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Analysis of Herding Behavior of Investors in the Banking Industry in Indonesian Stock Market for February - June 2020 Period

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ABSTRACT

This study aims to analyze the herding behavior of investors on banking industry on the Indonesian stock market for the period February - June 2020. This study uses the Chang, Cheng and Kharona (2000) model in detecting herding. The dependent variable in this study is Cross-Sectional Absolute Deviation (CSAD). The independent variable in this study is market return. The sample in this study was 43 existing banking industry stocks registered February - June 2020 using the target population technique. The data analysis method in this research is simple regression analysis. The data used are daily data on the closing price of the company's shares and the closing price of the JCI during the period February - June 2020. The results showed that during a bear market condition, there was no indication of herding behavior in the banking industry on the Indonesian stock market for the period February - June 2020.

Keywords: Herding Behavior, CSAD, Market Return.

BACKGROUND

A significant impact on trading on the stock exchange also occurred due to the corona virus pandemic (Covid-19). This impact can be demonstrated by a decrease in the Composite Stock Price Index (IHSG) on the Indonesia Stock Exchange (IDX). Information obtained from the President Director of the IDX, Inarno Djajadi, said that the latest data on April 17, 2020, showed that trade indicators had decreased compared to 2019. Some of them were the JCI decreased by -26.43% to 4,635. Decrease in market capitalization by -26.35% to 6,300 trillion, decrease in daily transactions by -1.49% to 462 thousand times. A significant decline in trading on the stock exchange also occurred in March 2020, when the government announced two positive cases of Covid-19 in Indonesia. Financial markets are negatively affected both internally and externally. The JCI situation got the lowest level on March 24, 2020, down -37.49% compared to the end of 2019 (mediaindonesia.com).

Prior to the COVID-19 period, Indonesia the Indonesian stock market was being hit among world investors or commonly referred to as emerging markets. Emerging Market is defined as a growing market and is characterized by the size of the growing market and the increasing purchasing power of the people. In general, many emerging markets occur in developing countries Fanani, 2012 in Manalu (2020). Referring to the data from the Indonesia Stock Exchange, throughout 2020 foreign investors will continue to record selling actions on the Indonesian stock exchange. The value is unmitigated, the year to date foreign net sell has reached Rp. 18 trillion. This indicates that in the midst of a pandemic, investment in risky assets such as stocks in the country is becoming less attractive, so that foreign investors tend to release their shareholdings (www.cnbcindonesia.com).

From the investor or investor side, there are various ways to deal with the risks that arise in investing. The first way is to do technical analysis, which is an analysis technique known in the financial world that is used to predict the trend of a stock price by studying past market data, especially price and volume movements and fundamental analysis through individual investment calculations by each investor. use information that is owned, for example company financial reports, company annual reports, inflation, interest rates, and other information related to the field of capital markets. However, doing these individual calculations requires special skills as well as a lot of patience and experience in the capital market in order to produce a more accurate output for investing. The second way is an alternative option to overcome weaknesses in the first way by following other investors who are considered to have credibility in the investment field or in other words seeing the actions of other investors in the same situation, this action is known as herding behavior, Manalu (2020).

The covid-19 virus outbreak has the potential to encourage an increase in bank NPLs, which can have an impact on reducing the capital of a bank. Thus, seeing the banking conditions during the COVID-19 period, investors will turn to investments that produce higher returns.

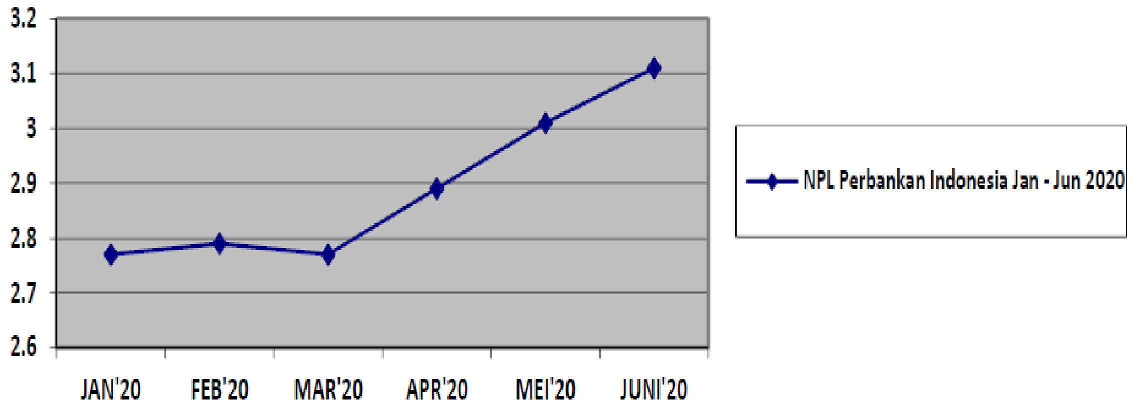

Figure 1. Indonesian Banking NPL Jan - Jun 2020

Based on this phenomenon, the researcher considers this research feasible to analyze the herding behavior of investors in the banking industry on the Indonesian stock market for the period February - June 2020.

Herding Behavior

According to Lan & Rose (2011), herding behavior is described as the tendency of people to follow others to make identical investment decisions, where little information is publicly available. Investors are interested in where they can make a profit by relying on collective information rather than personal information.

According to (Spyrou, 2013), the lack of information in the market causes herding actions by investment actors. This is because based on this minimal information, the results of the information are not diverse and tend to point to one point, therefore herding behavior occurs. So what is meant by herding behavior is irrational investor behavior, because investors base their investment decisions by looking at the actions of other investors in the same situation or it can be said with follow-up behavior without conducting in-depth analysis of a stock before starting investing. Chang, Cheng, and Khorana (2000), provide four reasons why investors transact in the same direction, namely:

1. Investors process the same information
2. Investors prefer stocks with common characteristics, namely prudent, liquid or better-known.
3. Investment managers tend to follow the steps of transactions made by other

managers in order to maintain their reputation.

4. Investment managers follow the valuation of the share prices of other managers.

According to Golarzi & Ziyachi (2013), the impact of herding behavior is the emergence of phenomena such as an increase in stock price fluctuations, falling prices, calendar effects, differences in stock returns, unequilibrium between prices and fundamental variables leading to an inefficient market.

The Chang, Cheng and Kharona (CCK) Method

The CCK method (2000) is a refinement of the method created by Christie and Huang (CH). CCK measures the level of stock dispersion with Cross-sectional Absolute Deviation (CSAD) of Stock Returns. CCK argues that if investors tend to follow market behavior as a whole and reject their analysis during periods of large price movements, then the linear relationship and the increasing relationship between market dispersion and returns are no longer valid. It will be a non-linear increase or decrease.

The Rational Asset Pricing model is used to predict that the dispersion is a positive function of market returns and the relationship is linear. Then the increasing tendency of investors' herding behavior towards market consensus when large stock price movements can change the relationship from linear to non-linear. Therefore, CCK uses non-linear regression to estimate the relationship. The initial CCK analysis illustrated the relationship between CSAD and market returns.

Gunawan (2011) Detection of Herding Behavior in Indonesian and Asia Pacific Stock Markets. The data analysis technique used is regression analysis. The result of the research is that herding behavior is an irrational investor behavior, because investors base their investment decisions not by looking at the economic fundamentals of a risky asset, but by looking at the actions of other investors in the same situation, or following market consensus. An indication of herding behavior can be seen from the relationship between the level of spread of stock returns (Cross Sectional Absolute Deviation, CSAD) and market portfolio returns. If herding occurs, the rate of spread of stock returns will increase lower than the increase in market portfolio returns, even if the spread of stock returns will decrease even though the market portfolio returns will increase. Herding behavior can lead to an error in pricing of a stock because there is bias among investors in seeing the risks and returns that are expected from a stock. To determine the relationship between the level of spread of return on shares and returns on market portfolios in several conditions, quantile regression is used. The results obtained from this study are that in the Indonesian stock market and the Asia Pacific global stock market, herding behavior occurs when market stress conditions, while in normal conditions and conditions of very high stock returns, investor behavior tends to be more rational.

Chandra, Maximilian (2012) Measurement and Analysis of Herding Behavior on the Indonesia Stock Exchange 2007-2011. Herding behavior tends to occur in emerging markets such as Indonesia. This is corroborated by research conducted by Chang, Cheng and Khorana which stated that there was herding activity in emerging markets at that time, South Korea and Taiwan. This research discusses whether the herding behavior of investors occurs when IPO offers are offered on the Indonesia Stock Exchange in the 2007-2011 period. Research using the Cross-sectional Absolute Deviation (CSAD) method to detect herding resulted in no significant herding behavior that could result in abnormal returns.

Conceptual Framework

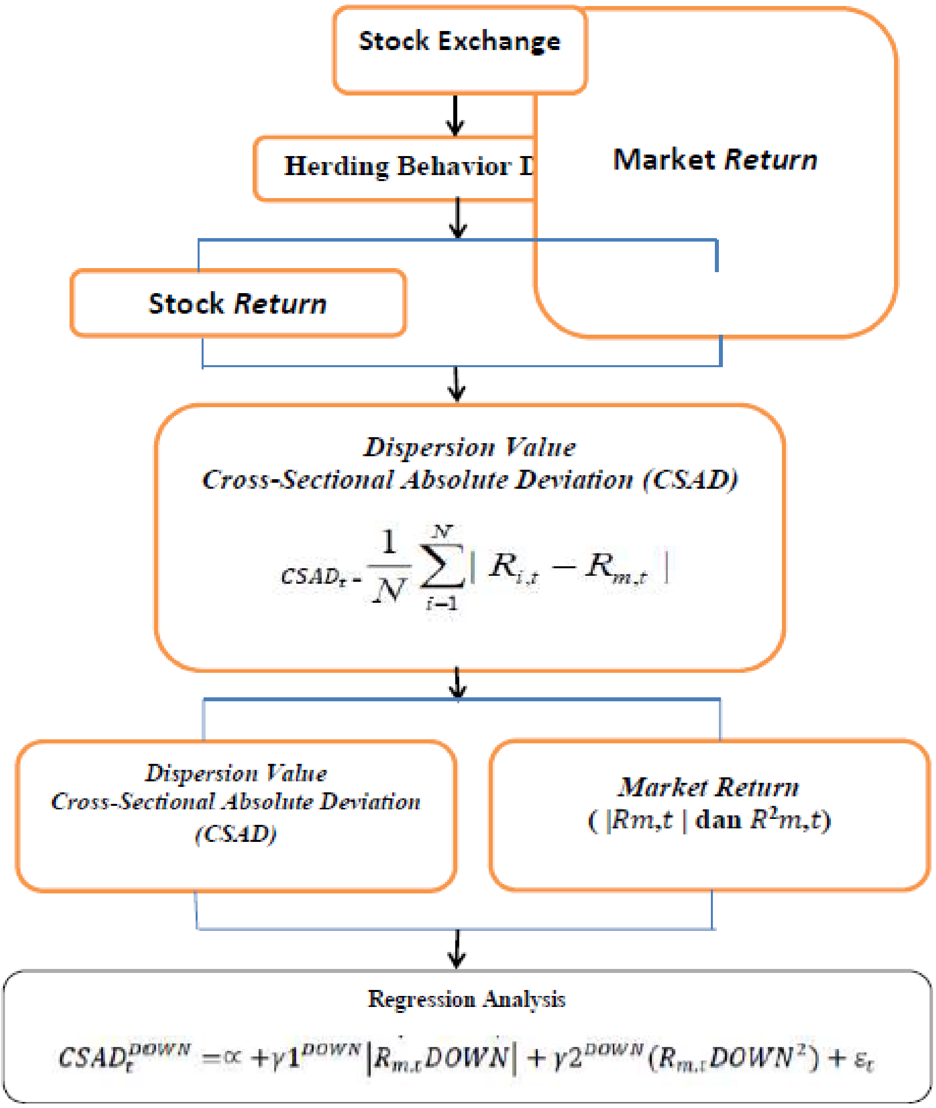

Figure 2. Conceptual Framework

Hypothesis

There is an indication of the herding behavior of investors in the banking industry on the Indonesian stock market for the period February - June 2020 which is marked by a squared market return ($R2m, t$) which has a non-linear and significant negative effect on dispersion (CSAD).

RESEARCH METHODS

This type of research is associative research, which connects two or more variables in which the research proposal, process, hypothesis, data analysis and data conclusions are written using aspects of measurement, formula calculation, and certainty of numerical data. This study aims to determine whether there are indications of investor herding behavior in the banking industry on the Indonesian stock market for the period February - June 2020. The population used in this study is the banking industry stocks that are already listed and actively listed on the Indonesian stock exchange as many as 43 stocks. .

The first stage in this analysis method is to calculate the daily individual stock returns from each stock that is used as the research sample, the formula for calculating individual stock returns is as follows:

$$R_{i,t} = \frac{P_t - P_{t-1}}{P_{t-1}}$$

The second stage in this analysis method is to calculate the daily stock market return of each stock that is used as the research sample, the formula for calculating stock market returns is as follows:

$$R_{m,t} = \frac{P_{m,t} - P_{m,t-1}}{P_{m,t-1}}$$

The third stage in this analysis method is to calculate the total average value of the Cross-Sectional Absolute Deviation (CSAD) of each individual stock return on a daily basis with the daily stock market return in the same period t. It can be concluded that the CSAD calculation is as follows:

$$CSAD_t = \frac{1}{N}\sum_{i=1}^{N} |R_{i,t} - R_{m,t}|$$

RESULTS AND DISCUSSION

Simultaneous Effect Significance Test (Test F)

The F test aims to test the effect of the independent variables together or simultaneously on the dependent variable. Based on Table 4.4, it is known that the Prob value. (F-statistics), namely 0.00000 <0.05, it can be concluded that all independent variables, namely ABS RMT, RMT2 simultaneously, have a significant effect on the CSAD variable.

Regression Equations and Partial Effect Significance Test (t test)

A constant value of 0.064 means that if the market return value (| Rm, tDOWN | Rm, tDOWN2) is constant or zero, then the Cross Sectional Absolute Deviation (CSAD) is 0.064%.

It is known that ABS RMT has a positive effect on CSAD, with a regression coefficient of 2.273 and a significant value of Prob. 0.0000 <0.05. So that ABS RMT has a positive and significant effect on CSAD. If the market return decreases by 1%, CSAD will increase by 2.273%

It is known that RMT2 has a negative effect on CSAD, with a regression coefficient of -1.404 and significant with a Prob value. 0.8400> 0.05. So that RMT2 has a negative effect on CSAD, but it is not significant, meaning that it shows no indication of herding behavior in the banking industry on the Indonesian stock market when market conditions are bearish (down).

Determination Coefficient Test (R2)

Based on Table 4.4, it is known that the coefficient of determination (R-squared) is R ^ 2 = 0.4770. This value can be interpreted that ABS RMT, RMT2 simultaneously or jointly affect CSAD by 47.70%, the remaining 52.30% is influenced by other factors not included in this study.

Based on the results of the research previously described, it shows that herding behavior is not present in the Indonesian stock market in the banking industry for the period February - June 2020. The non-linear coefficient (γ2DOWN) between the dispersion value (CSAD) and market returns when market conditions are bearish in banking industry on the Indonesian stock market, the banking sector is insignificant at -1,404. So it can be concluded that when market returns are not significant, investors tend to inconsistently follow market consensus in investing in the stock exchange. This indicates that there is an indication of herding behavior which is not significant in the banking industry. The Indonesian stock market when market conditions are bearish (down) during the study period. However, the final conclusion of this study is that herding does not occur in this study because the probability does not meet, which is not significant.

This explains that investors in the banking industry in the Indonesian stock market in the banking sector tend to receive information and carry out good analysis to select rational stocks because they are not conditionally influenced by other investors and do not follow the noise that occurs in the market. This shows that investors in making investment decisions are more likely to pay attention to fundamental information in making decisions because the information needed by investors relating to stock price movements in the market can be accessed properly and validly so that investors make it the basis for investment analysis.

If this research is connected with the Efficient Market Hypothesis theory in Indonesia which consists of Weak Form Market Efficiency, Semi Strong Form Market Efficiency (Semi Strong Form) and Strong Form Market Efficiency (Strong Form). So it can be explained that Indonesian market conditions reflect Semi Strong Market Efficiency (Semi Strong Form) because securities prices fully reflect all published information (all publicly available information) including information contained in the financial statements of the issuing company. In this market, there is no investor or group of investors who can use published information to obtain abnormal profits over a long period of time (Jogiyanto, 2003). In this study, it shows that investors still view and use company financial reports as important information in making stock investment decisions in the banking industry on the Indonesian stock market.

When this research is connected with Behavioral Finance Theory, financial behavior is a psychological application for financial decision making and financial markets. Financial behavior is also a transformation of the financial paradigm with a psychological framework (Shefrin, 2000). In this case it can be seen that this theory shows that investors in decision making can be influenced by investor psychology, which causes each person to make different decisions, namely how each person or investor responds to the information they get by looking at the profitability and returns they will get in the future. . In this study, it can be seen that after the outbreak of the Covid-19 pandemic, investors still choose to make investment decisions by looking at the fundamentals of banking industry companies, but there are concerns about economic and market instability so that investors follow market consensus, although not consistently.

The result of this research is that herding occurs but it is not significant or not significant in the banking industry on the Indonesian stock market. This happens because investors not only look at past stock price movements to see future stock movements to predict and make informed decisions during the Covid-19 period but also view and use other information published by issuers in the banking industry at Indonesian stock market to see the financial performance of companies in the banking industry. In this case, investors also see other information during the Covid-19 pandemic regarding the increased NPL of banks during the Covid-19 pandemic, which describes debtors experiencing business difficulties / shocks resulting in difficulties in paying credit to the banking industry in Indonesia.

Herding does not occur when stock returns deviate far from market returns. Conversely, in the case that herding applies, the stock returns will not deviate far from the market returns as a whole (Chandra, Maximilian, 2012). In this study, it was found that herding occurred but not real or significant, in this case this theory can be seen from the descriptive analysis obtained, namely the average value of 0.0128607 indicating the lowest level of dispersion is 0.31% and the highest level of dispersion is 4.37. % of the total data obtained an average level of dispersion of 1.28%, with a standard deviation of 0.0111182 and an average (mean) of 0.0128607 indicating less variable data because the standard deviation value is smaller than the average (mean).

The factors that cause herding behavior include the following: Investors are more likely to herding when stocks have negative news sentiment. In particular, herding appears to be driven primarily by market uncertainty, extreme market conditions and periods of high information flows. In times of market stress, investors tend to suppress their thinking and follow market consensus more (Rahayu, Adik Duwi et al, 2019). In this case, if this theory is related to this research, it can be seen in the period February - June 2020 because the world is experiencing a pandemic, then the news shows negative things to the public which will have an impact on market uncertainty. This has made investors tend to be pessimistic in investing and become more adherent to market consensus even though the banking industry is inconsistent with the Indonesian stock market.

This research is supported by Gunawan, et al, 2011 resulting in the identification of herding behavior in the Indonesian stock market based on LQ45 shares, indicating that there are indications of herding in market stress conditions. This indication can be seen from the coefficient $\gamma 2$ which is negative and significant at the 5% real level. This means that investors in the Indonesian stock market have irrational behavior. Although there is a slight difference, this study has herding but it is not significant.

CONCLUSION

1. All independent variables, namely the ABS RMT, RMT2 variables simultaneously or jointly affect CSAD by 47.70%, the remaining 52.30% is influenced by other factors.
2. Based on the simultaneous test results with the F test, all independent variables, namely ABS RMT, RMT2 simultaneously, have a significant effect on the CSAD variable.
3. It is known that ABS RMT has a positive effect on CSAD, with a regression coefficient of 2.273 and a significant value of Prob. 0.0000 <0.05. So that ABS RMT has a positive and significant effect on CSAD. If the market return decreases by 1%, CSAD will increase by 2.273%
4. It is known that RMT2 has a negative effect on CSAD, with a regression coefficient value of 1.404 and significant with a Prob value. 0.8400> 0.05. So that RMT2 has a negative effect on CSAD, but it does not significantly indicate an indication of herding behavior, but it is not significant. It can be concluded that there is no indication of herding behavior in the banking industry on the Indonesian stock market when it is bearish (down).

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