MULTIFINANCE
Jurnal Ekonomi, Manajemen Dan Perbankan

Altin Riset Publishing
http://altinriset.com/journal/index.php/multifinance
E-ISSN: 3024-8175
Vol. 2, No. 2 November 2024

BEHAVIORAL FINANCE: THE IMPACT OF HERDING BEHAVIOR ON INVESTMENT DECISIONS

(The Case Of Companies Listed In The Lq-45 Index In The Indonesian Stock Exchange (BEI) For The Period 2018-2020)

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Abstract

The purpose of this study is to describe and analyze the effect of herding behavior on investment decisions in companies included in the LQ-45 index of the Indonesia Stock Exchange (IDX) for the period 2018-2022 Research method will use descriptive verification method. To test the hypothesis to determine the influence or causal relationship of the hypothesis that has been proposed. In this study, the verification method is used to determine how much influence herding behavior has on investment decisions. Findings show the results of hypothesis testing that, the independent variable herding behavior has a positive and significant effect on investment decisions, which means that with the panic of investors over the unclear sources of information and market conditions that will affect portfolio performance or can be said to be informational cascades conditions cause the loss of objectivity of an investor and lead to an irrational attitude so that investment decisions are made by following signals and information owned by other investors who are considered high skilled to be used as a reference for portfolio performance. Value, according to the test results that have been carried out, the herding behavior variable results in a coefficient value of 1.61 with a significance level of 0.0198 <0.05, and the test results for the Coefficient of Determination in this study, show an RSquare value of 0.081119, meaning that 8.1% of the dependent variable Investment Decision can be explained by the independent variable, namely Herding Behavior. For 91.9% can be explained by other factors outside of Herding Behavior.

Keywords: Financial Behavior, Herding Behavior, Investment Decision, financial freedom

Abstrak

Tujuan dari penelitian ini adalah untuk mendeskripsikan dan menganalisis pengaruh herding behavior terhadap keputusan investasi pada perusahaan yang termasuk dalam indeks LQ-45 Bursa Efek Indonesia (BEI) periode 2018-2022 Metode penelitian akan menggunakan metode deskriptif verifikatif. untuk menguji hipotesis guna mengetahui pengaruh atau hubungan kausal dari hipotesis yang telah diajukan. Dalam penelitian ini, metode verifikatif digunakan untuk mengetahui seberapa besar pengaruh herding behavior terhadap keputusan investasi. Temuan menunjukkan hasil pengujian hipotesis bahwa, variabel independen herding behavior berpengaruh positif dan signifikan

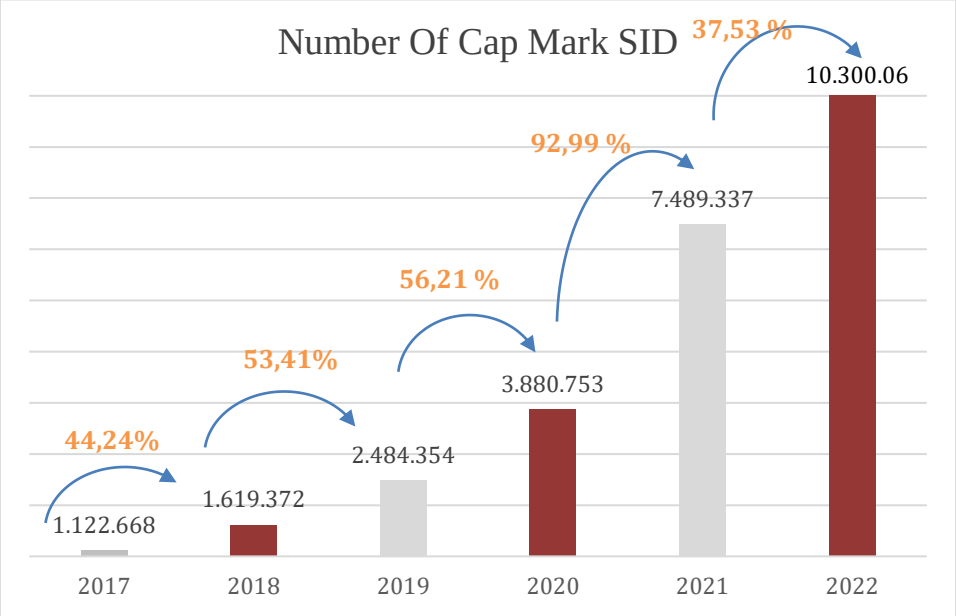
terhadap keputusan investasi, yang berarti dengan adanya kepanikan investor atas ketidakjelasan sumber informasi dan kondisi pasar yang akan mempengaruhi kinerja portofolio atau dapat dikatakan kondisi informational cascades menyebabkan hilangnya objektivitas seorang investor dan mengarah pada sikap yang tidak rasional sehingga keputusan investasi yang dilakukan dengan mengikuti sinyal dan informasi yang dimiliki oleh investor lain yang dianggap high skilled untuk dijadikan acuan kinerja portofolio. Nilai, berdasarkan hasil pengujian yang telah dilakukan, variabel herding behavior menghasilkan nilai koefisien sebesar 1,61 dengan tingkat signifikansi 0,0198 < 0,05, dan hasil uji Koefisien Determinasi pada penelitian ini, menunjukkan nilai RSquare sebesar 0,081119, artinya 8,1% variabel dependen Keputusan Investasi dapat dijelaskan oleh variabel independen yaitu Herding Behavior. Sebesar 91,9% dapat dijelaskan oleh faktor-faktor lain diluar Herding Behavior.

Kata kunci: *Perilaku Keuangan, Herding behavior, Keputusan Investasi, kebebasan finansial*

Introduction

This digital era with very rapid growth and increased literacy that is being renewed after the COVID-19 pandemic, will certainly have a huge impact on human life. It cannot be denied that the situation experienced yesterday with the COVID-19 pandemic helped the growth of buying company shares in the capital market because business activities were restricted and many activities were carried out from home so people had to find other ways to keep earning income so that many people decided to buy and sell shares online (Rosid et al., 2024). To achieve hierarchical goals in the new normal during the current pandemic and endemic, humans need financial freedom often referred to as financial freedom. Financial freedom is the condition of someone who can fulfill their needs with the desired lifestyle and achieve considerable savings. Someone who already has financial freedom still has to manage their funds, the allocation of these funds will usually be used for consumption, savings, and investment (Atif Sattar et al., 2020).

The fund allocation that is usually used as passive income by most people is an investment. Investment is an activity carried out to allocate funds to one or several types of assets that are expected to generate income and increase the value of these assets in the future, someone who invests or allocates their funds to be used as capital for a company is called an investor, according to bareksa.com the number of investors in the capital market as of December 2021 was 7.48 million investors to 10.3 million investors as of December 28, 2022, which means the number of investors has increased by 37.5%. Investor growth can also be seen in the average transaction volume which increased by 16% to reach 23.9 billion shares compared to last year. This can be seen in the graph below:



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Sourse : KSEI; bareksa.com

Description :

*) Grow 10x

**) Percentage of investors

***) Number of capital market individual investors as of December 26, 2022

Figure. Growth Chart of Stock Investors (2017-December 2022)

The increase in investors that has been shown by the graph above, must be accompanied by the quality of investors who know how to buy and sell shares, because if the increase in investors that is happening now without being accompanied by education related to the capital market and buying and selling shares will lead to the tendency of new investors in the euphoria of rising stock prices which causes herding (Robin & Angelina, 2020).

The investment decision is a decision taken by investors in purchasing funds or assets that are expected to generate future profits, during the investment decision process, an understanding of the relationship between return expectations and investment risk also needs to be studied. Investment decisions are the basic things that must be understood by an investor to be applied not only in investing in stocks but in all investment products, the purpose of which is clear to maximize the profit to be obtained and reduce the risks and losses that will arise in the future (Almansour et al., 2023). Investment decisions are not only related to information and data processing but are related to the investment plan that will be carried out by an investor to succeed in the next investment process after making investment decisions(Ahmad & Wu, 2022) .

The investment decision chosen by an investor will describe the processing of information and data owned, if the results of the investment decision produce a return by investor expectations, then the data processing and forecasting process is accurate. Many factors influence investors in making decisions when making investments, one of which is social factors, namely herding. Herding is the behavior of an irrational investor making investment decisions with a tendency to follow the investment decisions of other investors, the highly irrational attitude possessed by an investor is due to a lack of planning, information, and data which will then be analyzed fundamentally and

technically. If an investor tends to have herding behavior, it will cause changes in stock prices that will have an impact on asset returns and risk, resulting in mispricing (Din et al., 2021; Mittal, 2019).

This herding behavior is one way that an investor avoids the risk of loss because it is considered that the decisions and information owned by other investors who are used as role models are expected to meet the high expectations of these investors in generating high returns (Shukla et al., 2020). The phenomenon of herding behavior is indicated due to the panic of investors over the unclear sources of information and market conditions that will affect the performance of their portfolios or can be said to be informational cascades, this situation was felt by investors yesterday during the COVID-19 pandemic. When an investor is faced with a risky situation, there will be objectivity, emotions, and other psychological factors that will influence the investment decision of the investor (Suresh, 2024; Yasmin & Ferdaous, 2023). With this factor, it causes panic which causes behavior that has an impact on the loss of objectivity of an investor in decision-making and fundamental and technical analysis, because of this phenomenon, it cannot be beaten that all investors have made investment decisions with careful calculation and consideration.

So that it will lead to irrational attitudes and irrational behavior, so that it will give rise to irrational attitudes and doubts about the information held in market stress conditions (when stock returns are very low), especially with the current state of technological development which raises many influencers regarding trading or buying and selling shares so that it raises a tendency to follow signals and information owned by other investors who are considered high skilled to be used as a reference so that portfolio performance can be secured, as well as the easier it is for people to access trading platforms to buy and sell shares and there is a change in orientation in investments that should expect results for the long term to expectations for the short term, because usually investors who expect profits for the long term have analyzed the fundamentals of the company that will be chosen as a place to invest so that the capital market situation that is unstable and stock prices are falling will not affect because these investors believe that good fundamental analysis will help stock prices return to normal. Meanwhile, investors who have an orientation only for the short term tend to follow the market trend only. Herding behavior is likely to occur in Indonesian investors because Indonesia is an emerging market country, which means that the economy of the Indonesian state is developing and beginning to engage with the global market as it develops.

Research Method

Based on the main issues to be discussed in this study, researchers will use descriptive verification methods. Descriptive verification research with a quantitative approach, descriptive research is research conducted to determine the value of independent variables, be it one or more variables (independent) without making comparisons or connecting with other variables (Barlian, 2018). Meanwhile, verification research is a method carried out on certain populations or samples with the aim of testing predetermined hypotheses (Barlian, 2018). testing a predetermined hypothesis (Barlian, 2018), this verification method is usually used to determine the effect or causal relationship of the hypothesis that has been proposed. In this study, the verification method is used to determine how much influence herding behavior has on investment decisions.

In this research, the authors set a proxy to measure herding behavior using the estimation approach of Cross-Sectional Absolute Deviation (CSAD). The most appropriate measurement to detect herding is to measure the dispersion value between stock returns and market returns which can later show how close the difference in the value of individual stock returns is to market returns

(Kartini & Nahda, 2021; Rehan et al., 2021). In the investment decision process, investors must calculate the analysis and information that has been obtained. The calculation that can be used in this investment decision process is ICF (Investing Cash Flow). Cao et al., (2021), where Investing Cash Flow is cash inflows and outflows originating from capital expenditure activities, company mergers, and acquisitions as well as purchases or sales of company securities. Herding Behavior and Investment Decision data are obtained in Table 1 below.

Table. Financial Data of *Herding Behavior dan* Investment Decision

COMPANY	YEAR	*HERDING BEHAVIOR*	INVESTMENT DECISION
AKRA	2018	124,376	385.813.753
AKRA	2019	28,0468	779.297.473
AKRA	2020	-15,008	(139.352.627)
ANTM	2018	-92,658	(2.593.809.364)
ANTM	2019	-48,488	(885.313.400)
ANTM	2020	-683,5	(567.381.567)
ASII	2018	-16,696	(29.731.000.000)
ASII	2019	59,8572	14.197.000.000
ASII	2020	-28,965	13.133.000.000
BBCA	2018	-71,114	20.627.654
BBCA	2019	-99,408	(34.732.414)
BBCA	2020	-22,273	(44.117.844)
BBNI	2018	27,3506	9.611.702
BBNI	2019	32,7211	13.483.654
BBNI	2020	-18,427	(11.992.116)
BBRI	2018	-18,809	(26.999.124)
BBRI	2019	-74,934	(5.188.301)
BBRI	2020	-25,08	(116.007.831)
BBTN	2018	95,6551	1.689.493
BBTN	2019	58,1305	7.077.106
BBTN	2020	-108,3	(23.726.876)
BMRI	2018	63,6861	21.041.189
BMRI	2019	-21,716	(16.251.888)
BMRI	2020	20,5981	33.313.371
BSDE	2018	94,8118	2.651.717.327.363
BSDE	2019	-7,8707	(1.969.149)
BSDE	2020	-113,07	(1.005.506)
EXCL	2018	-75,224	(6.203.352)
EXCL	2019	14,6096	8.692.000
EXCL	2020	-38,051	(5.497.900)
GGRM	2018	-8,9245	(3.227.776)
GGRM	2019	147,772	4.718.278
GGRM	2020	77,6027	5.048.267
HMSP	2018	83,7896	333.951

HMSP	2019	192,027	56.710
HMSP	2020	91,5944	863.728
ICBP	2018	-68,781	(4.712.882)
ICBP	2019	-35,427	(2.399.814)
ICBP	2020	53,5421	34.957.389
INDF	2018	102,837	11.223.682
INDF	2019	-118,08	(583.826)
INDF	2020	17,0788	37.636.597
INTP	2018	24,5163	505.092
INTP	2019	-20,074	(1.045.966)
INTP	2020	47,4597	661.734
JSMR	2018	131,356	7.178.664.161
JSMR	2019	-98,317	(15.914.544)
JSMR	2020	-125,83	(24.183.096)
KLBF	2018	25,1884	1.289.828.516.617
KLBF	2019	-28,574	(1.900.541.453.691)
KLBF	2020	9,70994	951.215.261.376
MNCN	2018	196,878	1.625.457
MNCN	2019	-376,96	(1.332.132)
MNCN	2020	26,1302	1.171.682
PTBA	2018	-239,04	(1.576.781)
PTBA	2019	143,914	3.784.778
PTBA	2020	-56,628	113.585
PTPP	2018	113,775	4.038.843.365.603
PTPP	2019	31,482	3.025.576.173.698
PTPP	2020	-436,9	(3.384.037.650.800)
SCMA	2018	91,2013	234.414.911
SCMA	2019	78,2367	1.102.474.720
SCMA	2020	-374,74	(228.209.548)
SMGR	2018	-109,2	(1.789.031)
SMGR	2019	-29,662	(17.160.548)
SMGR	2020	-78,78	(2.251.194)
TLKM	2018	55,8008	35.090.000.000
TLKM	2019	-24,24	(35.791.000.000)
TLKM	2020	40,3326	35.256.000.000
UNTR	2018	89,6844	27.730.809
UNTR	2019	73,2857	9.757.541
UNTR	2020	-117,84	(2.594.328)
UNVR	2018	75,3125	1.942.485
UNVR	2019	24,7197	1.446.845
UNVR	2020	306,443	690.216
WIKA	2018	-44,049	(6.068.318)
WIKA	2019	-97,404	(4.043.690)
WIKA	2020	-223,86	(5.232.493)

Source: PT BEI secondary data processed

Result and Discussion

Herding Behavior is the tendency of an investor to imitate the actions of other investors in making investment decisions using the general direction of market movements by ignoring the data, information, and analysis already owned. The following is data on Herding Behavior in companies listed in the LQ-45 index for the 2018-2020 period as measured by Cross-Sectional Absolute Deviation (CSAD).

	X
Mean	-16.94091
Median	-8.397574
Maximum	306.4430
Minimum	-683.4974
Std. Dev.	142.1796
Skewness	-1.845250
Kurtosis	9.201771
Jarque-Bera	169.2657
Probability	0.000000
Sum	-1321.391
Sum Sq. Dev.	1556557.
Observations	78

Source: Processed Secondary Data

Figure 4. Descriptive Statistical Results of Herding Behavior Variables

Based on the data that has been processed, the minimum value of Herding Behavior occurred in 2020 at the Aneka Tambang (Persero) Tbk company -683.5. The minimum value shown in Figure 4.2, explains that the Herding Behavior tendency that occurred in the 2018-2020 range reached the lowest value of -683.5. The maximum value obtained in 2020 at the Unilever Indonesia Tbk company amounted to 306.443. The value shown explains that in the 2018-2020 range, the Herding Behavior tendency that occurred in LQ-45 Index investors reached the highest value of 306,443. The average value of the Herding Behavior variable is -16.94091, for a Standard Deviation Value of 142.1796. The resulting Standard Deviation value explains that in this study the data processed for the Herding Behavior variable experienced a large data spread and the variation of data was quite wide.

Description of Investment Decision

Investment decision is the process of processing information owned by an investor to produce conclusions about the value or results that will be obtained in the future and the selection of existing alternatives to avoid risk. The following is data on Investment Decisions in companies listed in the LQ-45 index for the 2018-2020 period as measured by Investing Cash Flow (ICF).

	Y
Mean	8.60E+10
Median	223768.0
Maximum	4.04E+12

Minimum	-3.38E+12
Std. Dev.	8.02E+11
Skewness	1.437235
Kurtosis	16.68504
Jarque-Bera	635.5146
Probability	0.000000
Sum	6.71E+12
Sum Sq. Dev.	4.96E+25
Observations	78

Source: Processed Secondary Data

Figure 5. Descriptive Statistical Results of Investment Decision Variables

Based on the data that has been processed, the minimum value of the Investment Decision occurred in 2020 in the PP (Persero) Tbk company amounting to -3.38. The minimum value shown in Figure 4.3 explains that in the 2018-2020 range, the Investment Decision made by investors in LQ-45 Index stocks reached the lowest point of -3.38. The maximum value obtained in 2018 at the PP (Persero) Tbk company amounted to 4.04. This value explains that in the 2018-2020 range, the Investment Decision variable from LQ-45 Index investors reached the highest point of 4.04. The average value of the Investment Decision variable is 8.06, for the Standard Deviation Value of 8.02. This value explains that in this research the data processed for the Investment Decision variable is less varied and more accurate with the mean/average.

Numerical Results

After performing Panel Data Regression Analysis using 3 (three) approaches, namely the Chow Test, Hausman Test, and Lagrange Multiplier Test. This study will use the Random Effect Model, the following are the results of data processing with a predetermined model estimation method.

Dependent Variable: Y				
Method: Panel EGLS (Cross-section random effects)				
Date: 07/13/23 Time: 14:22				
Sample: 2018 2020				
Periods included: 3				
Cross-sections included: 26				
Total panel (balanced) observations: 78				
Swamy and Arora estimator of component variances				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.13E+11	9.60E+10	1.179325	0.2419
X	1.61E+09	6.75E+08	2.381045	0.0198

Source: Processed Secondary Data

Figure 6. Panel Data Regression Analysis Results

The regression equation results are obtained as below: Y = 1.13 + 1.61*X + [CX=F]

α = 1.13 means that the Herding Behavior (X) variable is constant. Then the Investment Decision variable (Y) will be worth 1.13 significant units at an alpha of 5%. β1 = the result of the Herding Behavior regression coefficient shows that the greater the Herding Behavior (X), the more the Investment Decision (Y) will increase. Vice versa, if the value of Herding Behavior (X) is small, the Investment Decision (Y) will decrease.

Proposed Improvements

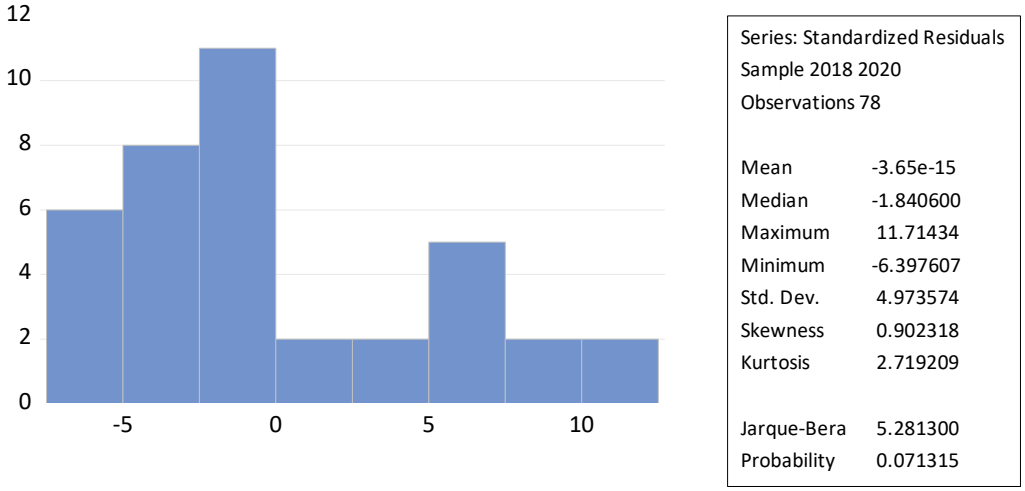
Studies with titles or the topic of herding behavior and investment decisions will be better and deeper if the data is primary, where the data is collected by distributing qualitative questionnaires so that indicators of behavior and investment decisions explore the psychological factors of the respondents.

Validation

The classical assumption test is a test that aims to provide certainty that the regression equation obtained has accuracy in estimation, is unbiased, and is also consistent. For classical assumption testing in this study, we will use the normality test, heteroscedasticity test, multicollinearity test, and autocorrelation test.]

Normality Test

Data processing for the normality test of this study obtained the following results:



Source: Processed Secondary Data

Figure 7. Normality Test Results

Indicates that the normality test results for this study are normally distributed because the resulting probability value is 0.071315. It can be said to be normally distributed because the probability value is> 0.05. The results of the normality test for this study are normally distributed because the resulting probability value is 0.071315. It can be said to be normally distributed because the probability value is> 0.05.

Heteroscedasticity Test

A research model that can be said to be good if there is no heteroscedasticity. This study is to conduct a Heteroscedasticity test with the following results.

Panel Period Heteroskedasticity LR Test	

Equation: UNTITLED				
Specification: Y C X				
Null hypothesis: Residuals are homoskedastic				
	Value	df	Probability	
Likelihood ratio	1.824773	21	1.0000	
LR test summary:				
	Value	df		
Restricted LogL	-114.3702	36		
Unrestricted LogL	-113.4579	36		

Source: Secondary data processed

Figure 8. Heteroscedasticity Test Results

Shows the probability value of the Heteroscedasticity test for this study is 1.00. So it can be said that this research is free from Heteroscedasticity problems.

A regression model can be said to be good if there is no correlation or relationship between the independent variables. For this test, you can use the tolerance value and VIF value (Variance Inflation Factordwith the following results.

Multicollinearity Test

A regression model can be said to be good if there is no correlation or relationship between independent variables. For this test, you can use the tolerance value and VIF value (Variance Inflation Factordwith the following results:

	Coefficient	Uncentered	Centered
Variable	Variance	VIF	VIF
C	18.71493	27.97277	NA
X	1.086649	27.97277	1.000000

Source: Processed Secondary Data

Figure 9. Multicollinearity Test Results

Figure 4.6. shows the VIF value for Herding Behavior (X) of 1.00. The VIF value in the test is <10, which means that for this study there is no multicollinearity problem.

Autocorrelation Test

Autocorrelation is carried out to test whether in a linear regression model between confounding errors in period t and confounding errors in the previous period. If there is a correlation, it can be called an autocorrelation problem.

Root MSE	7.64E+11
Mean dependent var	8.60E+10
S.D. dependent var	8.02E+11

Sum squared resid	4.55E+25
Durbin-Watson stat	1.965534

Source: Processed Secondary Data

Figure 10. Autocorrelation Test Results

The autocorrelation test results are indicated by the Durbin-Watson Stat value of 1.965534. With the Durbin Watson (DW) value which is between the Durbin Upper (DU) range of 1.6581 and 4-Durbin Upper (4-DU) -2.3419, it can be said that the data in this study are free from autocorrelation problems.

Hypothesis Testing.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.13E+11	9.60E+10	1.179325	0.2419
X	1.61E+09	6.75E+08	2.381045	0.0198

Source: Processed Secondary Data

Figure 11. Hypothesis Test Results

Figure 11. shows the results of hypothesis testing with a probability value of Herding Behavior of 0.0198, this value is <0.05. This means that H_0 is rejected and H_a is accepted, the independent variable Herding Behavior (X) has a positive and significant effect on Investment Decisions.

Conclusion

The Herding Behavior variable results in a coefficient value of 1.61 with a significance level of 0.0198 <0.05. It can be concluded that the Herding Behavior (X) variable has a positive and significant effect on Investment Decisions (Y), meaning that the panic of investors over the unclear sources of information and market conditions that will affect portfolio performance or can be said to be informational cascades conditions causes a loss of objectivity of an investor and creates an irrational attitude so that he makes investment decisions by following signals and information owned by other investors who are considered high skilled to be used as a reference for portfolio performance. The results of this study are in line with the research of Dila and Halmawati (2019) which proves that the Herding Behavior variable has a positive or significant effect because every increase in herding bias by one unit will also increase investment decisions by 0.778. Research by I Wayan Rona & Ni Kadek Sinawarti (2021) also shows that hypothesis 1 is accepted, meaning that herding bias has a positive and significant effect on investment decision-making. Investment behavior increases, for example, when investors do not have references and sources of information and tend to be easily influenced by other investor actors. Similarly, the level of herding bias will decrease when investors already have complete sources of information, facts, data, and references. The test results for the coefficient of determination in this study, show the RSquare value of 0.081119, meaning that 8.1% of the dependent variable Investment Decision can be explained by the independent variable, namely herding behavior. 91.9% can be explained by other factors apart from herding behavior.

References

Ahmad, M., & Wu, Q. (2022). Does herding behavior matter in investment management and perceived market efficiency? Evidence from an emerging market. *Management Decision*, *60*(8), 2148–2173. https://doi.org/10.1108/MD-07-2020-0867

Almansour, B. Y., Elkrghli, S., & Almansour, A. Y. (2023). Behavioral finance factors and investment decisions: A mediating role of risk perception. *Cogent Economics & Finance*. https://www.tandfonline.com/doi/abs/10.1080/23322039.2023.2239032

Atif Sattar, M., Toseef, M., & Fahad Sattar, M. (2020). Behavioral Finance Biases in Investment Decision Making. *International Journal of Accounting, Finance and Risk Management*, *5*(2), 69. https://doi.org/10.11648/j.ijafrm.20200502.11

Barlian, E. (2018). *METODOLOGI PENELITIAN KUALITATIF & KUANTITATIF*. OSF. https://doi.org/10.31227/osf.io/aucjd

Cao, M. M., Nguyen, N.-T., & Tran, T.-T. (2021). Behavioral Factors on Individual Investors' Decision Making and Investment Performance: A Survey from the Vietnam Stock Market. *The Journal of Asian Finance, Economics and Business*, *8*(3), 845–853. https://doi.org/10.13106/jafeb.2021.vol8.no3.0845

Din, S. M. U., Mehmood, S. K., Shahzad, A., Ahmad, I., Davidyants, A., & Abu-Rumman, A. (2021). The Impact of Behavioral Biases on Herding Behavior of Investors in Islamic Financial Products. *Frontiers in Psychology*, *11*. https://doi.org/10.3389/fpsyg.2020.600570

Kartini, K., & Nahda, K. (2021). Behavioral Biases on Investment Decision: A Case Study in Indonesia. *The Journal of Asian Finance, Economics and Business*, *8*(3), 1231–1240. https://doi.org/10.13106/jafeb.2021.vol8.no3.1231

Mittal, S. K. (2019). Behavior biases and investment decision: Theoretical and research framework. *Qualitative Research in Financial Markets*, *14*(2), 213–228. https://doi.org/10.1108/QRFM-09-2017-0085

Rehan, M., Alvi, J., Javed, L., & Saleem, B. (2021). Impact of Behavioral Factors in Making Investment Decisions and Performance: Evidence from Pakistan Stock Exchange. *Market Forces*, *16*(1), 22–22. https://doi.org/10.51153/mf.v16i1.435

Robin, R., & Angelina, V. (2020). ANALYSIS OF THE IMPACT OF ANCHORING, HERDING BIAS, OVERCONFIDENCE AND ETHICAL CONSIDERATION TOWARDS INVESTMENT DECISION. *JIMFE (Jurnal Ilmiah Manajemen Fakultas Ekonomi)*, *6*(2), Inpress. https://doi.org/10.34203/jimfe.v6i2.2558

Rosid, A., Isabella, A. A., Hartoto, H., Siswantini, T., & Suharyati, S. (2024). Behavioral Finance In Decision Making: An Experimental Study Of Investor Bias And Indonesian Private Market Anomalies. *Jurnal Ekonomi*, *13*(03), Article 03.

Shukla, A., Rushdi, D. N. J., & Katiyar, D. R. C. (2020). *Impact of Behavioral Biases on Investment Decisions 'A Systematic Review'* (SSRN Scholarly Paper 3600023). Social Science Research Network. https://papers.ssrn.com/abstract=3600023

Suresh, S. (2024). Impact of Financial Literacy and Behavioural Biases on Investment Decision-making. *FIIB Business Review*, *13*(1), 72–86. https://doi.org/10.1177/23197145211035481

Yasmin, F., & Ferdaous, J. (2023). Behavioral biases affecting investment decisions of capital market investors in Bangladesh: A behavioral finance approach. *Investment Management and Financial Innovations*, *20*(2), 149–159. https://doi.org/10.21511/imfi.20(2).2023.13