

Do Global Factors Drive Herd Behavior in Asymmetric: Evidence from Indonesia, Malaysia, and Thailand

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ABSTRACT

The occurrence of several crises in recent decades has led to significant uncertainty in capital markets potentially encouraging herd behavior tendencies. This study aims to investigate whether herd behavior exists under asymmetric conditions and explore the influence of global factors on such behavior in the manufacturing sector listed in the capital markets of Indonesia, Malaysia, and Thailand using daily closing stock price information from January 2015 to December 2022. The study utilizes cross-sectional dispersion methodology and incorporates dummy variables in the standard model. The findings show that asymmetric herding tendencies are only seen among manufacturing firms listed on the Indonesian stock market during downturns, whereas in Malaysia and Thailand, there is no such behavior during market fluctuations. In Indonesia, global factors do not play a significant role in driving asymmetric herding, whereas in Malaysia and Thailand it is more influenced by the Federal Funds Rate.

Keywords : **Asymmetric Herding; Market Up and Down; Federal Funds Rate; World Oil Price; Cross-Sectional Dispersion**

ABSTRAK

Terjadinya beberapa krisis dalam beberapa dekade terakhir telah menyebabkan ketidakpastian yang signifikan di pasar modal berpotensi mendorong kecenderungan perilaku herd. Penelitian ini bertujuan untuk menyelidiki apakah perilaku herd ada dalam kondisi asimetris dan mengeksplorasi pengaruh faktor global terhadap perilaku tersebut di sektor manufaktur yang terdaftar di pasar modal Indonesia, Malaysia, dan Thailand dengan menggunakan informasi harga saham penutupan harian dari Januari 2015 hingga Desember 2022. Penelitian ini menggunakan metodologi dispersi cross-sectional dan menggabungkan variabel dummy dalam model standar. Temuan menunjukkan bahwa kecenderungan asymmetric herding hanya terlihat di antara perusahaan-perusahaan manufaktur yang terdaftar di pasar saham Indonesia selama masa penurunan, sedangkan di Malaysia dan Thailand tidak adanya perilaku tersebut selama fluktuasi pasar. Di Indonesia, faktor global tidak memainkan peran yang signifikan dalam mendorong terjadinya asymmetric herding, sedangkan di Malaysia dan Thailand lebih dipengaruhi oleh tingkat suku bunga Federal Funds Rate.

Kata Kunci : **Herding Asimetris; Pasar Naik dan Turun; Suku Bunga Federal; Harga Minyak Dunia; Dispersi Cross-Sectional**

INTRODUCTION

Shares are frequently denoted as assets carrying significant risk and increased volatility relative to alternative investment vehicles in the capital market, as their prices tend to vary daily in response to investor behavior. According to traditional financial theory, investors are generally presumed to act rationally, and markets are believed to be efficient (Doyle & Chen, 2009; Megginson, 1997; Read, 2013). However, along with the times and the various crises experienced worldwide in recent decades, markets have increasingly exhibited inefficiencies, uncertainty, and deviations in asset prices from their intrinsic values (Hwang & Salmon, 2004; Javaira & Hassan, 2015; Lao & Singh, 2011; Spyrou, 2013). This situation demonstrates that the concept of an efficient capital market is no longer applicable in present circumstances due to the rise of various behavioral biases, which hinder the ability to profit from optimal asset allocation and diversification (Economou, 2020; Spyrou, 2013). One of the most prominent behavioral biases that have received attention from researchers to test the existence of this phenomenon in various world capital markets, both developed, emerging, and frontier markets is herding behavior (Economou, 2020; Mobarek et al., 2014; Youssef, 2022).

Herding behavior takes place when investors overlook their own personal information and instead mimic the actions of other investors in the market (Chang et al., 2000; Youssef, 2022), or it may arise from market participants accessing similar information, prompting them to make similar investment choices (Froot et al., 1992; Lakonishok et al., 1992). Herding behavior can be categorized into intentional herding and spurious herding (Economou, 2020). Intentional herding comprises both rational and irrational behaviors. Irrational herding, also known as non-informational herding, is a biased behavior in which individuals follow the crowd, potentially leading to bubble-like phenomena and imitative actions (Spyrou, 2013). Nevertheless, herding behavior is primarily concerned with the intention driving investors' actions, whether they are rational or irrational (Youssef, 2022). Some social psychologists argue that herding behavior isn't invariably irrational or subconscious, but rather stems from the innate human desire for conformity (Rook, 2006). Hence, the act of herding is considered an inherent human instinct, persistently influencing the process of human decision-making (Lao & Singh, 2011).

Herding behavior may manifest during market fluctuations, whether up or down, termed as herding in asymmetric, regrettably, research in this area remains constrained. Asymmetrical herding may occur due to varied investor responses to market fluctuations (Tan et al., 2008). Christie and Huang (1995) were trailblazers investigating herding behavior within the U.S. stock market over 27 years? Their findings revealed no evidence of such behavior, regardless of the market up and down or stress conditions. Chang, et al. (2000) investigated the phenomenon of herding in the stock markets of the United States, Hong Kong, and Japan by developing Christie and Huang (1995) method. Their findings indicated that herding behavior occurred in these markets only during periods of market stress or market bullish and bearish, with no detection under normal conditions. Economou, Hassapis and Philippas (2018) examined the capital markets of the United States, England, and Germany. The findings indicated that during the research period, no herding behavior was observed except in England during times of crisis, where herding behavior was attributed to fear.

Several researchers have endeavored to witness herding tendencies within Latin American capital markets. Their findings suggest that such behavior manifests predominantly during periods of market stress (Chiang & Zheng, 2010), market up and down (De Almeida, et al, 2012), and is more prevalent in the capital markets of Chile and

Mexico (Kabir & Shakur, 2018). In Asian markets, South Korea, Taiwan, and China's capital markets exhibited herding behavior when the market rises or falls (Chang, et al, 2000; Hwang and Salmon, 2004; Chiang and Zheng, 2010), but other studies failed to detect such behavior in the Chinese markets (Demirer & Kutan, 2006). Most of research findings indicate that herding behavior is more prevalent in emerging capital market compared to developed capital markets (Chang et al., 2000; Christie & Huang, 1995). ASEAN is one of the countries where a significant portion of its capital markets are comprised of emerging market categories. Hence, exploring the phenomenon of unequal herd behavior within the ASEAN capital market remains highly intriguing, despite several research endeavors; however, the findings remain inconclusive. Because of the limited research on asymmetric herding in ASEAN countries, particularly studies that only focus on specific stocks, it is essential to conduct further research on asymmetric herding behavior across ASEAN region countries to make a better contribution.

Kabir and Shakur (2018) identified herding behavior regardless of whether the market experienced upward or downward movement in Thailand's capital market. Bui et al. (2015), a study within the ASEAN region, found evidence of asymmetric herding in the capital markets of Indonesia, Malaysia, and Vietnam, during both market upswings and downturns. Sadewo & Cahyaningdyah (2022) explored the phenomenon of herding in the Indonesian stock market, revealing its presence during market declines rather than during upswings. This study will investigate asymmetric herding tendencies within the manufacturing industry across three ASEAN nations: Indonesia, Malaysia, and Thailand. Researching these three nations proves intriguing due to their substantial presence of manufacturing firms and the highest count of investors when contrasted with other ASEAN countries, where numerous youthful investors are recognized for their daring investment decisions. Furthermore, there remains a scarcity of research focusing on asymmetric herd behavior within manufacturing companies.

The manufacturing sector plays a substantial role in the economy, making significant contributions to a nation's GDP while fostering economic expansion. Swift advancements and expansion prospects within manufacturing can lead to substantial boosts in stock prices. Economic growth in developing nations is often influenced by various factors including government policies supporting industrial growth and foreign investment. The burgeoning economic landscape makes investing in the manufacturing industry an attractive avenue for generating substantial profits (Agustin & Nahar, 2020).

Manufacturing PMI Index in Indonesia, Malaysia, and Thailand, is a matter of interest to investors as it reflects prospects, indicating either growth or deceleration of the industry. PMI manufacturing index for Indonesia, Malaysia, and Thailand experienced a significant decline in 2020 during the height of the COVID-19 pandemic. By mid-2021, there was a significant decline in Indonesia and Malaysia, whereas Thailand's decline was comparatively minor (tradingeconomics.com, 2024). Indonesia's PMI manufacturing index has been on a downward trend since late 2021 but remains above 50, indicating growth potential. Similarly, Malaysia has seen a decline, dipping below 50, signifying a contraction. Conversely, Thailand has shown an upward trend since late 2020, indicating growth in its manufacturing sector. This situation is likely to impact investors when they make investment choices, possibly fostering herd behavior in asymmetric. Herd behavior in asymmetric can arise from various influences, both on a global and local scale (R. E. Rahman & Ermawati, 2019; Youssef, 2022). Factors on a global scale that influence herd behavior both when the market up and down, which are often studied include world oil prices and the Fed Funds

Rates. However, research in this area remains relatively constrained (Balcilar et al., 2014; R. E. Rahman & Ermawati, 2019; Youssef, 2022).

Fluctuations in oil prices impact both the present and future cash flows of the company, consequently influencing stock returns (Jones & Kaul, 1996). The Fed funds rate also affects stock markets across the Asia Pacific region, such as those in Indonesia, Malaysia, and Thailand, besides influencing the financial markets of the United States. This connection is often linked to the news impact generated by these countries' stock markets (Kim & Nguyen, 2009). The connection between oil prices and the Fed funds rate has been demonstrated to influence herding behavior, although this impact isn't consistent across all countries or sectors examined (Balcilar et al., 2014; Rahman & Ermawati, 2020; Ulussever & Demirer, 2017; Youssef, 2022).

The objective of this study is to examine if herding tendencies manifest in asymmetrical situations and to delve into the impact of global factors on such behavior tendencies within the manufacturing sector listed on the stock markets of Indonesia, Malaysia, and Thailand from 2015 to 2022, utilizing daily closing stock prices. This study sets itself apart from others by examining manufacturing industries in three ASEAN countries that are part of emerging capital markets to demonstrate the presence of herd behavior under asymmetric conditions and identify global factors that contribute to this phenomenon, an area scarcely explored in research within ASEAN countries. The results of this research could aid in advancing the body of literature on behavioral finance, while also offering insights to regulatory bodies overseeing capital markets in Indonesia, Malaysia, and Thailand. This may assist them in better anticipating and addressing herding behavior through improvements in trading regulations.

Based on the above explanation, several hypotheses can be formulated for this research. The first hypothesis posits the presence of asymmetric herding among manufacturing companies listed on the stock markets of Indonesia, Malaysia, and Thailand. The second hypothesis is that the Federal Funds rate drives asymmetric herding behavior in manufacturing companies listed on the Indonesia, Malaysia, and Thailand stock markets. The third hypothesis proposes that the world oil price influences asymmetric herding behavior in manufacturing companies listed on the stock markets of Indonesia, Malaysia, and Thailand.

RESEARCH METHOD

This study is conducting fundamental research that utilizes a quantitative method to identify investor herd behavior in asymmetric and global factors that drive it within the manufacturing industry listed on the stock markets of Indonesia, Malaysia, and Thailand. Fundamental research seeks to acquire fresh insights into specific phenomena and issues, to subsequently devise solutions and construct theories derived from research findings. In practice, this study will employ descriptive methodologies and a quantitative framework (Sekaran & Bougie, 2016). Descriptive research methods are employed to gather authentic and insightful data concerning asymmetric herding behavior. Quantitative investigations typically follow a deductive approach, concentrating on utilizing data to validate theories. Quantitative research is frequently linked with positivism, particularly when employing a clearly defined and structured data collection methodology (Saunders et al., 2023).

The data utilized in this research consists of secondary data, specifically historical records covering the daily closing prices of all stocks traded by manufacturing firms listed in the Indonesian, Malaysian, and Thai capital markets spanning from January 2015 to December 2022. This data was acquired from the trading view, Yahoo

Finance, and investing.com website. The research period was chosen because global economic conditions were volatile, with the economic and financial crisis exacerbated by the war between Russia and Ukraine, the COVID-19 pandemic, and a variety of other world problems, making it an interesting study. The research employed purposive sampling to select a sample comprising 123 companies from Indonesia, 98 from Malaysia, and 50 from Thailand in the manufacturing industry.

In order to meet the research goals, a systematic approach will be employed, utilizing non-linear regression for all processes. This method starts with the cross-sectional absolute deviation (CSAD) technique as outlined by Christie & Huang (1995), as follow as Equation 1.

$$CSAD_{m,t} = \sum_{j=1}^N \frac{|R_{i,t} - R_{m,t}|}{N} \quad (1)$$

Referring to Equation 1, $R_{i,t}$ represents the stock return of company i on day t , $R_{m,t}$ denotes the weighted average share return of all manufacturing firms listed on day t , and N represents the number of manufacturing firms on day t .

To ascertain the presence of herd behavior in asymmetric, a model derived from Chang et al., 2000 approach is employed. This model incorporates dummy variables within the standard framework as used by (Chiang & Zheng, 2010; Economou, 2020; Luo & Schinckus, 2015; Mobarek et al., 2014), representing the following Equation 2.

$$CSAD_{jt} = \alpha + \gamma_1 D^{up} |R_{mt}| + \gamma_2 (1 - D^{up}) |R_{m,t}| + \gamma_3 D^{up} R_{m,t}^2 + \gamma_4 (1 - D^{up}) R_{m,t}^2 + e_t \quad (2)$$

Based on Equation 2, D^{up} is a dummy variable, that represent the weighted average share return of all manufacturing firms listed with a criteria value of 1 for days when the market shows positive returns and 0 for days when the market experiences negative returns on day t . The coefficients γ_3 and γ_4 is determined to be both negative and statistically significant at level of 1%, 5% and 10%, suggesting an asymmetric herd behavior during market uptrends and downtrends within manufacturing firms listed in Indonesia, Malaysia, and Thailand stock market.

We employ an adapted asymmetric herd behavior model, as utilized by Youssef, 2022, to assess global variables (such as the Federal Funds Rate and the global oil price) drive herd behavior during both bullish and bearish market conditions. Here's the structure of the Model 3.

$$CSAD_{jt} = \alpha + \gamma_1 D^{up} |R_{mt}| + \gamma_2 (1 - D^{up}) |R_{m,t}| + \gamma_3 D^{up} R_{m,t}^2 + \gamma_4 (1 - D^{up}) R_{m,t}^2 + \gamma_5 FFR + \gamma_6 WOP + \epsilon_t \quad (3)$$

Referring to Model 3, FFR is the US Federal Funds rate and WOP is the world oil price. The occurrence of global factors prompting herd behavior in asymmetric will be apparent when the coefficients γ_5 and γ_6 exhibit negativity and significance at level of 1%, 5%, and 10%. This demonstrates that both world oil prices and the US Fed Funds rate play a role in fostering asymmetric herd behavior within manufacturing firms listed in Indonesia, Malaysia, and Thailand stock markets.

RESULTS AND DISCUSSION

Descriptive statistics present an overview of the sample employed in this study to identify herd behavior in asymmetric and the global factors that drive it, utilizing

CSAD and market returns (R_m). Table 1 exhibits the descriptive statistics of CSAD and R_m for the manufacturing firms listed in Indonesia, Malaysia, and Thailand.

Table 1. Descriptive Statistics

| | Indonesia | | Malaysia | | Thailand | |
|---------------------|-------------------|------------------|-------------------|------------------|-------------------|------------------|
| | CSAD _I | R _{m I} | CSAD _M | R _{m M} | CSAD _T | R _{m T} |
| Mean | 2.14052 | 0.59962 | 2.18640 | 0.72577 | 1.62680 | 0.63540 |
| Median | 1.82588 | 0.36439 | 2.01492 | 0.50686 | 1.48136 | 0.46278 |
| Maximum | 16.29878 | 8.44140 | 9.006854 | 12.28260 | 25.77011 | 10.74728 |
| Minimum | 0.01322 | 0.00207 | 0.17641 | 0.00027 | 0.59986 | 4.00000 |
| Std. Dev. | 8.11206 | 4.15956 | 0.75218 | 0.79234 | 0.79250 | 0.70225 |
| Observations | 1937 | 1937 | 1957 | 1957 | 1941 | 1941 |

Source: Data processed, 2024

The data presented in Table 1 indicates that Malaysian manufacturing companies hold the top position for average CSAD value, while Thailand ranks lowest. The elevated CSAD value in Malaysia's market suggests a notable variance between individual share returns and the overall market returns for manufacturing firms. Conversely, the lower CSAD value in Thailand's market implies that individual asset returns align closely with the market returns for manufacturing companies overall. According to the capital asset pricing model's assumptions, the rational asset pricing model predicts that the dispersion of stock returns will rise linearly with absolute market returns (Chang et al., 2000). This is attributed to individual stocks having varying sensitivities to market returns. Herd behavior emerges when the rise in CSAD is less than the increase in market returns. Several studies indicate that a low CSAD suggests the likelihood of herd behavior, and vice versa (Economou, 2020; Noviliya & Prasetiono, 2017).

Malaysian manufacturing firms boast the highest average market rate of return (R_m), contrasting with Indonesia, where it is the lowest. Typically, market returns correlate positively with market risk, evident in the standard deviation. However, this pattern diverges in Indonesia, where despite having the lowest average R_m , it exhibits a high standard deviation, indicating elevated risk. In Malaysian and Thai manufacturing sectors, standard deviation similarly surpasses average R_m , though the margin is relatively minor.

A country's CSAD and RM typically correlate with those of other countries, as demonstrated by the manufacturing firms in Indonesia, Malaysia, and Thailand, as depicted in Table 2. The stronger the correlation coefficient, the more strongly connected a country's capital market is with those of other nations.

Table 2. Cross-Manufacturing Industry Correlation

| | Indonesia | | Malaysia | | Thailand | |
|-------------------|-------------------|------------------|-------------------|------------------|-------------------|------------------|
| | CSAD _I | R _{m I} | CSAD _M | R _{m M} | CSAD _T | R _{m T} |
| CSAD _I | 1.000000 | | | | | |
| R _{m I} | 0.987420 | 1.000000 | | | | |
| CSAD _M | 0.007213 | 0.001417 | 1.000000 | | | |
| R _{m M} | 0.007091 | 0.008051 | 0.141341 | 1.000000 | | |
| CSAD _T | 0.049982 | 0.046619 | 0.184809 | 0.034546 | 1.000000 | |
| R _{m T} | -0.066593 | -0.062554 | 0.045206 | 0.098422 | 0.213904 | 1.000000 |

Source: Data processed by using equation 1 and R_m , 2024

The data presented in Table 2 indicates that the correlation between Malaysia and Thailand in terms of CSAD is strong enough, reaching 0.185. This suggests that the integration among manufacturing firms in the capital markets of Malaysia and Thailand

is stronger than Malaysia with Indonesia also Thailand with Indonesia which is relatively low. The correlation of market returns among manufacturing firms in the capital markets of Indonesia and Malaysia, Indonesia and Thailand, and Malaysia and Thailand is notably weak. The correlation with Indonesia is negative, indicating that market returns of manufacturing companies in the Indonesian capital market move in the opposite direction to those in the Thai capital market. When R_m increases in the Indonesian capital market, it tends to decrease in the Thailand capital market. The strongest correlation in market returns is observed between the Malaysian and Thailand capital markets.

Asymmetric herding may manifest in varied market scenarios, specifically when market fluctuations lead to divergent investor responses, resulting in both upward and downward market movements. The findings from the tests on asymmetric herd behavior under various market conditions for manufacturing companies listed on the stock markets of Indonesia, Malaysia, and Thailand are depicted in Table 3.

Table 3. The outcomes of Herd Behavior in Asymmetric During Up and Down Market Days

| | Indonesia | Malaysia | Thailand |
|-----------------------------------|-------------------|------------------|------------------|
| Constant | 1.202(29.035)*** | 1.683(59.926)*** | 1.289(43.176)*** |
| $\gamma_1 D^{up} R_{mt} $ | 1.774(18.025)*** | 0.822(16.738)*** | 0.465(5.189)*** |
| $\gamma_2 (1 - D^{up})$ | 1.211(13.402)*** | 0.518(12.122)*** | 0.432(10.747)*** |
| $\gamma_3 D^{up} R_{m,t}^2$ | 0.001(2.002)** | 0.004(0.362) | 0.126(2.479)** |
| $\gamma_4 (1 - D^{up}) R_{m,t}^2$ | -0.155(-4.045)*** | 0.006(1.404) | 0.002(43.176) |
| R ² adj. (%) | 99.64 | 54.95 | 61.15 |

Note: *, **, *** indicate significance at the 10%, 5%, and 1% levels, respectively

Sources: Data processed by using equation 2, 2024

The data presented in Table 3 indicates that herd behavior among manufacturing companies listed on the Indonesian capital market occurs asymmetrically, specifically during downward market conditions, while it remains undetected during upward market trends, as evidenced by the notable negative coefficient γ_4 . The results of practical examinations conducted on the Indonesian capital market align with the research of (Economou, 2020; Mobarek et al., 2014; Philippas et al., 2013), indicating that asymmetric herding is prevalent during market down. In the manufacturing industry listed on capital markets of Malaysia and Thailand, there was no evidence of herd behavior in asymmetric observed when the market experienced either rises or falls. This is indicated by the positive but insignificant coefficients γ_3 and γ_4 for Malaysia, and a positive and significant coefficient γ_3 for Thailand, though it does not confirm the presence of asymmetric herd behavior. The outcomes of this study align with Nimanussornkul & Nimanussornkul (2021); and Kabir & Shakur, 2018, discoveries, indicating the absence of herding behavior during both upward and downward trends in the Thailand and Malaysia capital market. The outcomes of this study oppose the discoveries of Bui et al. (2015) who identified herding tendencies in the Malaysian stock market during both upward and downward market movements.

During market declines, the manufacturing sector of Indonesia's capital market shows herding conduct. This tendency typically arises from investor anxiety triggered by an influx of adverse news. As a result, Indonesia's capital market is dominated by younger investors, who are inclined to take riskier investment paths despite limited education (Rahmawati, 2021). Motivated by a sense of excitement, they are influenced to collectively follow market trends, thus driving herd behavior. During pessimistic

market conditions, investors typically tend to mirror market movements (Gleason et al., 2004). Prechter (2001) observed that herding tendencies become apparent during market fluctuations, propelled by investors' pursuit of maximizing gains while minimizing losses. A significant drop in the market can induce instability in the financial sector and spur substantial market fluctuations (Demirer & Kutun, 2006), posing risks to the stability of Indonesia's capital market. Asymmetric herding, which wasn't observed in the Malaysian and Thai capital markets' manufacturing sectors, suggests that investors don't excessively respond to market fluctuations, whether they're upward or downward. Decision-makers in manufacturing industry investments do not follow market movements because they perceive increased risk when many investors share the same inclination to buy in bullish markets and sell in bearish ones, thus leading to asymmetric herding.

Global factors are believed to potentially stimulate uneven herd behavior, although such influence may not be uniformly distributed worldwide. Table 4 presents the anticipated outcomes of asymmetric herd behavior within the manufacturing listed companies as observed in the capital markets of Indonesia, Malaysia, and Thailand.

Table 4. Estimates Results of Global Factors Drive Herd Behavior in Asymmetric

| | Indonesia | Malaysia | Thailand |
|---------------------------------|-------------------|-------------------|-------------------|
| Constant | 0.801(1.173) | -0.693(-0.715) | 1.367(2.744)*** |
| $\gamma_1 D^{up} R_{m,t} $ | 1.775(18.018)*** | 0.806(16.201)*** | 0.387(4.361)*** |
| $\gamma_2(1 - D^{up})$ | 1.209(13.482)*** | 0.499(11.317)*** | 0.409(10.149)*** |
| $\gamma_3 D^{up} R_{m,t}^2$ | 0.001(1.979)** | 0.006(0.630) | 0.133 (2.644)*** |
| $\gamma_4(1 - D^{up})R_{m,t}^2$ | -0.153(-4.041)*** | 0.007(1.652)* | 0.002(43.176) |
| $\gamma_5 FFR$ | 0.011(0.746) | -0.065(-2.871)*** | -0.135(-7.486)*** |
| $\gamma_6 WOP$ | 0.029(0.576) | 0.198(2.521)** | 0.011(0.159) |
| R ² adj. (%) | 99.64 | 55.75 | 63.61 |

Note: *, **, *** indicate significance at the 10%, 5%, and 1% levels, respectively

Sources: Data processed by using equation 3, 2024

The provided data in Table 4 suggests that global factors, particularly the US Fed Funds rate and world oil prices, do not promote herd behavior in asymmetric at manufacturing firms in the Indonesian stock market, particularly during market downturns. It's believed that herd behavior is more likely fueled by other factors not examined in this research such as news that raises issues and speculation, leading investors to react impulsively and follow market trends, thus fostering herd behavior. These results oppose Balcilar et al. (2014) viewpoint, which suggests that investors in the stock market seek speculative cues from the oil market as positive indicators and aim to achieve better returns by going against the prevailing market sentiment. The findings of this study also go against the research results of (Arisanti, 2020; Rahman & Ermawati, 2020), who previously stated that the US Fed Funds rate strongly promotes herd behavior in Indonesia.

Herd behavior is asymmetric within manufacturing firms listed on the Malaysian and Thailand stock exchanges and is more likely to be influenced by fluctuations in the US Fed Funds rate, as indicated by the notable negative coefficient γ_5 and significant. Conversely, alterations in global oil prices do not impact the manifestation of herd behavior within these nations. The US Federal Funds rate has been shown to prompt investors in manufacturing firms in Malaysian and Thai markets to be more reactive, viewing it as negative information affecting investment choices. Changes in the US Fed Funds rate announcement led to a collective response in Malaysia and Thailand's capital markets, as numerous stock analysts forecast the impact on stock prices, driving

investor actions, both rational and irrational, in their investment decisions (Arisanti, 2020). The absence of impact from global oil price changes on asymmetric herd behavior aligns with Rahman & Ermawati (2019) study, which similarly discovered no correlation between oil price fluctuations and herd behavior in the stock markets of Malaysia and Thailand. The time delay between fluctuations in oil prices impacting company revenues and, subsequently, the economy is necessary. However, since herding behavior is short-lived, demonstrating the direct impact of global oil prices on herding behavior is challenging (Kilian & Park, 2009).

CONCLUSION

This study seeks to detect herd behavior in asymmetric and explore the global factors that drive such behavior within the manufacturing industry listed on the stock markets of Indonesia, Malaysia, and Thailand. The findings of the study reveal that herd behavior is asymmetric within manufacturing firms listed on the Indonesian stock market and is observed solely during market downturns but not during upswings. This pattern usually stems from investor unease provoked by a surge of negative information. In the manufacturing sectors listed on the capital markets of Malaysia and Thailand, there was no indication of herd behavior in asymmetric observed during market movements, whether the market was up or down. The asymmetric herd behavior observed in manufacturing firms listed on the Indonesian stock market during market downturns isn't driven by global elements like the US Fed Funds rate or global oil prices. There's a suspicion that other factors, such as news triggering concerns and speculative activities, prompt investors to react impulsively, driving them to follow market trends and thereby fostering herd behavior in the Indonesian capital market. Meanwhile, in manufacturing firms listed on the Malaysian and Thailand stock exchanges, herd behavior tends to be more influenced by changes in the US Fed Funds rate with no discernible impact from fluctuations in world oil prices. The findings of this paper could contribute to the development of knowledge in the field of behavioral finance. Additionally, they could provide valuable insights to regulatory authorities responsible for overseeing capital markets in Indonesia, Malaysia, and Thailand. Such insights might help these authorities better predict and tackle herding behavior by refining trading regulations.

RECOMMENDATION

The findings from this research will inspire the governments in the capital markets of Indonesia, Malaysia, and Thailand to create strategies to minimize the emergence of herding behavior. This is particularly crucial during periods of fluctuation in manufacturing firms and overall capital markets, aiming to uphold market stability. Such measures are essential in mitigating excessive volatility and uncertainty, which hinder investors from optimizing asset allocation and diversification, and impede enterprises from accessing capital market funding effectively. This study still faces several limitations. It solely focuses on observing the manufacturing sector listed on the capital markets of countries considered as emerging markets within ASEAN. The research duration spans only 8 years, exclusively examines herd behavior in asymmetric conditions, alongside global factors influencing this behavior.

Future researchers are advised to broaden the scope by incorporating more ASEAN or Asian countries over an extended research period. Furthermore, exploring additional variables such as cross-country herding and the influence of developed

capital markets like those in the United States and Europe capital markets on ASEAN emerging stock markets would enhance the test outcomes, making them more valuable for advancing behavioral finance studies in the financial literature.

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