GATR Journal of Finance and Banking Review
Journal homepage: http://gatrenterprise.com/GATRJournals/JFBR/vol9_2024_issue1.html
J. Fin. Bank. Review 9(1) 27–37 (2024)

Insights into Herding Behavior in Indonesian Islamic Banks

Kamaludin[1] , Berto Usman[1] , Weni Susanti[2]*

[1]Universitas Bengkulu, Indonesia
[2]Universitas Tridinanti Palembang, Indonesia

ABSTRACT

Objective—This study investigates the phenomenon of herding behavior among investors in Indonesia's Shariah banks. In this situation, market participants tend to follow prevailing market trends without engaging in comprehensive fundamental analysis.

Methodology/Technique – Specifically, the research examines the influence of investors' religious understanding as a mediating variable on their decision-making processes within the Shariah financial sector. Notably, the study addresses whether investors are more inclined to mimic market movements or rely on independent analysis when investing in Sharia-compliant banks. It is commonly observed that rumors can precipitate rash trading decisions among investors, leading to the buying or selling of shares even in the absence of substantial changes in asset fundamentals (Bommel, 2003).

Findings –Employing a quantitative approach, this study utilizes path analysis to explore the impact of religious understanding on herding behavior. Although prior research has extensively investigated herding behavior, the introduction of religious understanding as a mediating variable offers a new dimension to assess the correlation between religiosity and market behavior. This aspect has not been widely examined in previous segmentations. The sample comprises data from 15 Islamic Banks in Indonesia, analyzed using associative data analysis techniques with AMOS software. Findings indicate significant positive relationships between stock returns and herding behavior, trading volume and herding behavior, and the level of Islamic understanding and herding behavior in these banks.

Novelty – However, these relationships do not hold when Islamic understanding is applied as a mediating variable. This suggests that the level of religious understanding acts as a direct influencer rather than a mediator in herding behavior among investors in Indonesian Islamic banks.

Type of Paper: Empirical

JEL Classification: G41, D81, C58.

Keywords: Herding behavior, Stock returns, Trading volume, Level of Understanding of Islam

Reference to this paper should be made as follows: Kamaludin; Usman, B; Susanti, W. (2024). Insights into Herding Behavior in Indonesian Islamic Banks, *J. Fin. Bank. Review*, 9(1), 27 – 37. https://doi.org/10.35609/jfbr.2024.9.1(1)

Introduction

Herding behavior is the tendency of investors or other market participants to follow the investment direction of others. This behavior is irrational as investors base their investment decisions not on available information or the fundamental value of a company, but rather on the actions of other investors or market noise.

* Paper Info: Revised: April 13, 2024
Accepted: June 30, 2024

* Corresponding author: Weni Susanti
E-mail: weni_susanti@univ-tridinanti.ac.id
Affiliation: Universitas Tridinanti Palembang, Indonesia

Investors engage in herding due to the lack of clear information, which encourages them to follow the behavior of other investors or previously formed consensus, thus saving time and resources in analyzing information. The presence of information asymmetry prompts investors to make different decisions, leading to irrational herding behavior among investors or what is known as herding behavior. This assumption suggests that domestic investors follow stock-selling decisions similar to foreign investors, indicating herding behavior (Kusuma et al., 2013). Herding behavior causes stock price changes that impact the return and risk of those assets, resulting in asset prices deviating from their fundamental value or experiencing mispricing (Chiang & Zheng, 2010 in Dharmawan, 2015). The Efficient Market Hypothesis (EMH) explains that stock prices reflect the information available in the market, including past information, current information, and unpublished information. Husnan (1998) states that an efficient capital market reflects all relevant information in security prices. The faster new information is reflected in security prices, the more efficient the capital market is, making it more challenging for investors to obtain abnormal returns. The availability of accurate information is a crucial factor for investors to know before deciding to invest, which can lead to the formation of an efficient market. However, the development of the Indonesian capital market in terms of trading systems, the number of issuers, and investment value is not accompanied by the level of efficiency required by a capital market. Fabozzi (1992) conducted research showing that the Indonesian Stock Exchange has not shown the level of efficiency required by a capital market. This is evidenced by the existence of anomalies in the Indonesian capital market, caused by information asymmetry leading to bias in the capital market.

Information bias can also be caused by rumors circulating among investors. Rumors easily spread among investors, leading them to sell or buy shares even if there are no fundamental changes in assets. Rumors influence investors in selling or buying shares (Van Bommel et al., 2007). Rumors circulating in the capital market lead to information asymmetry, causing investors to behave irrationally. Rational investors will try to analyze all available information. However, irrational investors will invest based on instinct, following others, and are not accustomed to analyzing information, resulting in irrational profits or losses. The research findings from Natapura (2009) show that 45% of investors exhibit emotional behavior in investing, making them irrational. Panic also often occurs during market shocks, causing investors to follow each other in selling shares, leading to a decrease in share prices. This can make share prices unpredictable and cause price instability in the market. This situation also makes the market inefficient. Therefore, traditional financial models cannot explain investor behavior in decision-making. Investor behavior that follows others can be termed as herding behavior.

The market perceives foreign investors to have higher quality information than domestic investors, often causing the market to overreact when there are large buy or sell actions. This perception leads local investors to transact in the same direction as foreign investors, indicating herding behavior (Kusuma et al., 2013). Herding behavior causes stock price changes that impact the return and risk of those assets, resulting in asset prices deviating from their fundamental value or experiencing mispricing (Chiang & Zheng, 2010 in Dharmawan, 2015). When there is mispricing, it means that stock prices do not reflect the information about the actual company condition; thus, herding behavior contradicts the Efficient Market Hypothesis (EMH). When stock prices on the Exchange deviate from the fundamental value for a long time, it will worsen the stock price volatility, eventually leading to bubbles and crashes on the Stock Exchange.

Research on herding behavior has been conducted extensively by previous researchers, but there is limited research conducted during the COVID-19 pandemic. This is because this phenomenon is a first-time experience that has never happened before. Using the CSAD method (Cross Section Absolute Deviation) from Chang, Cheng, and Khorana, several researchers have discussed the impact of COVID-19 on herding behavior. (Espinosa- Méndez & Arias, 2021) found strong evidence that the COVID-19 pandemic increased herding behavior in the European stock market. However, research conducted by Wu, Yang, and Zhao (2020) did not find herding behavior in the two Chinese stock markets (Shanghai and Shenzhen Stock Exchanges) during the COVID-19 pandemic. When the market experiences uncertainty, it leads to Informational Cascades, a situation where investors face uncertainty about information sources and market conditions, causing panic among investors concerned about their portfolio performance. During panic, investors will disregard fundamental or technical analysis and cause doubts about their analysis in stressful market conditions, tending to follow signals and behaviors of other investors perceived as more skilled to secure their portfolio performance (Lindhe, 2012). Such a situation indicates herding behavior.

Herding behavior is the tendency of investors to follow other investors in investing decisions. This behavior is irrational as investors base their investment decisions not on available information or the fundamental value of a company, but rather on the actions of other investors or market noise. Investors engage in herding due to the lack of clear information, which encourages them to follow the behavior of other investors or previously formed consensus, thus saving time and resources in analyzing information. In this context, Herding behavior is not only related to consumer behavior but also several aspects can be seen in Islamic Banks in Indonesia, including investor behavior in investment, policy impacts on Sharia rules, news influence, market sentiment, and global and local effects. With the majority of Indonesia's population being Muslim, does this have an important influence on making investments by comparing herding behavior in Indonesia's Islamic financial market with the global Islamic market or with the conventional financial market in Indonesia? The purpose of herding among investors is to make investment decisions quickly and validly without using too much time and resources. It also aims to minimize guilt when the investor's decision turns out to be incorrect (Natapura, 2009). Based on the above description, this study aims to determine and analyze whether stock returns, trading volume, and the level of understanding of Islam have a positive influence on the probability of herding behavior occurring in Islamic Banks in Indonesia and to determine and analyze whether the level of understanding of Islam plays a role in mediating the relationship between stock returns and trading volume on the probability of herding behavior occurring in Islamic Banks in Indonesia.

Literature Review

Herding Behaviour

Herding behavior is a phenomenon in which individuals tend to follow the majority decisions or actions taken by a group, without considering existing information or knowledge. This can occur in various contexts, including financial markets, where investors tend to follow market trends rather than making decisions based on fundamental information or independent analysis. The theory of herding behavior has been studied in relation to Return, Trading Volume, and the level of religious understanding.

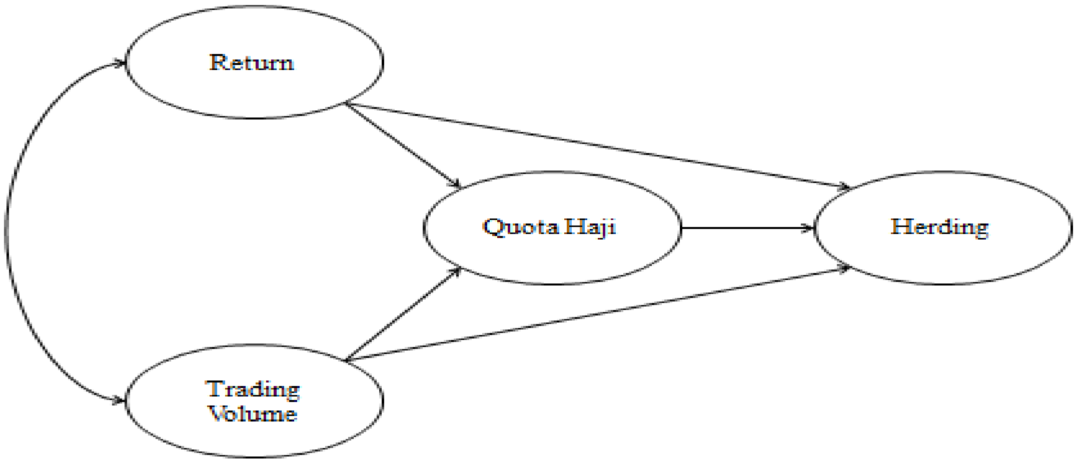


Figure 1. Theory of herding behaviour (Kai-Ineman & Tversky, 1979)

Herding behavior in the understanding of human behavior is related to cognitive biases and decision-making based on heuristics. Their works, such as "Prospect Theory" and research on "anchoring bias" and "availability heuristic," indirectly depict how Herding Behavior can occur in the context of decision-making. Herding has indeed been extensively researched in the American, European, and Asian markets. However, research examining how herding can be influenced by stock returns and trading volume while incorporating the variable of Islamic religious understanding as a mediating variable remains limited, especially in Indonesia.

Return and Herding Behavior

Return is the desired rate of return that investors aim for, which can be either realized return or expected return. Realized return is the return that has already occurred based on historical data, aimed at measuring a company's performance and serving as the basis for determining expected return and future risks. On the other hand, expected return is the return that investors anticipate in the future. Return is one of the factors considered by investors in their investment decisions. According to Tandeilin (2001), return consists of two components: yield and capital gain (loss). Yield refers to the income from an investment, which can be dividends or interest. Meanwhile, capital gain (loss) refers to the increase or decrease in the price of an asset, also known as the change in security prices. If this difference is positive, then investors will receive capital gain. (Wylie, 2005) stated that UK mutual funds experiencing herding behavior have performed well in the past. It can be concluded that the probability of herding also depends on a company's stock return. (Lakonishok et al., 1992) found that return contributes to the occurrence of herding. (Wylie, 2005) mentioned UK mutual funds experiencing herding. Based on these descriptions, the author formulates the first hypothesis:

Hypothesis I: *Return has a positive influence on the probability of herding behavior occurring in Sharia Banks in Indonesia.*

Trading volume and herding behavior

Stock trading volume is one of the indicators of market reaction to an announcement. According to (Ang & Choi, 1997), the approach of stock trading volume can be used as a proxy for market reaction. (Christoffersen & Tang, 2010) explain that high asymmetry occurs in less liquid markets. (Nautz, 2013) prove that trading volume correlates significantly positively, leading investors to have the opportunity to exhibit herding behavior. (Bohl & Siklos, 2005) state that low information quality and market transparency can lead to high levels of herding. (Nautz, 2013) conducted research on herding and trading volume. Trading volume correlates significantly positively, leading investors to have the opportunity to exhibit herding behavior. (Bohl & Siklos, 2005) state that low information quality and market transparency can lead to high levels of herding in developing markets. The Information-induced Herding theory (Froot et al., 1992) mentions that investors who can develop private information, thereby increasing trading activity, are encouraged to investigate the same stocks as traders with different information. In other words, investors who can develop their private information will also follow other investors with different information in investment decision-making, leading to herding behavior in the market. Based on the explanations above, the author formulates the second hypothesis:

Hypothesis II: *Trading volume has a positive influence on the probability of herding behavior occurring in Sharia Banks in Indonesia.*

The level of understanding of Islam and herding behavior

Azra (1999) stated that religion is a fertile ground to become a crying banner in carrying out anarchic actions, which are also based on readings and textual constructions within the religion itself. Similarly, according to Crawford (2000) in its relation to politics, religion is easily dragged into the realm of radicalism with the politicization of religion as an open source of radicalism, which is actually more based on the weakening of existing political systems and institutions. Based on these opinions, it is understood that due to the substance within religion, it is very easily dragged or involved in radicalism using various languages of sciences, such as ideological, political, socio-cultural, or economic languages. Strangely, in this aspect, the attitudes and behaviors of religious communities often manifest themselves in ambiguous interpretations of religious texts, leading to various harmful activities that destroy human values, even though such actions are never justified from the perspective of the same religious teachings. Nadia (2012) revealed that Islamic radicalism is associated with a narrow-minded movement that often uses violence to teach and defend their beliefs. Consequently, Islam, which was originally a religion guaranteeing salvation for the universe, becomes perceived as "fierce," and sympathizers of radical Islamic movements appear fierce and ferocious in the eyes of society.

Irham (2015) also stated in his research that if religious understanding is narrow and exclusive, it may tend to be closed off and not accept diversity. Etymologically, in English, the word for knowledge is "knowledge." In the Encyclopedia of Philosophy, knowledge is defined as "justified true belief" (Bakhtiar, 2013). In the Indonesian Dictionary, knowledge is defined as everything that is known; expertise: or everything known about a subject (subject matter) (Depdikbud, 1997). In terminology, according to (Gazalba, 1992), knowledge is what is known or the result of the work of knowing. This work of knowing is the result of recognition, awareness, consciousness, understanding, and proficiency. Based on these opinions, knowledge is everything that is known, which is the result of human recognition of something or all human efforts to understand a particular object, usually obtained through the contact of the five senses with a specific object.

The definition of religion in the Indonesian Dictionary means a system that regulates faith (belief) and worship to the Almighty God and the rules related to human interaction with God, other humans, and the environment (Depdikbud, 1997). According to (Nashori & Mucharam, 2002), religion is a divine decree revealed to His Prophets to be a guide for human life. The characteristics of religion are the relationship between creatures and the Creator, manifested in their inner attitudes, visible in their worship, and reflected in their daily behavior. Thus, religion covers three main issues: beliefs, worship, and rules. Based on these opinions, religion refers to all binding rules from Allah SWT through His Prophets that serve as a guide for human life vertically and horizontally, capable of bringing humans to achieve happiness in this world and the hereafter.

After understanding the definitions of knowledge and religion, it can be concluded that the term "religious knowledge" in this study refers to everything that is known, which is the result of students' knowledge of the teachings within their religion acquired through various learning activities, whether in the family, society, or community environment. Through this learning process, students have comprehensive knowledge of the teachings of their religion that they adhere to. Therefore, the level of religious knowledge of students indicates the level of knowledge and understanding of a person regarding the teachings of their religion, especially those contained in the holy scriptures or the guidelines of their religion. Based on the explanations above, the author formulates the third and fourth hypotheses:

Hypothesis III: *The level of understanding of Islam has a positive influence on the probability of herding behavior occurring in Islamic Banks in Indonesia.*

Hypothesis IV: *The level of understanding of Islam moderates the relationship between stock returns and trading volume on the probability of herding behavior occurring in Islamic Banks in Indonesia.*

Research Methodology

Sampling Method

The population of this study consists of all Islamic banks in Indonesia. Due to researcher limitations, the sample size of Islamic banks is determined to be 15 banks, namely: Bank Aceh Syariah; BPD Nusa Tenggara Barat Syariah; Muamalat Indonesia, Tbk; Victoria Syariah; BRI Syariah; BJB Syariah; BNI Syariah; Syariah Mandiri; Mega Syariah; Panin Syariah; Syariah Bukopin; BCA Syariah; BTPN Syariah; Net Indonesia Syariah; and BSI. The observation period is 7 years from 2015 to 2021, with monthly data for a total of 77 months.

Table 1 : Operationalization of Variables

No	**Variabel**	**Indikator**	**Referensi**
1	Herding Behaviour	Issued Securities (t) - Issued Securities (t-1)	Supardi (2005)
		Investment in Securities (t) - Investment in Securities (t-1)	
2	Return	Fixed Rate Yield	Tandeilin (2011)
		Floating Rate Yield	
3	Trading Volume	Issued Securities	Ang (1997)
		Investment in Securities	
4	The Level of Religious Understanding	The average level of participation in the Hajj pilgrimage (Allocation of Annual/Monthly Hajj Worship Quotas)	Government of Saudi Arabia (2021)

Source: Author 2021

Data analysis method

The type of analysis method used in this research is quantitative data analysis with associative data analysis type that utilizes mediation variables using AMOS as a tool for data analysis (Sugiyono, 2016).

Results and Discussion

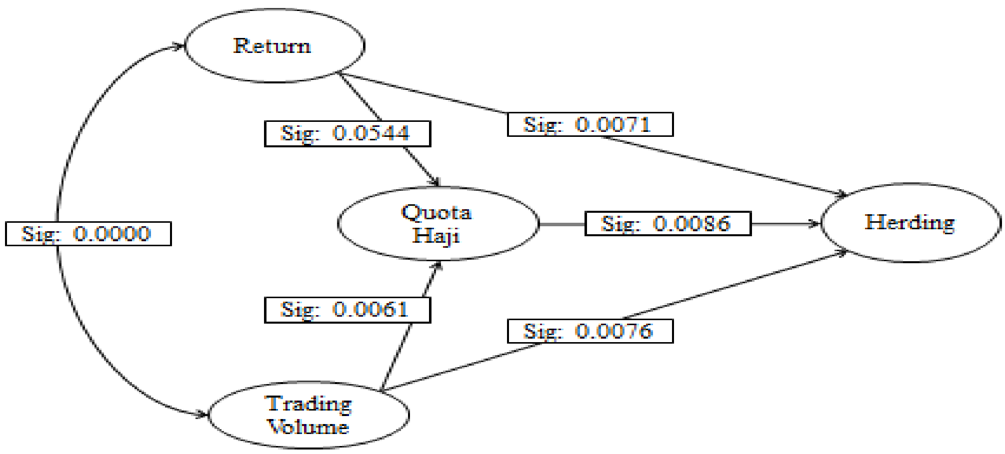
Description of Research Data

The "Return" referred to in this study consists of two supporting indicator items. Firstly, the return represented by fixed rate yield peaked in July 2021 at 195,266, and the return represented by floating rate yield peaked in December 2020 at 67,102. The highest trading volume for issued securities occurred in April 2019 at 70,663, and for investment in securities, it occurred in July 2020 at 70,035. The level of religious understanding is measured by the average value of the annual Hajj Pilgrimage Quota in Indonesia, which was 221,000 quotas from 2017 to 2020. Herding behavior can be observed from the movement of the value of issued securities, which decreased from 1,561 in December 2015 to 628 in 2020, and the movement of the value of investment in securities, which was 1,441 between 2015 and 2020 and decreased to 375.

Causality Test Results

Based on the significant values obtained, here is the explanation: Return to Hajj Quota has a significant value of 0.0544; Trading Volume to Hajj Quota has a significant value of 0.0061; Return to Herding has a significant value of 0.0071; Trading Volume to Herding has a significant value of 0.0076, and Hajj Quota to Herding has a significant value of 0.0086. This means that equations two to five have a significant and positive influence.

The Resulting Research Model



Source: Primary Data Processing, 2021

Figure 2 above illustrates the model formed from the previously raised analytical framework. It can be seen that all values on the lines indicate significant numbers, except for the relationship between return and Hajj quota (sig 0.0544 > 0.05).

Discussion

Stock returns and herding behavior at Islamic Banks in Indonesia

The causal relationship between these two variables (return and herding) is significant, indicating a significant and positive influence of stock return variables on herding behavior. These research findings are consistent with Fauziah and Rusmita (2019), who showed that investors in the Indonesian stock market tend to behave rationally. This is indicated by the significance value of $\gamma 2$ being greater than 0.05 at each quantile. Rahayu et al. (2019) concluded that herding behavior is a mimicking behavior exhibited by stock investors in their stock selection decision-making. Al-Homaidhi, M., & Al-Khazali, O. M. (2020) found that herding behavior exists in the Indonesian Sharia stock market. Asymmetric herding occurs in the Indonesian Sharia stock market where herding behavior only occurs when the market is declining. Herding occurs in almost all stock markets around the world. Factors contributing to herding behavior include negative news sentiment regarding analyzed stocks, incentives and career concerns of analysts, market risk and uncertainty at the company level, aggregate uncertainty, market uncertainty, extreme market conditions, high information flow periods, high volatility risk, analysis of smaller stock types, economic/financial crises, declining market conditions, interest rate increases, currency depreciation, poor information environment, and low disclosure quality. Herding is done to assess the extent to which herding behavior affects the movement of Islamic Bank stock prices, as well as its implications for market efficiency and investment decision-making by avoiding the risk of decision-making errors in selecting stocks that are difficult to assess because decisions made through herding follow decisions that are evolving among a number of analysts or other investors. This research focuses on Islamic banks or financial institutions operating on Sharia principles. This study also aligns with Behavioral Finance theory, which explains how psychological factors and human behavior influence financial decisions, including herding behavior.

Trading volume and herding behavior at Islamic Banks in Indonesia

The causal relationship between these two variables (trading and herding) is significant, indicating a significant and positive influence of trading volume variables on herding behavior. These research findings align with Wijaya and Meirisa (2015), who found that higher IHSG volatility results in increased market return uncertainty. (Wardhana & Tandelilin, 2011) revealed that high IHSG fluctuations indicate that the capital market is capable of quickly forming prices, thus impacting return fluctuations. The causal relationship between these two variables (trading and herding) is significant, indicating a significant and positive influence of trading volume variables on herding behavior. Return and investment risk in the capital market are considered high because securities prices can easily change, influenced by internal and external company factors (Samsul, 2015). Additionally, according to Hartono (2017), the higher the investment return on an asset, the greater the risk investors must bear. Herding behavior in this context refers to investors' tendency to follow the crowd in trending volume activities and investor behavior in Islamic banks without conducting careful fundamental analysis, aimed at understanding the extent to which trading volume is influenced by herding behavior in Islamic financial markets, and its impact on market efficiency and stock price dynamics. This research refers to Herding Behavior theory, which explains how investor decisions to follow the crowd in trading can create market trends that are not always based on fundamental information.

The Level of Understanding of Islam and Herding Behavior.

The causal relationship between the level of religious understanding and herding behavior is at a significant level, meaning there is a significant and positive influence of the variable of religious understanding on the variable of herding behavior. Not many studies have been conducted combining these two variables to examine their causal relationship. However, there is research by Rizvi, S. A., & Khan, H. M. (2018) which shows that religiosity, knowledge, and perception of quality have a positive and significant impact on the intention of customers to use Islamic banks in Indonesia. This research focuses on the level of understanding of Islam (such as understanding of Sharia principles) and herding behavior in Islamic financial markets but in this study, it looks at the interest of customers in opening savings accounts in Islamic banks in Indonesia. This study looks at investors or financial market participants based on Islam or operating in Sharia with the aim of understanding how the level of religious understanding influences investor herding behavior, as well as its impact on market efficiency and making investment decisions in line with Sharia principles. If we look at the number of Hajj quotas given, this can be one of the factors influencing how herding probability is formed in the market, especially in Sharia Commercial Banks in Indonesia. It has not been further analyzed whether a smaller quota will weaken this causal relationship and it has also not been further analyzed whether a larger quota will make this causal relationship stronger.

The mediating role of the level of understanding of Islam on the influence of stock returns and trading volume on the probability of herding behavior occurrence in Islamic banks in Indonesia.

In discussing this section, the author utilizes the Sobel test. The first Sobel test is on the path of the influence of stock returns on herding behavior mediated by the variable of the level of understanding of religion.

Sobel Test I

Exp	Input	Estimates	Test Statistic	p-value
ta	0.0544	**Sobel Test**	0.00849451	0.99322244
tb	0.0086	**Aroian Test**	0.00046713	0.99962728

Source: Primary Data Processing, 2021

If we look at the p-values generated from both the Sobel test and the Aroian test, all values are above the 0.05 level (Baron & Kenny, 1987; Bentler, 1987; Wijayanto, 2008; Hair, 2020). This implies that indirectly, the variable of religious understanding level (quota) is not capable of mediating. The second Sobel test is on the path of the influence of trading volume on herding behavior mediated by the variable of the level of understanding of religion.

Sobel Test II

Exp	Input	Estimates	Test Statistic	p-value
ta	0.0061	**Sobel Test**	0.00497547	0.99603017
tb	0.0086	**Aroian Test**	0.00005246	0.99995814

Source: Primary Data Processing, 2021

If we look at the p-values generated from both the Sobel test and the Aroian test, all values are above the 0.05 level (Baron & Kenny, 1987; Bentler, 1987; Wijayanto, 2008; Hair, 2020). This involves psychological, religious, and economic aspects in the context of Islamic finance. The mediating role of the level of understanding of Islam in the relationship between stock returns, trading volume, and the probability of herding behavior occurrence in Islamic banks in Indonesia, which focuses on Shariah-compliant banks, aims to identify the extent to which the level of understanding of Islam influences stock returns and trading volume regarding the possibility of herding behavior. The implications of these findings suggest that indirectly, the variable of the level of understanding of Islam (quota) is not capable of mediating. Based on the two tables (Table 4.6 and Table 4.7), it is explained that although the variable of the level of understanding of Islam (quota) has an influence on the herding variable, this does not apply if this variable is used as a mediating variable. Thus, it can be said that the level of understanding of Islam (quota) is a variable that must stand alone and cannot act as a mediating variable also known as partial mediation, because of the direct influence without mediation.

Conclusions and Recommendations

The relationship between stock returns, trading volume, the level of understanding of Islam, and herding behavior in Islamic banks in Indonesia has a positive influence. Herding behavior refers to investors' tendency to follow market trends without conducting an in-depth analysis of the intrinsic value of an asset or financial instrument, which includes Islamic economic principles such as justice and transparency that affect investors in their investment decisions, especially. On the other hand, the mediating role of the level of understanding of Islam on the influence of stock returns and trading volume on the probability of herding behavior occurrence in Islamic banks in Indonesia does not mediate the influence or is also known as partial mediation. This encompasses psychological aspects in financial decision-making, including herding behavior, and how religious understanding influences herding behavior.

For investors, herding behavior does not necessarily indicate a high level of return. Therefore, investors should use and deepen fundamental analysis when making investment decisions. Subsequent researchers are expected to conduct a more in-depth study on herding behavior using a larger sample size and extending the observation period to further explore the behavior related to herding.

References

Ang, B. W., & Choi, K.-H. (1997). Decomposition of aggregate energy and gas emission intensities for industry: a refined Divisia index method. *The Energy Journal*, *18*(3), 59–73.

Beverly Crawford, “Identity Politics: An Institutional Approach,” in Journal Gate, Number 10, Vol. IV, June –August 2001,

Bikhchanadani dan Sharma (2001) Impact of cognitive profile and information uncertainty on herding behavior of investor. *IOSR Journal of Business and Management*, *16*(1), 68-74.

Bohl, M. T., & Siklos, P. L. (2005). *Trading Behavior During Stock Market Downturns: The Dow, 1915-2004*. Univ., Department of Economics.

Christoffersen, S. K., & Tang, Y. (2010). Institutional herding and information cascades: Evidence from daily trades. *Available at SSRN 1572726*.

Froot, K. A., Scharfstein, D. S., & Stein, J. C. (1992). Herd on the street: Informational inefficiencies in a market with short-term speculation. *The Journal of Finance*, *47*(4), 1461–1484.

Gazalba, S. (1992). Systematics of Philosophy. *Jakarta: Bulan Bintang*.

Hsieh, S. F. (2013). Individual and institutional herding and the impact on stock returns: Evidence from Taiwan stock market. *International Review of Financial Analysis*, *29*, 175-188.

Jinghan Chen, Xiao, dan Peng Cheng (2008) The small world of investing: Board connections and mutual fund returns. *Journal of Political Economy*, *116*(5), 951-979.

Kai-Ineman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, *47*(2), 263–291.

Lakonishok, J., Shleifer, A., & Vishny, R. W. (1992). The impact of institutional trading on stock prices. *Journal of Financial Economics*, *32*(1), 23–43.

Mi, Z.-H., Sun, Y., Wang, G.-W., Pan, W.-M., Li, Z.-Q., Dai, J.-P., Ma, Q., Lin, H.-Y., Liu, Y.-P., & Xu, B. (2012). Horizontal test for BEPCII 500 MHz spare cavity. *Chinese Physics C*, *36*(10), 99

Nofsinger, J. R., & Sias, R. W. (1999). Herding and feedback trading by institutional and individual investors. *The Journal of finance*, *54*(6), 2263-2295.

Nashori, F., & Mucharam, R. D. (2002). Developing Creativity in Islamic Psychology Perspective. *Yogyakarta: Kudus Tower*.

Nautz, D. (2013). *Herding in financial markets: Bridging the gap between theory and evidence*. Berlin School of Economics.

Rajendra Wisnu Tristantyo (2014) Is There Herding Bias in Tax Amnesy? The Indonesian Case. *International Journal of Accounting and Taxation*, *5*(2), 100-106.

Sugiyono, S. (2016). Combination research methods (mixed methods). *Alfabeta, Bandung*.

Van Bommel, L., Bij de Vaate, M. D., De Boer, W. F., & De Iongh, H. H. (2007). Abstract. *African Journal of Ecology*, *45*(4), 490–498.

Wardhana, L. I., & Tandelilin, E. (2011). Institutional ownership and agency conflict controlling mechanism. *Journal of Indonesian Economy & Business*, *26*(3), 389–406.

Wylie, S. (2005). Fund manager herding: A test of the accuracy of empirical results using UK data. *The Journal of Business, 78*(1), 381–403.