Proceeding of 4th International Conference on Research and Development (ICORAD)
Vol. 3 No. 2 (2024)
Page : 506-521
ISSN:2828-4925
DOI: 10.47841/icorad.v3i2.286

Behavioral Biases in Influencing Generation Z Investment Decisions: The Moderating Role of Financial Literacy

Anindya Ardiansari[1], Harjum Muharam[2], Irene Rini Demi Pangestuti[3]
[1,2,3]Universitas Diponegoro, Semarang, Indonesia
[1]Universitas Negeri Semarang, Semarang, Indonesia

Corresponding email: anindya@mail.unnes.ac.id

Received: December,2, 2024 | Revised: December,18, 2024 | Accepted: December,20, 2024

Abstract. The purpose of this study was to determine the effect of representativeness bias, herding bias and regret aversion on investment decisions with financial literacy as a moderating variable. The population in this study were Generation Z Investors in Semarang City. The number of samples used in this study were 98 Generation Z Investors in Semarang City. The data collection method used a questionnaire. The results showed that there was a positive and significant effect of representativeness bias, herding bias and regret aversion on investment decisions. The results also show that financial literacy as a moderating variable is able to moderate the influence of representativeness bias and herding bias on investment decisions, but financial literacy cannot moderate the influence of regret aversion on investment decisions. Suggestions that can be given are that investors can continue to develop knowledge and abilities to analyse financial information by attending educational training or investment-related seminars provided by accredited parties so that investors avoid making irrational decisions that can be detrimental in the future.

Keywords: Investment Decision; Bias Representativeness; Bias Herding; Regret Aversion; Financial Literacy

INTRODUCTION

Investment can be an alternative to an activity of spending a certain amount of funds to get benefits within a certain period of time (Fridana & Asandimitra 2020). In the investment world there are terms such as high risk, higher return (Chen & Zhang, 1998). An investor must recognise the risks he can bear because the level of risk borne is in accordance with the level of return he gets (Beatrice et al., 2021). Investment decisions involve a person's internal psychological considerations and judgements, especially in the face of future uncertainty (Ayudiastuti, 2021). Loppies (2022) say that investors do not always make investment decisions correctly or rationally, because they are influenced by factors that make investor behaviour deviate. The existence of psychological factors owned by investors will have an impact on the selection of their decisions so that investors make illogical or irrational decisions (Setiawan et al., 2018). Minimal knowledge in information analysis skills can also result in investors making the wrong decisions which are influenced by their behavioural biases (Shahani & Ahmed, 2022).

One of the phenomena that occurs in Indonesia is that many investors in investing in stocks act irrationally (Beatrice et al., 2021). Factors that influence irrational decisions such as rumours, limited information on risks and benefits of individual backgrounds and behavioural biases (Qasim et al., 2019). Adil et al. (2022) state that investors tend to make unfavourable decisions on their investments, resulting in poor investment performance. This happens because investors make decisions without being based on technical and fundamental analysis techniques, but because they follow the behaviour of other investors

Proceeding of 4th International Conference on Research and Development (ICORAD)
Vol. 3 No. 2 (2024)
Page : 506-521
ISSN:2828-4925
DOI: 10.47841/icorad.v3i2.286

(Wirawan et al., 2022). This phenomenon can occur due to the influence of behavioural finance on investment decisions. Behavioural finance examines the existence of behavioural bias in investors that affects decision making. Behavioural bias is divided into two categories, namely cognitive bias and emotional bias (Pompian, 2006). Cognitive bias can be interpreted as a deviation in decision making based on the thinking process, while emotional bias is defined as a deviation in decision making based on current feelings or emotions (Kartini & Nahda, 2021).

Representativeness bias is one of the cognitive biases that can influence an investor's decision (Parveen et al., 2020). Representativeness bias is a decision-making behaviour carried out by investors based on the past and causes errors in decision making (Shefrin, 2007). Representativeness bias occurs when investors make decisions only comparing them based on past events (Puspawati & Yohanda, 2020). Vitmiasih (2021) argues that representativeness bias is formed because investors are often faced with similar events, so they assume that the way to solve them is also relatively the same. Representativeness bias occurs because investors analyse information simply, judgments depend on track records, ignore information, and excessive trust (Khan et al., 2017).

Furthermore, herding bias is a bias that is often carried out by investors. Herding behaviour can be interpreted as the behaviour of investors to imitate other investors in making investment decisions without considering fundamental analysis (Hwang & Salmon, 2004). According to Puspawati & Yohanda (2022), herding bias is the irrational behaviour of investors who follow the behaviour of other investors in making investment decisions, causing bias. Investors rely more on collective information from several trusted people rather than personal information to buy or sell assets (Kengatharan & Kengatharan, 2014). Herding occurs when investors rely more on information that has been verified by many investors rather than their own abilities due to the belief that decisions made by the majority of investors cannot be wrong (Aristiwati & Hidayatullah, 2022).

In addition, regret aversion also affects investors' investment decisions. regret aversion occurs when an investor's desire to avoid the pain of regret as a result of a decision-making mistake that has occurred (Ogunlusi & Obademi, 2021). Regret aversion is a psychological bias due to investors not wanting to feel regret after making decisions (Sattar et al., 2020). Investors who have concerns about changes in stock prices after making a decision will behave regret aversion (Yuningsih & Taufiq, 2019). Investors who regret their decisions will have an impact on their decisions in the future (Zahera & Bansal, 2018).

According to research by Ayaa et al. (2022) representativeness bias has a positive influence on investment decisions. This research is in line with Yadav & Chaudhary, (2022) who said similar results. However, it is different from the results of research conducted by Shahani & Ahmed, (2022), which says that representativeness bias has no positive effect on investment decisions. It is stated that financial literacy has strengthened or weakened if included as a moderating variable (Adil et al., 2022). In other words, financial literacy can affect investment decision making. The purpose of this study is to find the effect of representativeness bias, herding bias, and regret aversion on investment decisions. Financial literacy serves as moderation included in the research model.

METHOD

This research uses a quantitative approach with a causality research design. The population in this study is generation Z investors in Semarang city who were born in 1996 - 2012 or have aged 11- 28 years who have invested in the capital market with a minimum age

Proceeding of 4th International Conference on Research and Development (ICORAD)
Vol. 3 No. 2 (2024)
Page : 506-521
ISSN:2828-4925
DOI: 10.47841/icorad.v3i2.286

of 17 years. The sample used in this study was taken using non probability sampling technique with the type of sampling using purposive sampling. The data analysis method used is descriptive analysis, validity test and reliability test. Testing in this study using the Structural Equation Modelling (SEM) method with Partial Least Square (PLS) technique.

Table 1. Characteristics of Respondents

No	Gender	Frequency	Percentage
1	Men	44	44,90%
2	Women	54	55,10%
	Total	**98**	**100%**
No	**Education**	**Frequency**	**Percentage**
1	SMA/SMK/MA	24	24,49%
2	D1/D2/D3	16	16,33%
3	S1	57	58,16%
4	S2/S3	1	1,02%
	Total	**98**	**100%**
No	**Age**	**Frequency**	**Percentage**
1	17	1	1.02%
2	18	3	3.06%
3	19	5	5.10%
4	20	20	20.41%
5	21	12	12.24%
6	22	9	9.18%
7	23	8	8.16%
8	24	5	5.10%
9	25	16	16.33%
10	26	10	10.20%
11	27	9	9.18%
12	28	1	1.02%
	Total	98	100%
No	**Work Status**	**Frequency**	**Percentage**
1	Students	57	58.16%
2	Public/Private Employee	36	36.73%
3	Self-employed	5	5.10%
	Total	**98**	**100.00%**
No	**Duration of investment**	**Frequency**	**Percentage**
1	<1 year	19	19.39%
2	1-2 year	45	45.92%
3	>2 year	34	34.69%
	Total	**98**	**100.00%**

Source: Processed Research Data (2024)

RESULTS AND DISCUSSION

1. Determination Coefficient

The determination coefficient is used to assess how much influence the independent variable has on the dependent variable and the model's ability to explain the dependent variable. This study uses the R-square (R2) value to determine the value of the determination

Proceeding of 4th International Conference on Research and Development (ICORAD)
Vol. 3 No. 2 (2024)
Page : 506-521
ISSN:2828-4925
DOI: 10.47841/icorad.v3i2.286

coefficient. The r-square value of the structural model is 0.75 indicating a strong relationship, 0.50 indicating a moderate relationship, and 0.25 indicating a weak relationship (Latan & Ghozali, 2015). The following is table 2 which presents the determination coefficient value.

Table 2. Determination Coefficient Value

Variable	R - Square
Investment decisions	0.546

Source: SmartPLS 4.0 output (processed by author, 2024)

Table 2 shows the coefficient of determination value of 0.546 or 54.6%. The coefficient of determination value of 54.6% indicates that the investment decision variable can be explained by the variables of bias representativeness, bias herding, regret aversion, and financial literacy by 54.6%. While the remaining 45.4% is explained by other variables outside this research model. The coefficient of determination value of this study is included in the moderate category.

2. Predictive Relevance (Q2)

Predictive Relevance (Q2) can be used to measure the observation value of the overall model and parameter estimates in the study. The Q2 value > 0 indicates that the model has a good predictive relevance value, while if the Q2 value < 0, then the research model does not have a good predictive relevance value (Latan & Ghozali, 2015).

Table 3. Predictive Relevant Value

Variable	Q - Square
Investment decisions	0.463

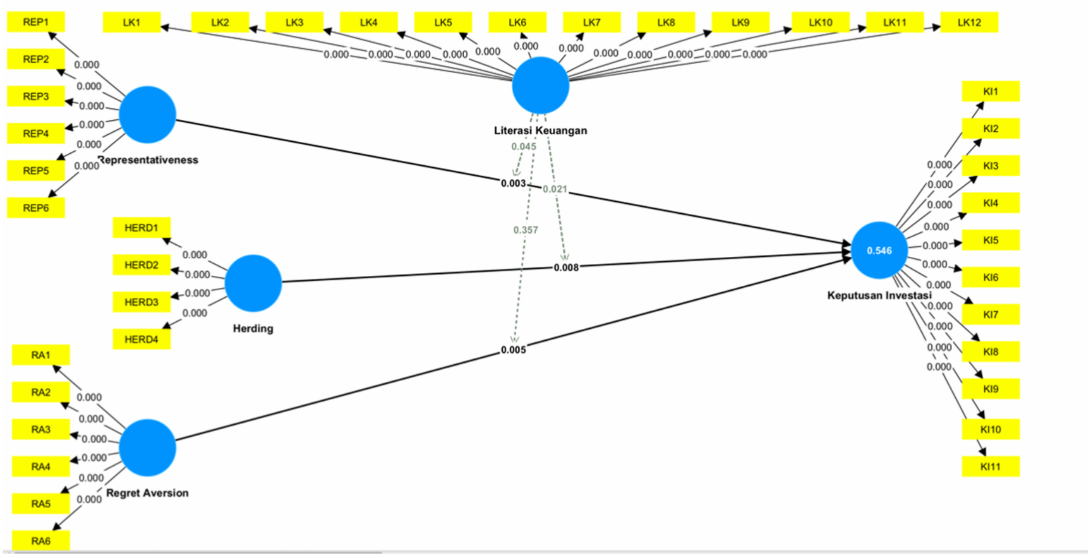
Source: SmartPLS 4.0 output (processed by author, 2024)

Table 3 shows the results of the Q2 value of 0.463 so that it can be said that the model has good predictive relevance because the value of 0.463 has met the criteria, namely more than 0.

3. Hypothesis Testing

Hypothesis testing is conducted to test and measure the research hypothesis based on the path coefficient value by looking at the original sample value, t-statistic, and p-value. According to Ghozali & Latan (2015), a hypothesis can be said to be significant if it meets the criteria, namely the t-statistic value> 1.96 and the p-value <0.05 with a significance level of 5%. The following table 4 is the path coefficient value in this study.

Proceeding of 4th International Conference on Research and Development (ICORAD)
Vol. 3 No. 2 (2024)
Page : 506-521
ISSN:2828-4925
DOI: 10.47841/icorad.v3i2.286



Picture 1. Research model

The value of the results of processing the hypothesis testing data between variables can be seen in table 4

Table 4. Hypothesis Testing Results

Hypothesis	Variable	Original sample	T statistic	P values	Result
Ha1	Representativeness -> Investment decision	0.233	2.969	0.003	Significant
Ha2	Hearding -> Investment decision	0.162	2.660	0.008	Significant
Ha3	Regret Aversion -> Investment decision	0.230	2.841	0.005	Significant
Ha4	Financial literacy x representativeness -> Investment decision	-0.182	2.006	0.045	Significant
Ha5	Financial literacy x Hearding -> Investment decision	-0.182	2.314	0.021	Significant
Ha6	Financial literacy x Regret Aversion -> Investment decision	0.080	0.921	0.357	Not Significant

Source: Processed Research Data (2024)

Based on the hypothesis test in this study, the Original Sample (b) value is 0.233, which means that the direction of the relationship between the representativeness bias variable and investment decisions is positive, meaning that the higher the representativeness bias behavior, the better the investment decision making. In addition, the t-statistic value of 2.969 is greater than the t-table of 1.96, and the p-value of 0.003 is smaller than 0.05, indicating that there is significance in the research results. Therefore, it can be concluded that representativeness bias has an effect on investment decisions so that Ha1 which reads "Representativeness Bias has a positive and significant effect on investment decisions" is accepted.

The results of this study indicate that Generation Z investors in Semarang City have high representativeness bias behavior, which influences their investment decision making.

Proceeding of 4th International Conference on Research and Development (ICORAD)
Vol. 3 No. 2 (2024)
Page : 506-521
ISSN:2828-4925
DOI: 10.47841/icorad.v3i2.286

Generation Z investors in Semarang City also avoid stocks that have performed poorly in the past for their investment decisions. This is proven by the statement "I am not interested in stocks that have a bad track record in the past" with an index of 77.14% which is included in the high category. Investors prefer to buy stocks by relying on stereotyped assessments of stock groups. They believe that if one stock in the sector is profitable, then stocks in the same sector will also be profitable. This is also proven by the statement item "I am interested in investing in blue-chip stocks" with the highest index among other statement items, namely 78.98%.

The results of this study are in accordance with cognitive bias in behavioral finance theory according to research by Ayaa et al. (2022) which states that cognitive factors in a person can cause behavioral bias and influence investment decision making. Waweru (2008) said in his research that behavioral bias in decision making is caused by errors in interpreting information by investors, emotional attitudes and cognitive weaknesses of investors can arise when making a decision. This happened to Generation Z investors in Semarang City in their investment decision making was influenced by representativeness bias, which means that the greater the representativeness bias, the greater the investment decision made. This happens because investors use one stock as a benchmark to assess the performance of similar stocks without analyzing the information obtained first so that investors assess stocks in one work group or sector as having the same information (Parveen et al., 2020). The results of this study are in line with research conducted by (Ahmad et al., 2021; Ayaa et al., 2022; Kirera & Mburugu, 2019; Novianggie & Asandimitra, 2019; Yadav & Chaudhary, 2022) which states that representativeness bias has a significant positive effect on investment decisions.

Based on the hypothesis test in this study, the Original Sample (b) value is 0.162, which means that the direction of the relationship between the bias herding variable and investment decisions is positive, meaning that the higher the bias herding behavior, the higher the investment decision-making. In addition, the t-statistic value of 2,660 is greater than the t-table, which is 1.96, and the p-value of 0.008 is smaller than 0.05, indicating significance in the research results. Therefore, it can be concluded that bias herding has an effect on investment decisions so that Ha2 which states "Bias Herding has a positive and significant effect on investment decisions" is accepted. The results of this study indicate that Generation Z investors in Semarang City have bias herding behavior that influences their investment decision-making. This result is supported by the indicator statement "I make a decision to buy a type of stock based on the type of stock owned by a group of investors" which has an index of 56.94%. The statement indicator "I react quickly to follow investment decisions taken by other investors" is the statement indicator with the highest index of 61.43%. This indicates that investors still tend to determine the shares they will own not based on the results of the analysis of the information received. This kind of investor behavior occurs due to lack of information, experience and knowledge and time constraints in decision-making so that they trust information from others more (Luong & Ha, 2011). The results of this study are in accordance with behavioral finance theory which states that there are psychological factors that influence investor decision-making (Ricciardi & Simon, 2000). In line with the research of Setiawan et al. (2018) which explains that the causes of investment decision-making experiencing bias are errors in interpreting information by investors, emotional attitudes, and limited information obtained. Generation Z investors in Semarang City are influenced by herding bias in making investment decisions, which means that the higher the herding bias, the more it will affect the decisions made by investors. This

Proceeding of 4th International Conference on Research and Development (ICORAD)
Vol. 3 No. 2 (2024)
Page : 506-521
ISSN:2828-4925
DOI: 10.47841/icorad.v3i2.286

herding behavior occurs because investors trust the analytical abilities of other investors more, which are easily obtained through social media recommendation information, stock recommendation groups, or people close to them. The results of this study are in line with (Addinpujoartanto & Darmawan, 2020; Ahmad et al., 2021; Ahmad & Wu, 2022; Fridana & Asandimitra, 2020; Novianggie & Asandimitra, 2019; Qasim et al., 2019; Ramashar et al., 2022; Shahani & Ahmed, 2022; Wendy, 2021) which states that herding bias has a positive and significant effect on investment decisions.

Based on the hypothesis test in this study, the Original Sample (b) value is 0.230, which means that the direction of the relationship between the regret aversion variable and investment decisions is positive, meaning that the higher the regret aversion behavior, the higher the investment decision-making. In addition, the t-statistic value of 2.841 is greater than the t-table of 1.96, and the p-value of 0.005 is smaller than 0.05, indicating significance in the research results. Therefore, it can be concluded that regret aversion has an effect on investment decisions so that Ha3 which reads "Regret aversion has a positive and significant effect on investment decisions" is accepted. The results of the descriptive analysis of the regret aversion variable on investment decisions have an average index of 66.36%. This shows that Generation Z investors in Semarang City still experience regret aversion in determining their investment decisions. Generation Z investors only buy stocks that have low risk. Generation Z investors in Semarang City have a fear of regret if they experience losses. This statement is supported by the indicator of the statement "I will not buy stocks whose value shows a decline so that I do not feel regret later" which has the highest index of 68.78%. The majority of Generation Z investors in Semarang City aged 17-27 years who were respondents to this study were worried about buying shares in stocks that experienced losses and could result in regret. Investors choose to make decisions such as selling stocks when they are rising and holding stocks that have poor performance for a long time with the assumption that they will increase in the future. Investors believe that making this decision can minimize regret from the risks received. Reluctant behavior to regret can ignore profit opportunities that investors should be able to get (Ogunlusi & Obademi, 2021). This study is in accordance with Behavioral finance theory which shows that investor behavior towards uncertain and risky conditions in making investment decisions Mutawally & Asandimitra (2019) and investors have different reactions between getting profit or loss in their decisions Ramashar et al. (2022). Generation Z investors in Semarang City in this study try to avoid mistakes in making a decision because they are afraid of the risk of loss they will experience. Mistakes in making decisions and experiencing losses will cause trauma to investors. This study is in line with research conducted by (Addinpujoartanto & Darmawan, 2020; Hariono et al., 2023; Mahadevi & Asandimitra, 2021; Putri & Sudiyatno, 2023; Rahawarin, 2023) which states that regret aversion has a positive effect on investment decisions.

Based on the hypothesis test in this study, the Original Sample (b) value is -0.182, which means that the direction of the relationship between the financial literacy variable moderating the bias representativeness variable on investment decisions is negative (weakening), meaning that financial literacy can weaken the influence of bias representativeness on investment decisions. In addition, the t-statistic value of 2.006 is greater than the t-table of 1.96, and the p-value of 0.045 is smaller than 0.05, indicating that there is significance in the research results. Therefore, it can be concluded that financial literacy can moderate the influence of bias representativeness on investment decisions so that Ha4 which reads "Financial literacy can moderate the influence of bias

Proceeding of 4th International Conference on Research and Development (ICORAD)
Vol. 3 No. 2 (2024)
Page : 506-521
ISSN:2828-4925
DOI: 10.47841/icorad.v3i2.286

representativeness on investment decisions" is accepted.

Investors who have a high level of financial literacy will be less likely to behave in a representativeness bias that can take irrational actions in making investment decisions. Investors with higher financial literacy will easily obtain information from technical and fundamental analysis so that they can make more appropriate decisions. This situation will increase the level of investor confidence in making decisions according to the information that has been processed (Adil et al., 2022). Based on the results of the descriptive analysis, the index has an average of 78.83%, which is included in the high category, represented by the statement indicator "I choose to invest in instruments that are in accordance with my abilities and risks" of 78.98%. The results of this study are in line with research conducted by (Waqar et al., 2022) and (Safitri et al., 2023) which states that financial literacy can moderate the influence of representativeness bias on investment decisions. However, this study contradicts the research of Ahmad et al., (2021), Shahani & Afaq Ahmed, (2022) which states the opposite.

Based on the hypothesis test in this study, the Original Sample (b) value is -0.182, which means that the direction of the relationship between the financial literacy variable and the herding variable on investment decisions is negative (weakening), meaning that financial literacy can weaken the influence of herding bias on investment decisions. In addition, the t-statistic value of 2.314 is greater than the t-table of 1.96, and the p-value of 0.021 is smaller than 0.05 106, indicating significance in the research results. Therefore, it can be concluded that financial literacy can moderate the influence of herding on investment decisions so that Ha5 which reads "Financial literacy can moderate the influence of herding bias on investment decisions" is accepted.

The level of financial literacy possessed by Generation Z investors in the city of Semarang will affect the influence of herding on investment decisions. The higher the level of literacy possessed by Generation Z investors, the weaker the possibility of investors experiencing herding in making their decisions. (Novianggie & Asandimitra, 2019) stated that investors with a high level of literacy will analyze the information obtained to make decisions so as to avoid biased herding behavior. The results of the financial literacy moderation test on the influence of herding on investment decisions showed significant results. Financial literacy can weaken the influence of herding on investment decisions taken by Generation Z investors in the city of Semarang. This is because investors with a high level of literacy (higher financial literacy) do not accept information available on social media or a group of investors without analyzing it first. Financial literacy can be used as a reference in making more rational investment decisions than following recommendations from a group of investors. The existence of financial literacy can weaken psychological factors that cause behavioral bias in investment decision making (Adil et al., 2022).

This study found that financial literacy is able to significantly moderate the influence of herding on investment decisions. High or low levels of literacy will significantly affect the influence of herding on investment decision making. The findings of this study are in line with research (Adil et al., 2022; Fitriyani & Anwar, 2022; Shahani & Ahmed, 2022) which states that financial literacy is able to moderate the influence of herding bias on investment decisions.

Based on the hypothesis test in this study, the Original Sample (b) value is 0.080, which means that the direction of the relationship between the financial literacy variable moderating the regret aversion variable on investment decisions is positive (strengthening), meaning that financial literacy can strengthen the influence of regret aversion on investment

Proceeding of 4th International Conference on Research and Development (ICORAD)
Vol. 3 No. 2 (2024)
Page : 506-521
ISSN:2828-4925
DOI: 10.47841/icorad.v3i2.286

decisions. In addition, the t-statistic value of 0.921 is smaller than the t-table of 1.96, and the p-value of 0.357 is greater than 0.05, indicating that there is no significance in the research results. Therefore, it can be concluded that financial literacy cannot moderate the influence of regret aversion on investment decisions so that Ha6 which reads "Financial literacy can moderate the influence of regret aversion on investment decisions" is rejected.

The regret aversion behavior of investors will involve emotional factors in determining investment decisions. Investors will involve emotions such as fear of losses experienced so that they choose a strategy to avoid regret. Behavioral finance theory shows that investment decision-making can be influenced by beliefs and preferences that cause overreaction to information obtained and affect the risk accepted (Bakar et al., 2016). Therefore, although Generation Z investors in Semarang City have a high level of financial literacy, emotional factors will also influence investment decision-making, so that the financial literacy variable becomes significant in moderating the effect of regret aversion on investment decisions. The findings of this study explain that the level of financial literacy does not have a significant moderating effect on the effect of regret aversion on investment decisions. The level of literacy possessed by investors will not affect the effect of regret aversion on their investment decisions. This is in line with research conducted by (Hariono et al., 2023) which states similar results. The results of the study indicate that investors in Malang City do not make reasonable decisions so that financial literacy cannot moderate the influence of regret aversion on their investment decisions.

CONCLUSION

It can be concluded in this study that, Representativeness Bias has a positive and significant effect on Investment Decisions, Herding Bias has a positive and significant effect on Investment Decisions, Regret Aversion has a positive and significant effect on Investment Decisions, Financial Literacy can moderate the effect of Representativeness Bias on Investment Decisions, Financial Literacy can moderate the effect of Herding Bias on Investment Decisions, and Financial Literacy cannot moderate the effect of Regret Aversion on Investment Decisions. The conclusion is that the representativeness, herding, and regret aversion biases owned by investors will affect their investment decision making. The greater the bias, the greater the investment decision taken. The purpose of this study is to examine the factors in investor investment decision making by considering the level of financial literacy as moderation. Based on the findings, it is proven that investment decisions are influenced by Representativeness Bias, Herding Bias, and Regret Aversion. By involving other variables besides financial literacy as moderation, it is expected to weaken the influence of the relationship between behavioral biases on investor investment decisions. Investors can continue to develop knowledge and ability to process and analyze financial information by attending educational training or investment-related seminars provided by accredited parties so that investors avoid bias in making decisions that result in irrational decisions and can be detrimental in the future.

REFERENCES

Abdillah, W., & Hartono, J. (2015). Partial least square (PLS) Alternatif structural equation modeling (SEM) dalam penelitian bisnis. *Yogyakarta: Penerbit Andi*, *22*, 103–150.

Addinpujoartanto, N. A., & Darmawan, S. (2020). 3 (3) (2020) 175-187 Pengaruh Overconfidence, Regret Aversion, Loss Aversion, Dan Herding Bias Terhadap

Proceeding of 4th International Conference on Research and Development (ICORAD)
Vol. 3 No. 2 (2024)
Page : 506-521
ISSN:2828-4925
DOI: 10.47841/icorad.v3i2.286

Keputusan Investasi Di Indonesia. In *Sejarah Artikel: Diterima*. http://journals.usm.ac.id/index.php/jreb

Adil, M., Singh, Y., & Ansari, M. S. (2022). How financial literacy moderate the association between behaviour biases and investment decision? *Asian Journal of Accounting Research*, *7*(1), 17–30. https://doi.org/10.1108/AJAR-09-2020- 0086

Adiputra, I. G. (2021). The Influence of Overconfidence, Representative Bias, and Risk Tolerance in Investment Decision Making: Evidence on Stock Investors in Indonesia. *Journal of Hunan University (Natural Sciences)*, *48*(4), 196–205.

Aeni, S. N. (2022). *Memahami Karakteristik dan Ciri-ciri Generasi Z*. Katadata.Co.Id. https://katadata.co.id/berita/nasional/622 6d6df12cfc/memahami-karakteristik-dan- ciri-ciri-generasi-z.

Ahmad, M., Mehboob, I., & Abdin, S. Z. ul. (2021). How Behavioral Factors Influence Investment Performance of Individual Investors in Pakistan Stock Market: A Moderated Mediation Approach. *Review of Economics and Development Studies*, *7*(3), 395–405. https://doi.org/10.47067/reads.v7i3.385

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

Altamimi, H. A. H., & Kalli, A. A. Bin. (2019). Financial literacy and investment decisions of UAE investors. *The Journal of Risk Finance*, *10*(5), 500–516. https://doi.org/10.1108/152659409110014 02

Ardiansari, A., & Saputra, A. (2015). Capital Market'S Reaction Towards 2014 Working Cabinet Announcement (Indonesian Case Study). *Jurnal Dinamika Manajemen*, *6*(1), 62–72. https://doi.org/10.15294/jdm.v6i1.4297

Aristiwati, I. N., & Hidayatullah, S. K. (2022). Pengaruh Herding Dan Overconfidence Terhadap Keputusan Investasi. *Jurnal Revenue : Jurnal Ilmiah Akuntansi*, *3*(1), 10– 14. https://doi.org/10.46306/rev.v3i1.92

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.2020050 2.11

Awais, M., Laber, M. F., Rasheed, N., & Khursheed, A. (2016). *Impact of Financial Literacy and Investment Experience on Risk Tolerance and Investment Decisions : Empirical Evidence from Pakistan*. *March*.

Ayaa, M. M., Peprah, W. K., Mensah, M. O., Owusu-Sekyere, A. B., & Daniel, B. (2022). Influence of Heuristic Techniques and Biases in Investment Decision-Making: A Conceptual Analysis and Directions for Future Research. *International Journal of Academic Research in Business and Social Sciences*, *12*(5). https://doi.org/10.6007/ijarbss/v12- i5/13339

Ayudiastuti, L. (2021). Analisis Pengaruh Keputusan Investasi Mahasiswa. *Jurnal Ilmu Manajemen*, *9*(3), 1138–1149. https://doi.org/10.26740/jim.v9n3.p1138-1149

Bakar, S., Amelia, N., & Yi, C. (2016). The Impact of Psychological Factors on Investors' Decision Making in Malaysian Stock Market: A Case of Klang Valley and Pahang.

ISSN:2828-4925
DOI: 10.47841/icorad.v3i2.286

Procedia Economics and Finance, *35*(October 2015), 319–328. https://doi.org/10.1016/s2212- 5671(16)00040-x

Beatrice, V., Murhadi, W. R., & Herlambang, A. (2021). The effect of demographic factors on behavioral biases. *Jurnal Siasat Bisnis*, *25*(1), 17–29. https://doi.org/10.20885/jsb.vol25.iss1.art 2

Caparrelli, F., D'Arcangelis, anna M., & Cassuto, A. (2004). Herding in the Italian Stock Market: A Case of Behavioral Finance. *The Journal of Behavioral Finance*, *5*, 222–230. https://doi.org/10.1207/s15427579jpfm05 04_5

Chandani, A., Ratnalikar, V. A., Bhatia, A., & Mehta, M. (2020). An empirical study to analyze the human behavioral aspects on individual financial decisions based on Indian context. *Materials Today: Proceedings*. https://doi.org/10.1016/j.matpr.2020.09.6 55

Chen, H., & Volpe, R. P. (1998). An analysis of personal financial literacy among college students. *Financial Services Review*, *7*(2), 107– 128. https://doi.org/10.1016/s1057-0810(99)80006-7

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*(February), 1–10. https://doi.org/10.3389/fpsyg.2020.60057 0

Edwards, K. D. (1996). Prospect theory: A literature review. *International Review of Financial Analysis*, *5*(1), 19–38. https://doi.org/https://doi.org/10.1016/S 1057-5219(96)90004-6

F. Hair Jr, J., Sarstedt, M., Hopkins, L., & G. Kuppelwieser, V. (2014). Partial least squares structural equation modeling (PLS- SEM). *European Business Review*, *26*(2), 106– 121. https://doi.org/10.1108/EBR-10- 2013-0128

Fama, E. F. (1970). Efficient Capital Markets: A Review of Theory and Empirical Work. *The Journal of Finance*, *25*(2), 383–417. https://doi.org/10.2307/2325486

Ferdinand, A. (2014). Metode Penelitian Manajemen. *Semarang: Badan Penerbit Universitas Diponegoro*.

Fitriyani, S., & Anwar, S. (2022). The Effect of Herding, Experience Regret and Religiosity on Sharia Stock Investment Decisions for Muslim Millennial Investors with Financial Literacy as a Moderating Variable. *Jurnal Ekonomi Syariah Teori Dan Terapan*, *9*(1), 68. https://doi.org/10.20473/vol9iss20221pp6 8-77

Fridana, I. O., & Asandimitra, N. (2020). Analisis Faktor Yang Memengaruhi Keputusan Investasi (Studi Pada Mahasiswi Di Surabaya). *Jurnal Muara Ilmu Ekonomi Dan Bisnis*, *4*(2), 396. https://doi.org/10.24912/jmieb.v4i2.8729

Gärling, T., Blomman, M., & Carle, T. A. (2017). Affect account of disposition effect and consequences for stock prices. *Review of Behavioral Finance*, *9*(2), 187–202. https://doi.org/10.1108/RBF-07-2016- 0049

Gavrilakis, N., & Floros, C. (2022). The impact of heuristic and herding biases on portfolio construction and performance: the case of Greece. *Review of Behavioral Finance*, *14*(3), 436–462. https://doi.org/10.1108/RBF-11- 2020-0295

Gupta, C. (2019). Investor Psycology and Behavioural Finance. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3432901

Hariono, M. W., Cahyadi, R. T., & Wijayanti, D. (2023). Pengaruh Bias Perilaku terhadap Pengambilan Keputusan Irasional dengan Financial Literacy sebagai Pemoderasi.

ISSN:2828-4925
DOI: 10.47841/icorad.v3i2.286

Jurnal Samudra Ekonomi Dan Bisnis, *14*(1), 1– 14. https://doi.org/10.33059/jseb.v14i1.5304

Hayat, A., & Anwar, M. (2016). Impact of Behavioral Biases on Investment Decision Making with Moderating Role of Financial Literacy. *Jinnah Business Review*, *6*(2), 34–41. https://doi.org/10.53369/rkxa7855

Hidayah, E. (2021). Investment Decision: The Analysis of Risk Perception, Regret Aversion Bias Perception, and Overconfidence. *Review of Integrative Business and Economics Research*, *10*(3), 395.

Hwang, S., & Salmon, M. (2004). Market stress and herding. *Journal of Empirical Finance*, *11*(4), 585–616. https://doi.org/10.1016/j.jempfin.2004.04. 003

Jain, J., Walia, N., & Gupta, S. (2020). *Evaluation of behavioral biases affecting investment decision making of individual equity investors by fuzzy analytic hierarchy process*. *ahead-of-p*. https://doi.org/10.1108/RBF-03-2019- 0044

Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica*, *47*(2), 263–291. https://doi.org/10.2307/1914185

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

Kengatharan, L., & Kengatharan, N. (2014). The Influence of Behavioral Factors in Making Investment Decisions and Performance: Study on Investors of Colombo Stock Exchange, Sri Lanka. *Asian Journal of Finance & Accounting*, *6*(1), 1. https://doi.org/10.5296/ajfa.v6i1.4893

Khan, H. H., Naz, I., Qureshi, F., & Ghafoor, A. (2017). Heuristics and stock buying decision: Evidence from Malaysian and Pakistani stock markets. *Borsa Istanbul Review*, *17*(2), 97–110. https://doi.org/10.1016/j.bir.2016.12.002

Khoidah, I., & Wijayanto, A. (2017). Fenomena Anomali Pasar Di Bursa Efek Indonesia Dan Bursa Efek Singapura. *Management Analysis Journal*, *6*(1), 112–122. http://maj.unnes.ac.id

Kirera, F., & Mburugu, B. M. (2019). *Impact of Heuristic Biases on Individual Investor Decision Making Process At Nairobi Securities Exchange : a Survey of Individual Investors in Meru County Impact of Heuristic Biases on Individual Investor Decision Making Process At Nairobi Securities Exch*. *January*, 78–86.

Ksei.co.id. (2023). *Statistik Pasar Modal Indonesia*. https://www.ksei.co.id/files/Statistik_Pub lik_Desember_2023_v3.pdf

Kumar, S., & Goyal, N. (2015). Behavioural biases in investment decision making – a systematic literature review. *Qualitative Research in Financial Markets*, *7*, 88–108. https://doi.org/10.1108/QRFM-07-2014- 0022

Latan, H., & Ghozali, I. (2015). *Partial Least Squares: Concepts, Techniques and Applications using SmartPLS 3*.

Leković, M. (2020). Cognitive Biases as an Integral Part of Behavioral Finance. *Economic Themes*, *58*(1), 75–96. https://doi.org/10.2478/ethemes-2020- 0005

Lemeshow, S., Klar, J., Lwanga, stephen K. ., Pramono, D., & Hosmer, D. W. (1997). *Besar sampel dalam penelitian kesehatan (Terjemahan)*. Gadjah Mada University Press.

Loppies, L. S., Maria J.F Esomar1, M. J. ., & Janah, I. N. (2022). Herding Behavior, Overconfidence, Regret Aversion Bias On Investment Decisions. *International Journal*

of Economics, Social Science, Entrepreneurship and Technology (IJESET), *1*(5), 345–352.
https://doi.org/10.55983/ijeset.v1i5.357

Luong, L. P., & Ha, D. T. T. (2011). Behavioral Factors Influencing Individual Investors' Decision-Making And Performance A Survey At The Ho Chi Minh Stock Exchange. *Umeå School of Business*, p.103.

Mahadevi, S. A., & Asandimitra, N. (2021). Pengaruh Status Quo, Herding Behaviour, Representativeness Bias, Mental Accounting, Serta Regret Aversion Bias Terhadap Keputusan Investasi Investor Milenial Di Kota Surabaya. In *Jurnal Ilmu Manajemen* (Vol. 9, Issue 2).

Mutawally, F. W., & Asandimitra, N. (2019). Pengaruh Financial Literacy, Risk Perception, Behavioral Finance Dan Pengalaman Investasi Terhadap Keputusan Investasi Mahasiswa Surabaya. *Jurnal Ilmu Manajemen (JIM)*, *7*(4), 942–953.

Mutswenje, S. V., & Jagongo, A. (2014). A Survey of the Factors Influencing Investment Decisions: The Case of Individual Investors at the NSE. *International Journal of Humanities and Social Science*, *4*(4), 25–28. http://www.ijhssnet.com/journals/Vol_4_ No_4_Special_Issue_February_2014/11.pdf

Nada, S. M. A., & Moa'mer, faris abu. (2013). *Behavioural Factors Influencing Investment Decision Making: An Empirical Study of Palestine Stock Exchange*. 159.

Natasya, N., Kusumastuti, D. H., Alifia, W., & Leon, F. M. (2022). The Effect Between Behavioral Biases and Investment Decisions Moderated by Financial Literacy on the Millennial Generation in Jakarta. *The Accounting Journal of Binaniaga*, *7*(1), 113–
126. https://doi.org/10.33062/ajb.v7i1.502

Nicolle, A., Fleming, S. M., Bach, D. R., Driver, J., & Dolan, R. J. (2011). A Regret-Induced Status Quo Bias. *Journal of Neuroscience*, *31*(9), 3320–3327. https://doi.org/10.1523/JNEUROSCI.561 5-10.2011

Nofsinger, J. R. (2018). The Psychology of Investing. In Routledge (Ed.), *Routledge* (6th Editio). Routledge. https://doi.org/10.4324/9781315230856

Novianggie, V., & Asandimitra, N. (2019). The Influence of Behavioral Bias, Cognitive Bias, and Emotional Bias on Investment Decision for College Student with Financial Literacy as the Moderating Variable. *International Journal of Academic Research in Accounting, Finance and ManagementSciences*, *9*(2), 92–107. https://doi.org/10.6007/IJARAFMS/v9- i2/6044

Ogunlusi, O. E., & Obademi, O. (2021). The Impact of Behavioural Finance on Investment Decision-making: A Study of Selected Investment Banks in Nigeria. *Global Business Review*, *22*(6), 1345–1361. https://doi.org/10.1177/097215091985138 8

OJK. (2022). *Infografis Hasil Survei Nasional Literasi dan Inklusi Keuangan Tahun 2022. Otoritas Jasa Keuangan*. https://ojk.go.id/id/berita- dan-kegiatan/info-terkini/Pages/Infografis- Survei-Nasional-Literasi-dan-Inklusi- Keuangan-Tahun-2022.aspx#:~:text=Hasil SNLIK 2022 menunjukkan indeks,2019 yaitu 76%2C19 persen

Proceeding of 4th International Conference on Research and Development (ICORAD)
Vol. 3 No. 2 (2024)
Page : 506-521
ISSN:2828-4925
DOI: 10.47841/icorad.v3i2.286

Paramita, R. S., Isbanah, Y., Kusumaningrum, T. M., Musdholifah, M., & Hartono, U. (2018). Young Investor Behavior: Implementation Theory Of Planned Behavior. *International Journal of Civil Engineering and Technology*, *9*(7), 733–746.

Parveen, S., Satti, Z. W., Subhan, Q. A., & Jamil, S. (2020). Exploring Market Overreaction, Investors' Sentiments And Investment Decisions In An Emerging Stock Market. *Borsa Istanbul Review*, *20*(3), 224–235. https://doi.org/10.1016/j.bir.2020.02.002

Pompian, M. M. (2006). Behavioral Finance And Wealth Management: How To Build Investment Strategies That Account For Investor Biases. In *Behavioral Finance and Wealth Management: How to Build Investment Strategies That Account for Investor Biases*. https://doi.org/10.1002/9781119202400

Prasad, S., Kiran, R., & Sharma, R. K. (2021). Behavioural, Socio-economic Factors, Financial Literacy and Investment Decisions: Are Men More Rational and Women More Emotional? *The Indian Economic Journal*, *69*(1), 66–87. https://doi.org/10.1177/001946622098702 3

Puspawati, D., & Yohanda, A. R. (2022). Bias Perilaku Terhadap Keputusan Investasi Generasi Muda. *Akuntabilitas*, *16*(1), 41–60.

Putri, I. D. R., & Sudiyatno, B. (2023). Pengaruh Financial Literacy, Herding Dan Regret Aversion Bias Terhadap Keputusan Investasi Generasi Milenial. *... Studies and Entrepreneurship Journal ...*, *4*(4), 4198–4209. https://journal.yrpipku.com/index.php/m sej/article/view/1587%0Ahttps://journal. yrpipku.com/index.php/msej/article/dow nload/1587/1693

Qasim, M., Hussain, R. Y., Mehboob, I., & Arshad, M. (2019). Impact Of Herding Behavior And Overconfidence Bias On Investors' Decision-Making In Pakistan. *Accounting*, *5*, 81–90. https://doi.org/10.5267/j.ac.2018.07.001

Rahman Rahawarin, F. (2023). The Effect of Loss Aversion Bias and Regret Aversion Bias on Financial Decisions with Financial Literacy as an Intervening Variable. *Accounting and Finance Studies*, *3*(1), 301–314. https://doi.org/10.47153/afs31.5512023

Ramshar, W., Hanifa Sandri, S., Hidayat, R., Studi Akuntansi, P., Ekonomi dan Bisnis, F., Muhammadiyah Riau, U., & Studi Keuangan Perbankan, P. (2022). Faktor Psikologi dan Keputusan Investasi Mahasiswa di Pasar Modal. *Jurnal Riset Akuntansi Dan Keuangan*, *10*(1), 93–102. https://doi.org/10.17509/jrak.v10i1.36709

Ricciardi, V., & Simon, H. K. (2000). What Is Behavioral Finance? *Behavioral Finance and Wealth Management*, 3–21. https://doi.org/10.1002/9781119202400.c h1

Sadalia, I., & Butar-butar, N. (2016). Perilaku Keuangan : Teori dan Implementasi. *Pustaka Bangsa Press*.

Safitri, H., Mustaruddin, Wendy, & Giriati. (2023). Cognitive Dan Emotional Bias Dalam Pengambilan Keputusan Investasi: Dimediasi Risk Tolerance Dan Dimoderasi Financial Literacy. *Jurnal Ekonomi, Keuangan Dan Manajemen*, *3*(3), 785–797. https://journal.feb.unmul.ac.id/index.php/INOVASI/article/view/13553/2697

Sanusi, A. (2011). Metodologi penelitian bisnis. In *Jakarta: Salemba Empat*.

Setiawan, Y. C., Dorkas Rambu Atahau, A., & Robiyanto Jurusan Manajemen Fakultas Ekonomika dan Bisnis Universitas Kristen Satya Wacana Salatiga, D. (2018).

Proceeding of 4th International Conference on Research and Development (ICORAD)
Vol. 3 No. 2 (2024)
Page : 506-521
ISSN:2828-4925
DOI: 10.47841/icorad.v3i2.286

Cognitive Dissonance Bias, Overconfidence Bias dan Herding Bias dalam Pengambilan Keputusan Investasi. In *Accounting and Financial Review* (Vol. 1, Issue 1). http://jurnal.unmer.ac.id/index.php/afre

Shahani, R., & Afaq Ahmed, K. (2022). Investigating the Moderating Roles of Basic and Advanced Financial Literacy between Behavioural Biases and Stock Buying Decisions. *Journal of Organisational Studies and Innovation*, *9*(1), 1–19. https://doi.org/10.51659/josi.21-141

Sharma, S., & Bikhchandani, S. (2001). Herd Behavior in Financial Markets. *International Monetary Fund*, *24*(3), 279–310. https://doi.org/10.1111/j.1532- 950X.1995.tb01298.x

Shefrin, H. M. (2007). Behavioral Corporate Finance. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.288257

Sisbintari, I. (2018). Sekilas Tentang Behavioral Finance. *Jurnal Ilmiah Administrasi Bisnis Dan Inovasi*, *1*(2), 88–101. https://doi.org/10.25139/jai.v1i2.814

Sladek, S., & Grabinger, A. (2016). Gen Z: The First Generation of the 21st Century Has Arrived! *XYZ University*, 1–15. www.xyzuniversity.com

Subash, R. (2012). Role of Behavioral Finance in Portfolio Investment Decisions: Evidence from India. *Faculty of Social Science Institute of Economic Studies*, 8-9Dash, M. K. (2010). Factors Influencing Investm. http://ies.fsv.cuni.cz/default/file/download/id/20803

Sugiyono. (2019). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D.* Alfabeta.

Sukandani, Y., Istikhoroh, S., & Waryanto, R. B. D. (2019). Behavioral Finance Pada Proses Pengambilan Keputusan Investasi. *SHRP- II : SeminaNr Hasil Riset Dan Pengabdian*, 150–156.

Tekçe, B., Yilmaz, N., & Bildik, R. (2016). What Factors Affect Behavioral Biases? Evidence From Turkish Individual Stock Investors. *Research in International Business and Finance*, *37*, 515–526. https://doi.org/10.1016/j.ribaf.2015.11.01 7.

Vitmiasih, V., Maharani, S. N., & Narullia, D. (2021). Pengambilan Keputusan Investasi Rasional: Suatu Tinjauan dari Dampak Perilaku Representativeness Bias dan Hearding Effect. *Jati: Jurnal Akuntansi Terapan Indonesia*, *4*(1), 1–13. https://doi.org/10.18196/jati.v4i1.9255

Wangzhou, K., Khan, M., Hussain, S., Ishfaq, M., & Farooqi, R. (2021). Effect of Regret Aversion and Information Cascade on Investment Decisions in the Real Estate Sector: The Mediating Role of Risk Perception and the Moderating Effect of Financial Literacy. *Frontiers in Psychology*, *12*(October),1–15. https://doi.org/10.3389/fpsyg.2021.73675 3

Waqar, H. M., Zulfiqar, B., & Hussain, M. (2022). Impact of Behavioral Biases on Investment Decision Making with Moderating Role of Financial Literacy. *University of Wah Journal of Management Sciences*, *6*(1), 166–186. https://uwjms.org.pk/index.php/uwjms/a rticle/view/77

Waweru, N., Munyoki, E., & Uliana, E. (2008). The Effects Of Behavioural Factors In Investment Decision-Making: A Survey Of Institutional Investors Operating At The Nairobi Stock Exchange. *International Journal of Business and Emerging Markets - Int J Bus Emerg Market*, *1*. https://doi.org/10.1504/IJBEM.2008.019 243

Proceeding of 4th International Conference on Research and Development (ICORAD)
Vol. 3 No. 2 (2024)
Page : 506-521
ISSN:2828-4925
DOI: 10.47841/icorad.v3i2.286

Wendy, W. (2021). Efek Interaksi Literasi Keuangan Dalam Keputusan Investasi: Pengujian Bias-Bias Psikologi. *Jurnal Ekonomi Bisnis Dan Kewirausahaan*, *10*(1), 36. https://doi.org/10.26418/jebik.v10i1.4340 3

Wirawan, R., Mildawati, T., & Suryono, B. (2022). Determinan Pengambilan Keputusan Investasi Berdasarkan Norma Subjektif, Kontrol Perilaku, Dan Perilaku Heuristik. *EKUITAS (Jurnal Ekonomi Dan Keuangan)*, *6*(1), 43–57. https://doi.org/10.24034/j25485024.y2022
.v6.i1.5163

Yadav, K., & Chaudhary, R. (2022). Impact of Heuristic-Driven Biases on Investment Decision-Making of Individual Investors: The Mediating Role of Risk Perception. *Orissa Journal of Commerce*, *43*(1), 127–143. https://doi.org/10.54063/ojc 2022.v43i01.
10

Yuningsih, & Taufiq, M. (2019). Investor Behavior In Determining Investment On Real Asset. *Jurnal Ilmiah Manajemen*, *9*(2), 327–340.

Zahera, S. A., & Bansal, R. (2018). Do investors exhibit behavioral biases in investment decision making? A systematic review. *Qualitative Research in Financial Markets*, *10*(2), 210–251.
https://doi.org/10.1108/QRFM-04-2017- 0028