,

Furthermore, no indication of herding behavior was found in a stock market, possibly due to the increasing quality and investment knowledge of market participants (Chiang and Zheng, 2010). Quality and knowledge in question is about the analysis of macroeconomics and microeconomics, especially the fundamental analysis of the company. Information about the fundamentals of the company in question is related to company wealth, company profitability and other economic transactions that can affect the company's wealth and profitability. Increasing the knowledge and quality of investments from market participants will make investment decisions more heterogeneous on the stock market. If investment decisions are increasingly heterogeneous, it will reduce herding behavior or patterns that cluster on investment decisions that exist in the stock market.

IV. CONCLUSION

The results of the analysis that have been conducted on the formulated hypothesis, it can be concluded that the results of the study indicate that there is no significant and negative relationship between individual stock returns and market returns and dispersion values (CSAD), as an indication of the absence of herding behavior on the Indonesian stock exchange. There is no indication of herding behavior on the Indonesian stock market, this means that market

participants can use strategy and be oriented as an investor, both investor growth and investor value. Investors also buy shares at low prices and sell at high prices. Because the stock market in Indonesia does not indicate herding behavior that can be categorized as having more efficient conditions, market participants can utilize the information available in the market as a reference in conducting transaction strategies.

Several investment strategies and orientations that can be carried out by investors in investing. Investors are generally distinguished by investor values and investor growth, most investors can use the information available in the market as a reference and strategy for conducting transactions. This is due to the stock market which is not indicated by herding behavior. Information flow can be absorbed quickly by changes in stock prices. The strategies that can be used emphasize more on the company's profit and value growth and dividends in the long run. Investors are not affected by fluctuations in stock prices because investors look for profits in the long run.

The next researcher is expected to be able to use all the shares that are on the Indonesian stock exchange, so that the concept of market-wide approach can be applied as a whole which has implications for conclusions and final results that can be generalized. Future studies are recommended to test the regression model every year so that herding behavior on the stock market can be compared between one year and the next, and it is suggested in subsequent studies to make comparisons between stock markets abroad, so that it can be known to what extent efficient markets in other countries are compared in Indonesia.

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