

DETECTION HERDING BEHAVIOUR ON POST INITIAL PUBLIC OFFERING: AN EMPIRICAL STUDY ON SHARIA STOCKS IN INDONESIA STOCK EXCHANGE

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ABSTRACT

Indonesia Capital Market has increased rapidly year by year, accompanied by lots of Initial Public Offering Company. Underpricing is a phenomenon that emerged after the Initial Public Offering announcement in almost all the capital markets in the world. This phenomenon caused investors to do herding behaviour. This study aims to examine the herding behaviour post-Initial Public Offering on Indonesia Islamic Capital Market. The data used in this study are the daily closing price of Initial Public Offering sharia stocks since the first day until the 30th day after Initial Public Offering announcement and daily closing price of the Indonesia Sharia Stock Index from January 2018 – December 2018. Twenty-two stocks that conducted an Initial Public Offering on Indonesia Stock Exchange in 2018 and were included in Sharia Securities list by Financial Service Authority in 2018. This study used the Cross-Sectional Absolute Deviation method to test herding behaviour. The results showed that there is a herding behaviour post-Initial Public Offering on Indonesia Islamic Capital Market in 2018. The existence of herding behaviour illustrates that the Indonesia Capital Market has not been efficient. The implication of this finding is when making investment decisions on Initial Public Offering stocks, investors need to pay attention to other investor's behaviour who have significant capital or investors who have the power to control the market.

Keywords: Behavioural Finance, Herding Behaviour, Cross-Sectional Absolute Deviation (CSAD), Initial Public Offering.

INTRODUCTION

The Indonesian capital market has been on a stable growth path in recent years, with the market capitalisation and trading activity showing steady expansion. The Benchmark of Indonesia, Jakarta Composite Index, which includes all stocks listed on the Indonesia Stock Exchange and can be considered a key indicator of financial market performance in Indonesia, has experienced substantial growth. This index experienced a record low in 1998 and a record high in 2018. Meanwhile, the number of Initial Public Offerings (IPO) on the Indonesia Stock Exchange (IDX) reached a 26-year high in 2018 totalling 57 issuers (Otoritas Jasa Keuangan [OJK], 2018)

Underpricing is an interesting phenomenon that occurs when companies go public (Hartono, 2014). It is a condition where the stock price at the time of the initial offering is relatively low compared to secondary market prices. Arifin (2010) found a significantly underpricing phenomenon on the Indonesia Stock Exchange during 1990-2008. Hartono (2014) count the initial return of an IPO for 25 years from 1991 to May 2014 in Indonesia and sowed that as many as 336 out of 420 issuers whose IPO experienced underpricing.

The existence of the underpricing phenomenon in Indonesia illustrates the specific behaviour of stock prices related to the time that stock prices at certain times are different from stock prices at other times. Therefore, investors tend to remember a phenomenon that becomes their reference for investment. Study on this phenomenon conducted by Rock (1986) emphasizes the information asymmetry among potential investors. According to this view, there are two types of investors, namely informed investors and uninformed investors. Informed investors have or receive more information, so they know the value of the shares to be issued. Other uninformed investors know or only get a limited information because it is difficult or expensive to get that information. Information asymmetry often makes investors doubtful in making investment decisions, so investors tend to imitate other investors' investment decisions; this known as herding on the capital market.

Herding behaviour refers to an investment strategy of mimicking other investors' actions or the market in general. Banerjee (1992) suggests that herding occurs when individuals do what everyone else does, even when their private information suggests they should take a different decision. Devenow and Welch (1996) refer to patterns of behaviour correlated among individuals.

An uncertain environment and limited information, in which investors follow the actions of others to prevent potential loss because of an information disadvantage, may constitute herding behavior. Kremer (2010) confirms that herding behavior and the availability of information are interrelated. Christie and Huang (1995) suggest that herding are individuals who suppress their own beliefs and base their investment decisions solely on collective market action, even when they disagree with predictions. Herding can categorize as being either a rational or irrational form of investor behaviour (Chang, Cheng, & Khorana, 2000). For rational herding, managers mimic others' actions, completely ignoring their private information to maintain their reputational capital in the market (Scharfstein & Stein, 1990). The irrational herding focuses on investor psychology, where investors disregard their prior beliefs and follow other investors blindly (Devenow & Welch, 1996). Irrational actions by investors when making investment decisions is contradicted with the statement stated by the Efficient Market Hypothesis theory or often called the EMH theory. The EMH explains that when receiving information in the form of rumours and issues, investors will behave reasonably and rationally and act according to the analysis performed.

Herding behaviour is considered one of the crucial elements of financial market performance. Dependency on aggregate information rather than personal information can cause the price of an asset to deviate from its fundamental values, making the price of an asset incorrect. The consequences of this behaviour lead to the formation of bubbles in the economy (Orléan, 1995; Persaud, 2000; Hirshleifer & Teoh, 2003; Hwang & Salmon, 2004).

Several empirical investigations of herding behaviour in financial markets conducted. Chang et al. (2000) found no evidence of herding in the United States and Japan, the two developed market in their sample. Laih and Liao (2013) also found the same results; there is no evidence of herding in the stocks market of Singapore during the Subprime Mortgage Crisis.

Chang et al. (2000) also discovered herding activity in two emerging market countries in their sample, South Korea, and Taiwan. Other research demonstrating the existence of herding activities in emerging countries was conducted by Laih and Liao (2013), who found that herding behaviour usually occurs in markets in developing countries where the majority of investors come from individual investors. However, the different results were proved by Ahsan and Sarkar (2013), they did not find any herding behaviour in emerging market countries such as Bangladesh. Kiran et al. (2020) also revealed that there is no herding behaviour in Pakistan. Due to the different results, this study is interested in examining the presence or absence of herding behaviour in Indonesia because it is categorized as a developing country.

Herding also found in the IPO market as in the study by Dehghani et al. (2004), which found that well-informed investors in the Malaysian capital market tend to exhibit herding behaviour, especially in the technology and consumer goods sector in up-and-down market conditions. Wang et al. (2017) also found herding behaviour during an IPO on the Taiwan Stock Exchange. In Indonesia, several studies of herding behaviour after an IPO have been conducted, including by Chandra (2012), the results of which indicate that there is no herding behaviour found after an IPO on the Indonesian Stock Exchange. Arisanti and Asri (2018) showed that there is a herding behaviour after an IPO on the Indonesia Stock Exchange for the period 2005-2015. Chandra (2012), Arisanti and Asri (2018), there are different results. These different findings have increased the interest of researchers to investigate the herding behaviour post IPO.

Researchers chose to examine herding behaviour after an IPO in the Indonesian Islamic Capital Market because of the principle of information transparency, known as *tadlis*. If it implied in the capital market, the Islamic capital market in Indonesia should have a higher degree of information transparency and no misleading information for investors. Therefore, the Islamic capital market can be considered more efficient than traditional capital markets, and the possibility of herding behaviour on the Islamic capital market may be less than on conventional capital markets.

Hence, this study aims to examine the herding behaviour post-Initial Public Offering on Indonesia Islamic Capital Market. Herding behaviour is detected using the Cross-Sectional Absolute Deviation (CSAD) model, which was first developed by Chang et al. (2000). The results depicted that there is a herding behaviour post-Initial Public Offering on Indonesia Islamic Capital Market in 2018. The presence of herding behaviour post-IPO on the Indonesia Islamic Stock Market in 2018 illustrates that the Indonesia Capital Market has not been efficient; therefore, herding behaviour becomes a regular thing. The findings have an important implication when making investment decisions on Initial Public Offering shares investors need to pay attention to other investors' behaviour who have significant capital or investors who have the power to control the market.

The rest of this study is organized as follows. Section two presents the data and the methodology used to detect herding behaviour. In sections three and four, we discuss findings and analysis. Conclusion and recommendation for future research are presented in the last section.

METHODS

A Purposive sampling method used to select the sample (22 companies that conducted an Initial Public Offering on Indonesia Stock Exchange in 2018 and were included in Sharia Securities List by Financial Service Authority in 2018). The data consist of the Indonesia Sharia Stock Index (ISSI) daily closing price and daily closing price of Initial Public Offering sharia stocks since the first day until the 30th day after the Initial Public Offering announcement during January 2018 – December 2018. All the data collected from the Indonesia Stock Exchange (IDX) online data service (<http://www.idx.co.id>) and Investing.com (<http://m.investing.com>) to detect herding behaviour post-Initial Public Offering (IPO) on Indonesia Islamic Capital Market.

This study adopts Chang, Cheng & Khorana (2000) methods as a measurement of herding. According to the capital asset pricing model, inconsistent movement of individual securities from the market returns results in more excellent dispersion of stocks under the assumption of rationality. The potentiality of the herding effect can be the consequence of lower dispersion of stocks at the time of higher market movements. Chang et al. (2000) proposed a measure to test herding based on a conditional version of the capital asset pricing model, which predicts a linear relation between dispersions in individual assets and the market return. The measurement they propose is known as the Cross-Sectional Absolute Deviation (CSAD) method. They suggested that the presence of herd behaviour in the market is not the result of a decrease in dispersion only. However, also it is the result of a nonlinear relation between the dispersion and the market return.

The Cross-Sectional Absolute Deviation (CSAD) method, recommended by Chang et al. (2000), is given below:

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

Where, R_i , is the observed stock return of firm i at time t ; R_m , is the return of market index during the same period t ; and N is the number of companies in the sample.

Chang et al. (2000) reveal that CSAD is not a measure of herding; instead the relationship between CSAD and R_m are used to detect herding behavior. Therefore, using the entire distribution of market returns, they suggested the following first nonlinear model for testing herding:

$$CSAD = \alpha + \gamma_1 |R_{mt}| + \gamma_2 R_{mt}^2 + \varepsilon_t$$

Where, α is the intercept variable; γ_1 is linear coefficient between CSAD and market return portfolio; γ_2 is nonlinear coefficient between CSAD and market return portfolio; R_{mt} denote the absolute value of the equally-weighted returns of all available stock on t period. The absolute value used to facilitate the comparison of the coefficients of the linear term. ε_t denote the standard error.

According to Chang et al. (2000), when market participants extremely diverge from market average during extreme price movements, a nonlinear relationship will appear between average market return and CSAD. A cynical and statistically significant γ_2 would capture Non-linearity.

The excellence of The Cross-Sectional Absolute Deviation (CSAD) method is, this method can detect herding behaviour, and the required data is relatively easy to obtain because it only uses stock return data. This study aims to detect the herding behaviour for all IPO sharia stocks in 2018 so that the CSAD method is best suited for this study.

Descriptive statistics and regression methods used in this study. Descriptive statistics used to show the measurement of their statistical values from the data. The level of significance used at 10% ($\alpha=0,1$) for regression analysis.

RESULT

Descriptive Statistic

The descriptive statistic result of the daily market return (R_{mt}) and CSAD are presented in the following table:

Table 1. Descriptive Statistics Results

Variable	Obs	Mean	Std. Dev	Min	Max
CSAD	30	0.050029	0.043042	0.000000	0.188705
$ R_{mt} $	30	0.002171	0.001876	0.000000	0.006473
R_{mt}^2	30	0.000008	0.000012	0.000000	0.000042

According to the table 1, we note the daily average CSAD during the observation period was 5,0029% with a maximum value of 18,875% achieved in the second post-IPO trading day, a minimum of 0 because this study was conducted using IPO stock closing prices (IPO stock closing prices for $t = -1$ are naught). A second critical remark concerns the lower standard deviation of the $|R_{mt}|$ and R_{mt}^2 , which suggests that the market has the same price variations or there is no high volatility in the Indonesian Islamic Capital Market even when the market was illustrated under extreme conditions.

Regression Analysis Results

The result of the linear regression analysis are obtained in table 2.

Table 2. Regression Result

	Coefficient	t-Statistic	Prob.
A	0.015206	1.999203	0.0601*
$ R_{mt} $	17.72939	2.286200	0.0339**
R_{mt}^2	-3141.087	-2.055857	0.0538*
R^2	22.48%	-	-

*** represent the statistical significance level of 1 %.

** represent the statistical significance level of 5 %.

* represent the statistical significance level of 10 %.

Table 2 shows the results of the regression analysis between Cross-Sectional Absolute Deviation (CSAD) and the return market. The obtained results demonstrate that the return market absolute ($|R_{mt}|$) is statistically significant and positive at the level of 5%. In other words, an increase in return market absolute ($|R_{mt}|$) significantly increase Cross-Sectional Absolute Deviation (CSAD) variability.

On the other hand, the result that return market square (R_{mt}^2) is negative and statistically significant at the level of 10% can consider as an evidence of the presence of herding behaviour post-IPO in Indonesia Islamic Capital Market. The results obtained indicate that CSAD decreases as the return market square (R_{mt}^2) increases, therefore, CSAD decreases, and herding behaviour observed during these uncertain days.

DISCUSSION

The presence of herding behaviour in Indonesia can be seen from the coefficient of return market square (Rmt2) which negative and statistically significant. It is indicate that CSAD decreases as the return market square (Rmt2) increase. In comparison, Chang et al. (2000) showed that in developed markets such as the United States and Japan, CSAD increases linearly with the return market square (Rmt2). All this reinforces that in developed countries there is no non-linear relationship in CSAD and the average of returns.

The existence of herding behaviour post-Initial Public Offering (IPO) on Indonesia's Islamic capital market in 2018 explains that investors did not behave rationally when making investment decisions, because all information concerning stock prices has not been correctly approached. This result also showed that the principle of information transparency has not fully worked well in Indonesia's Islamic capital market, especially during the IPO. Moreover, the presence of herding behaviour post-IPO on Indonesia's Islamic capital market in 2018 allegedly because of the optimism of the investors due to the under-pricing phenomenon, therefore, investors invested their money on IPO stocks.

The result obtained is in agreement with those of other studies in the literature. For instance, Chang et al. (2000) also demonstrated the presence of herding behaviour in Taiwan and South Korea, the two emerging markets of their sample. Herding behaviour could be influenced by factors such as the level of government intervention, both in monetary policy or indirect buying/selling on the stock market. Then, factors such as the limitations of useful micro information on the stock market (Chang et al., 2000). Other researchers also investigated the presence of herding behaviour in emerging markets was Laih and Liau (2013), their study indicating the presence of herding behaviour in Taiwan. Moreover, herding behaviour was also found post-Initial Public Offering in Taiwan Wang et al. (2017) and Malaysia Dehghani et al. (2004).

This study is consistent with research conducted by Arisanti and Asri (2018), who found the presence of herding behaviour post-IPO on the Indonesia Stock Exchange. It is because investors are not rational when making investment decisions, and the distribution of information has not been efficient. This result is similar to the research was conducted by Chaffai and Medhioub (2018), their study indicating the presence of herding behaviour in the Islamic Gulf Cooperation Council (GCC) stock markets.

The presence of herding behaviour post-IPO on Indonesia Islamic Stock Market in 2018 illustrates that the Indonesia Capital Market has not been efficient; therefore, herding behaviour becomes a regular thing.

The finding has some implications. First, investors need to pay attention to other investors' behaviour who have significant capital or investors who have the power to control the market when making investment decisions on Initial Public Offering shares. Second, companies must consider IPO timings to provide optimal results.

This study offers some contributions to the literature on herding. First, this study is applied to an emerging country or small capital market, which might influence the herd behaviour. Second, it analyses the relationship between herd behaviour and the investor sentiment, an issue that has been little explored. Finally, it covers a sufficiently extended time to dilute any biases arising from one-off market fluctuations.

CONCLUSIONS

In this study, we examine the herding behavior post-Initial Public Offering on Indonesia Islamic Capital Market. Results from daily data indicate that post-Initial Public Offering in Indonesia's Islamic Capital Market is characterized by herding behavior.

LIMITATIONS AND RECOMMENDATIONS

This study only used 22 companies that conducted an Initial Public Offering on Indonesia Stock Exchange in 2018 and was included in Sharia Securities List by Financial Services Authority in 2018, so they cannot be generalized. Further studies should increase the number of samples so that results can be generalized. Furthermore, the observation period of this study is only a year and focused on the underpricing phenomenon; future studies should extend the observation period and investigate the herding behaviour in other phenomena.

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