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What Can Be Done by Overconfidence Bias and Optimism Bias on Investor Decisions?

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ABSTRACT

This study aims to analyze the relationship between overconfidence bias and optimism of investment decision bias. One approach of investors is to support investment decisions by integrating excessive trust in reasoning, judgment, cognitive abilities, and emotions. To benefit from investment activities, investors must be right in making decisions. Some investors in the capital market tend to show irrational behavior influenced by psycho-logical factors contrary to classical theory. This research uses quantitative methods with data collection tech-niques in questionnaires distributed to investors in Karawang. Samples taken were as many as 120 investors in Karawang. This research was assisted with SPSS 16.0 statistical tools. Testing this study uses a test of validity and reliability. The analytical method uses the classical assumption test, multiple linear regression analysis, hy-pothesis testing. The results showed that overconfidence bias had a positive effect on investment decisions, and optimism bias positively affected investment decisions.

Keywords: *Overconfidence Bias, Optimism Bias, Investment Decision.*

1. INTRODUCTION

During 2019, investors in the Indonesian capital market grew significantly compared to the previous year. All investors grew 53.04%, which consisted of stock investors, mutual funds, and state securities (SBN). Based on the Indonesian Central Securities Depository (KSEI) data, the total capital market investors in Indonesia, as of December 27, 2019, reached 2.47 million investors. The number increased significantly from 1.61 million in the full year 2018 period. In terms of stock investors, investor growth was not as high as last year, where there was only a growth of 29.53% versus 35.60% year on year.

Based on data from the Office of Investment and Integrated Services, One Door, Karawang Regency reported the amount of foreign investment that reached Rp 11.635 trillion. This year, six foreign companies located in West Karawang have invested up to 100 million USD.

To benefit from investment activities, investors must be right in making decisions. The classical financial theory explains that every investor will act rationally and have the ability to process information received by investors [1]. The basis of the classical financial theory consists of several frameworks, including the Modern Portfolio Theory (MPT), the efficient market hypothesis (EMH) [1], the arbitration principles, and the capital assets pricing [2].

Nevertheless, the strategies carried out by investors now no longer only look at fundamental analysis (for the long term) and technical analysis (for the short term) [3]. Some investors in the capital market tend to show irrational behavior influenced by psychological factors contrary to classical theory [4]. Reference [5] found that investors in the decision-making process showed a high or irrational opportunist. Thus, allowing investors to make wrong decisions or incorrect estimates. Investors prone to biased behavior cause systematic errors and investment decision choices that are only satisfactory but do not maximize benefits, and this event is known as behavioral finance.

Financial behavior is a study of the influence of psychology on investors and their impact on the market.

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One of the rationales for behavioral finance is cognitive psychology [6]. In the psychological literature, it is found that a person makes systematic mistakes in ways of thinking, such as being too confident in his abilities and too dependent on experience [7]. Irrational investment decisions occur under conditions of uncertainty and specific risks. In an un-certain investment world, investors tend to take over-confidence decisions [8].

In general, overconfidence occurs among male investors, young investors, investors with low portfolios, and low-income investors [9]. According to reference [10], overconfidence is explained as excessive trust in reasoning, judgment, and cognitive abilities. The overconfidence concept stems from several psychological studies that found that people overestimate the ability and correctness of the information they provide. Some investors believe and consider their abilities above the average of other investors and can complete the task well and have an unrealistic self-evaluation level [2].

Overconfidence bias is often associated with optimism, but there is a difference between overconfidence bias and optimism bias. Overconfidence bias is related to investor skills, while optimism bias is related to results derived by factors outside the system (exogenous) [11]. Reference [12] explains that optimism is about positive expectations regardless of the effort and skills specified by investors to get these results. Reference [2] mentions optimism bias included in the type of emotional bias, and investors tend to be more optimistic about the market, economy, and positive performance of their portfolios. Some investors believe that their portfolio will work well, and poor performance will only occur in other investors' portfolios. This can reduce awareness of potential losses from the decisions they make. So, in this condition, it is interesting for the writer to examine whether investors in Karawang are affected by overconfidence bias.

Theoretical Study

Investment decisions can be defined as the process of choosing alternatives from various alternatives [13]. Making investment decisions is a significant challenge faced by investors. An investment decision is said to be optimal if the investment timing can maximize utility expectations [14]. To maximize utility, one will only invest if the expected return on investment is greater than if the money is spent now.

An investor buys a stock in the hope of getting a high return during his investment period [15]. However, investors tend to face reality where actual returns are different from expected returns. These differences are sources of risk. Risk can also be defined as irregularities that occur in investment decisions. Risk is measured using a standard deviation. The higher the standard deviation, the higher the risk of the asset.

Investment decisions are influenced by the experience of profits experienced by investors in the past and predictions of profit opportunities obtained in the future [16]. Investor decisions are subjective, depending on the investor's financial condition, the ability of technical analysis, and investor perception of risk. Before making a decision, investors must understand the opportunities that might occur in the future. Each investor has a different perception of the opportunities that investors own. This shows that in making decisions, investors can be irrational.

Behavioral finance is the study of the influence of psychological factors on financial actors' behavior and their impact on the market [17]. Meanwhile, behavioral finance is defined as the integration relationship between classical economic theory and finance with psychology and the science of decision making [2]. Behavioral finance explains and enhances understanding of investors' reasoning patterns, including the emotional patterns involved and the extent of influencing investment decisions [1]. Specifically, behavioral finance tries to find answers to what, why, and how finance and investment from a human perspective. The purpose of behavioral finance seeks to understand and predict the systematic implications of financial markets from a psychological standpoint.

Behavioral finance's rationale is limited to arritage and cognitive psychology [6] and limited to arbitrage answers why stock price deviations are difficult to observe by rational investors [18]. Psychological literature finds that a person makes a systematic mistake in thinking (cognitive) too sure of the ability or expertise possessed and too relying on experience [7]. Irrational decisions will occur because investors are exposed to a bias of trust and will occur if investors are under uncertainty (heuristic theory) and certain risks (theoretical prospects). As in [2], behavioral finance bias is divided into two types, namely cognitive and emotional.

The difference between standard financial theory and behavioral finance, including standard finance, assumes investors as rational individuals. In contrast, behavioral finance assumes investors as ordinary individuals. Standard finance considers the market to be efficient. Behavioral finance considers the market to be inefficient and difficult to beat in arranging portfolios. Standard finance suggests that investors use mean-variance theory, while behavioral finance advises investors to use behavioral portfolio theory rules. In addition, standards finance measures expected returns using asset pricing theory, while behavioral finance uses behavioral assets pricing theory [19].

Overconfidence is a condition where investors assume better expertise than other investors [20]. Referenc [2] explains overconfidence as the belief that investors' information is more precise than the actual situation, and overconfidence can arise through the experience he has ever experienced. In general, investors prone to overconfidence bias are investors with male characteristics, young age, low income, and low portfolio level [9]. Investors are exposed to overconfidence bias due to limited information received to make investors feel the ability and knowledge that exceeds other investors [2].

Overconfident investors will expect positive results from investment decisions taken. Investment returns will be associated with the skills possessed more than other investors' skills, but experiencing negative results will be associated with poor conditions [21]. When investors consider having skills in the investment world, it will cause investors to become overconfident and increase trading frequency [20]. Reference [22] states that investors affected by overconfidence bias will think that they are better investors than other investors and will ignore risk.

Several statements from overconfident investors revealed that they believed the investment decisions would produce more profits than other investors. Nevertheless, in reality, overconfident investors make wrong investment decisions in the capital market and cause losses. Overconfident investors tend to increase trading frequency, which will lead to poor investment performance and will endanger investors' finances [23]. Errors that occur and endanger investor wealth due to overconfidence bias include investors going to trade excessively because they believe they have not owned skills, investors become overestimated in evaluating investments, investors become underestimated of risk. Investors do not diversify their investment portfolios [2].

Aside from overconfidence bias, investors are also vulnerable to optimism bias. Bias optimism can cause investors to make excessive decisions. The psychological literature explaining everyone is susceptible to optimism bias, and in the last few years, optimism bias has received much attention from researchers in the field of financial behavior.

Reference [24] defines investor optimism as expectations of high returns from investment performance. Reference [12] explains that optimism is about positive expectations regardless of the effort and skills specified by investors to get these results. If investors benefit from a company under their expectations, they will invest in the same company next year, whereas if investor expectations are not met, investors will no longer invest in these companies [25]. Reference [26] states that investors are affected by optimism bias due to emotional factors that influence investors to make decisions. Investors affected by optimism bias in making decisions believe that the market situation will benefit them, and investors will take risks in making decisions [27].

One of the triggers for investors affected by optimism bias is getting used to or having investment experience, which can influence investors to make investment decisions [28]. In addition, investor moods can also affect investors' level of optimism; if investors are in a happy mood, investors will make decisions without first analyzing and only rely on investor confidence or optimism [29].

Optimism will also make individuals believe they can overcome adversity (the ability to overcome difficulties) in the future. Thus, optimistic individuals will see a relatively brighter future. As in [30], shows that optimism is often coupled with self-efficacy (an individual's trust in his ability to succeed in doing something). Optimism can provide benefits if related to proper self-efficacy (not biased). Such optimism will motivate someone to work hard to find solutions and improve things. Even so, healthy optimism is realistic optimism because unrealistic optimism can explode.

2. METHODS

The population in this study are investors who live in Karawang and are over 17 years old. In determining the sample, the following formula is used:

$$n = \frac{Z^2}{4(Moe)^2} \tag{1}$$

where:

Z = level of confidence needed in sample research

Moe = Margin of error or the maximum Level of errors that can be tolerated

n = Sample size

The confidence level used is 95 percent or Z = 1.96 and Moe = 0.1. Then the number of samples in this study are as follows:

$$n = \frac{(1.96)^2}{4(0.1)^2}$$

The calculation results show a minimum sample of 96.04 respondents, but the sample used in this study amounted to 150 respondents with the reason the number of samples approaching the population, the responses from respondents increasingly representative. The sample is distributed to respondents in Karawang. The sampling technique was used randomly or purposive sampling.

3. RESULTS AND DISCUSSION

In the results of the regression calculation, it was found that the overconfidence bias variable has a significance value of 0,000, whose value is smaller than the error tolerance limit of 0.05, so it can be concluded that H1 is accepted, which means the overconfidence bias variable has a significant favor-able influence on investment decisions. This shows that making investor decisions at Y Karawang is influenced by overconfidence bias.

As many as 96 percent of respondents in the study consisted of young investors and students and students. Young investors can be affected by over-confidence bias because young investors who are still students have high enthusiasm and motivation to study the world of investment through activities in the classroom or outside class activities related to in-vestment activities. However, this is not supported by the relevant information, so that it has the potential to make investors feel they have sufficient skills to invest that are not really in themselves. Investments in the capital market, especially stocks, are long-term investments with the highest risk com-pared to investment types such as mutual funds and bonds. To benefit from stock investment activities, an investor must have mature investment skills and concepts supported by factual and relevant market information. So that young investors and students are very vulnerable to lose from investment activities because they do not have a mature investment concept and are not supported by relevant information.

The higher the level of overconfidence bias, the more confident investors will believe their investment plans will be successful because they can predict and identify stocks that will benefit in the future. They were supported by a feeling of having better investment skills and experience than the average of other investors who do not necessarily have the feeling owned by investors. This bloated feeling can endanger investors' finances because overconfidence bias can make investors wrong in the prediction process that impacts decision-making. The results of this study are in line with research [10], [31] - [34].

In this study, it was found that the bias optimism variable has a significance value of 0,000, whose value is less than the error tolerance limit of 0.05, so it is concluded that H2 is accepted, which means the optimism bias variable has a significant positive effect on investment decision making. This shows that in making investment decisions, investors in Kara-wang are affected by optimism bias.

Respondents in this study were dominated by young investors who were still students and students or 96 percent. Young investors are vulnerable to optimism bias because young investors still have a high emotional level and an unstable heart. This can make investors experience excessive optimism that impacts investors to ignore the risks faced. Besides, if young investors have a high level of overconfidence, there will be a feeling of optimism that is also high. Be-cause stock investment activities in the capital market have a high-risk value, investors must have a mature emotional so that they cannot see the risks to be faced.

The higher the optimism bias on Investors in Karawang, the higher the investor's confidence regarding the return on investment will be higher than other investors. They also feel confident that their investment portfolio will run well under uncertain conditions and will experience success in the invest-ment world. Investors in Karawang also have high expectations for better investment returns and improved performance in the future and can achieve investment goals. Excessive beliefs and expectations can affect investment decision-making.

The tendency of optimism bias will cause investors to increase the intensity and amount of investment and take a higher risk for confidence and hope that they will get higher returns than other investors. Young investors in Karawang who are affected by optimism bias can indicate the increasing value of stock transactions in Karawang.

4. CONCLUSIONS

Based on the results of data analysis ob-tained through a questionnaire distributed to investors in Karawang, the following conclusions are obtained:

a. There is a behavior of overconfidence bias in making stock investment decisions in investors in Karawang, which has the potential for investors to make mistakes in making decisions.

b. There is an optimistic bias behavior in making stock investment decisions in investors in Karawang, which can cause investors to increase the intensity and amount of investment and be more courageous in taking investment risks.

REFERENCES

[1] Ricciardi, V. & Simon, H. K., 2000. What Is Behavioral Finance?. Business, Education and Thecnology Journal.

[2] Pompian, M., 2006. Behavioral Finance and Wealth Management. Canada: John Wiley & Sons.

[3] Sitinjak, E. L. M., 2016. news @unika soegijapranata. [Online] Available at: http://news.unika.ac.id/2016/01/ perilaku-investor-individu-di-pasar-modal-indonesia/

[4] Trinugroho, I. & Roy, S., 2011. Overconfidence and Excessive Trading Behavior: An Experimental

Study. International Journal of Business and Management, pp. 147-152.

[5] Monowar, P. O. &. M., 2013. Impact of Personality on Risk Tolerance and Investment Decisions (A study on poten-tial investor of Kazakhstan). Bang College Of Business, pp. 370-381.

[6] Barberis, N. & Thaler, R., 2003. A Survey Of Behavioral Finance. National Bureau of Economic Research.

[7] Ritter, J., 2003. Behavioral Finance. Pacific-Basin Finance Journal, pp. 429-437.

[8] Im, M. & Oh, J., 2016. Effect of Emotion Regulation As a De-biasing Mechanism on Overconfidence In Investment De-cision. Journal of Financial Services Marketing, pp. 209-225.

[9] Bulent, T. & Yilmaz, N., 2015. Are individual stock investors overconfident? Evidence from an emerging market. Jour-nal of behavioral and experimental finance, pp. 35-45.

[10] Lakshmi, J. & Minimal, M., 2016. Effect of Overconfidence on Investment Decision: A Behavioural Finance Approach. Splint International Journal of Professionals, pp. 70-77.

[11] Malmendier, U. & Tate, G., 2005. CEO Overconfidence and Corporate Investment. the journal of finance, pp. 2661-2700.

[12] Agrawal, K., 2012. A Conceptual Framework of Behavioral Biases in Finance. The IUP Journal of Behavioral Fi-nance.

[13] Subash, R., 2012. Role of Behavioral Finance in Portfolio In-vestment Decision: Evidence from India. Charles Univer-sity in Prague.

[14] Arrifin, Z., 2005. Teori Keuangan & Pasar Modal. Yogyakar-ta: Ekonisia.

[15] Muhardi, W., 2009. Analisis Saham Pendekatan Fundamental. Jakarta: PT Indeks.

[16] Virlics, A. 2013. Investment decision making and risk. Procedia Economics and Finance, 6, 169-177.Abdullah, M. M., 2015. Metodologi Penelitian Kuantitatif. Yogyakarta: Aswaja Pressindo.

[17] Sewell, M., 2007. Behavioral Finance. University Of Cam-bridge.

[18] Alsedrah, I. & Ahmad, N., 2014. Behavioral Finance: The Missing Piece in Modern Finance. Proceedings of the First Middle East Conference on Global Business, Economics, Finance and Banking.

[19] Statman, M., 2014. Behavioral Finance: Finance With Normal People. Borsa Istanbul Review, pp. 65-73.

[20] Khan, M. T. I., Tan, S.-H. & Chong, L.-L., 2016. The Effect Of Stated Preference for Firm Characteristics, Optimism and Overconfidence on Trading Activities. Faculty Of Man-agement.

[21] Sheikh, M. F. & Riaz, K., 2012. Overconfidence Bias, Trading Volume and Returns Volatility: Evidence from Pakistan. World Applied Sciences Journal, pp. 1737-1748.

[22] Knight, D., Durham, C, C. & Locke, E. A., 2001. The relation-ship of team goals, incentives, and efficacy to strategic risk, tactical implementation and performance. Academy of management journal.

[23] Barber, B. M. & Odean, T., 2000. Trading is Hazardous to Your Wealth: The Common Stock Investment Perfor-mance of Individual Investors. The Journal Of Finance, pp. 773-806.

[24] Hoffmann, A., Post, T. & Pennings, J., 2013. Individual Inves-tor Perception and Behavior During the Financial Crisis. Journal of Banking and Finance, pp. 60-74.

[25] Magnuson, N., 2011. the role of expectation in value and glamour stock return. Journal of Behavioural Finance.

[26] Lerner, J. S., Keltner & Dacher, 2001. Fear, Anger and Risk. Journal of Personality and Social Pschoogy.

[27] Pulford, B. D., 2009. Is luck on my side? Optimism, pessimism, and ambiguity aversion.

[28] Bracha, a. & Brown, D. J., 2012. Affective decision making: A theory of optimism bias. Games and Economic Behavior.

[29] Baker, H. k. & Nofisnger, J. R., 2002. Psychological Biases of Investor. Financial Services Review.

[30] Reivich, K. & Shatte, A., 2002. The resilience factor: 7 Essen-tial Skill for Overcoming

[31] Trehan, B. & Sinha, A. K., 2016. A Study of Existence of Overconfidence Biases Among Investors and Its Impact on Investment Decision. ELK Asia Pacific Journals.

[32] Toma, F.-M., 2015. Behavioral Biases of the Investment Deci-sions of Romanian Investorson the Bucharest Stock Ex-change. Procedia Economics and Finance, pp. 200-207.

[33] Bakar, S., 2015. The Impact of Psychological Factors on In-vestors Decision Making in Malaysian Stock Market: A case Oof Klang Valley and Pahang. Procedia Economics and Finance, pp. 319-328.

[34] Ullah, I., Ullah, A. & Rehman, N. U., 2017. Impact Of Over-confidence and Optimism on Investment Decision. Inter-national Journal of Information, Business and Management.