

## Analysis Overconfidence, Herding, and Anchoring in Investment Decisions Among ESOP at PT Bank Central Asia



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**ABSTRACT:** This study aims to determine the influence of behavioral finance or psychological bias on investment decisions made by Employee Stock Ownership holders of PT Bank Central Asia. Tbk focuses on variables such as overconfidence, herding, and anchoring. This research is based on qualitative data and uses multiple linear regression for its analysis and research tools using SPSS. This research questionnaire was spread across 155 holders of Employee Stock Ownership of PT Bank Central Asia.Tbk. The results showed that overconfidence and anchoring have a significant effect on influencing investment decisions. Overconfidence has the most significant influence on decision-making while herding has a more moderate influence. This research is expected to help understand what factors can influence investment decisions and can help to make better decisions and avoid potential biases that can lead to suboptimal results.

**KEYWORDS:** Behavioral Finance, Investment Decision, Employee Stock Ownership.

### I. INTRODUCTION

The separation between management and ownership of the company can potentially cause conflicts called agency conflicts. This conflict arises because of conflicting interests between the two parties, management as agents and shareholders as principals. Shareholders will contract management to work in the interests of shareholders. Because shareholders elect management, management must account for its work to shareholders and this is what triggers agency conflicts. To minimize this conflict, companies compete to prepare incentives or bonuses for employees or management so that they can work in the interests of shareholders. One of the incentives provided by the company is a bonus distribution system in the form of shares or known as the ESOP program.

ESOP or Employee Stock Ownership Program is a program where part of the shares issued by the company are allocated to be distributed to employees to make employees more loyal to the Company. Employee Stock Ownership Program is an employee ownership program of company shares that is expected to increase a sense of ownership that can support the improvement of company performance (Herdinata, 2012). One of the banks in Indonesia that provides incentives in the form of shares to employees (ESOP) is PT Bank Central Asia. This ESOP program allows employees of PT Bank Central Asia to have securities accounts to transact in the capital market, and most of them have basic knowledge about the capital market. These employees expect benefits or reciprocity in the form of dividends or the difference in profits between the selling and buying prices of shares (Capital Gains). To benefit from investment activities, investors or BCA employees must be right in making decisions.

The success of investors is obtained from the accuracy of portfolio decision-making from time to sales volume in the capital market. Investment decisions can be based on rational and irrational actions, Most investors make decisions rationally (Kubilay & Bayrakdoroglu, 2016). Investors want easy decision-making by using instinct or intuition without doing calculations with models or theories from finance. This is commonly referred to as behavioral heuristics and it causes systematic errors in calculation and leads to satisfaction in investing but not maximizing utility or profit (Kahneman & Tversky, 1979). Some investors in the capital market tend to show irrational behavior influenced by psychological factors that are contrary to classical theory (Trinugroho & Roy, 2011).

Behavioral finance is a pattern of investor reasoning that is involved with emotional processes in making decisions (Ricciardi & Simon, 2000). Behavioral finance is built by various assumptions and ideas from behavioral economics involving emotions, traits, preferences, and various kinds of things inherent in humans as intellectual and social beings will interact based on the emergence

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of decisions to take an action. One type of bias in behavioral finance is overconfidence, which is a psychological bias that arises when an individual tends to be too confident in his ability and knowledge in making decisions (Afriani & Halmawati, 2019).

Investor behavior bias based on emotions can lead to a tendency to Loss Aversion. Loss aversion itself is a more painful feeling when investors make investments that carry greater potential losses compared to the pleasure derived from similar gains (Godoi et al., 2005), so investors are more pressured by the prospect of losses compared to equivalent gains (Barberis & Thaler, 2003). Investment decision-making is not only influenced by cognitive and emotional factors but also social factors, one of which is herding. Herding behavior is the most common behavioral bias when investors tend to follow investment decisions made by the majority around them. The main reason for herding is pressure or influence by colleagues or people around (Afriani & Halmawati, 2019). (Lao & Singh, 2011) revealed that herding behavior causes the fundamental value of stocks to be low.

Another bias that is likely to arise is also anchoring. This behavioral bias arises in investors who tend to set a standard number for an investment based on the initial purchase price of the investment. If the value of their investment starts to fall, they still believe that the value will rise again and are unwilling to sell it (Subash, 2012).

Irrational behavior such as overconfidence, herding, anchoring, representativeness, availability, and loss aversion are psychological biases that arise when making investment decisions. (Muradoglu & Harvey, 2012) convinced the need to identify psychological biases that influence investors' investment decisions. Neglecting to understand his investment decisions will have an impact on investors' decisions and affect the performance of his portfolio. In addition, understanding psychological biases can help individual investors avoid common mistakes and help investors develop more rational decisions and better performance evaluations and forecasts.

Therefore, the purpose of this study is to detect (1) whether BCA employees' investment decisions are influenced by Overconfidence, Herding, and Anchoring psychological biases and (2) what psychological biases have the most significant influence. Based on this explanation, the author is interested in conducting research entitled "Analysis of Overconfidence, Herding, and Anchoring in Investment Decision Making Among ESOP Holders at PT Bank Central Asia. Tbk".

## **II. LITERATURE REVIEW**

Behavioral finance is the study of the influence of psychological factors on the behavior of financial actors and their impact on the market (Sewell, 2007). Behavioral finance is defined as the integration relationship between classical economic theory and finance with psychology and the science of decision-making (Pompian 2006). Behavioral Finance explains and enhances understanding of investors' reasoning patterns, including the emotional patterns involved and the extent to which they influence investment decisions (Ricciardi & Simon, 2000). Prospect theory is a theory developed by Kahneman & Tversky (1979). This theory combines two different disciplines, namely economics and psychology. This theory considers human behavior to be considered strange and contradictory in making a decision and is not always rational (Pradhana, 2018). (Tversky & Kahneman, 1992) introduced prospect theory to explain the actual behavior of individual investors wherein, investor decision-making is irrational and losses carry a greater emotional impact than gains, even if the result is no different. Prospect theory describes several mental conditions that commonly occur in the decision-making process such as loss aversion, regret aversion, and mental accounting (Wawro et al., 2008: 28)

Heuristic theory is a theory that explains that people tend to make decisions quickly based on experiences that have been experienced by individuals in the past. People will become accustomed to doing repetitive decision-making activities in the past so that the person concerned will soon be able to make decisions when faced with similar things. Decision-making based on heuristic factors can cause decision-making errors because it is only focused on the feeling of not wanting to experience losses without looking at various considerations and other factors such as uncertainty conditions. Kahneman and Tversky (1974) were the first authors to introduce the factors of heuristic methods in decision-making. Examples of behavior in theory are (1) representativeness a bias that relies on stereotypes (representation), (2) Availability bias, a bias that relies on the availability of information that is remembered only. (3) Anchoring bias is a bias that relies on habits or bases that have been determined from the beginning.

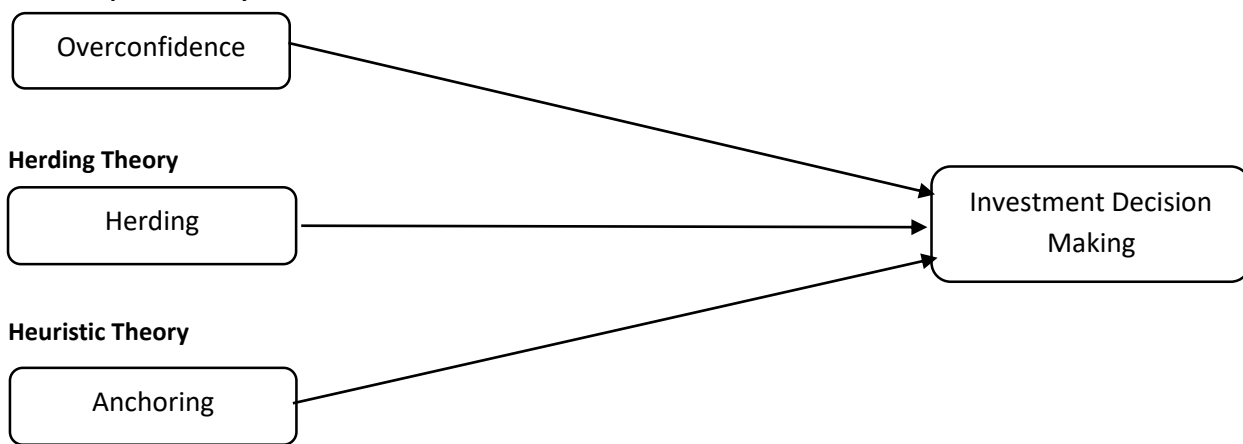
Self Deception Theory or Trivers Self-Deception Theory (2004) states that a person subconsciously feels confident that he has above-average abilities. Beliefs in him form a mindset to direct and manage his perceptions in such a way that tends to seek information that supports his behavior, then the individual will be trapped in the formation of false beliefs which will then lead to the formation of overconfidence behavior which has an impact on "self-deception". The level of knowledge will determine a person's sensitivity to the information that emerges and will further affect his level of confidence. One of the attitudes of this theory is Overconfidence, which is a bias based on the belief that the person has the knowledge, and abilities above average, and leads to erroneous predictions

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Investment is the process or action of investing in parties who need funds in the hope that they will get profits in the future. According to Subash (2012), investment decisions can be defined as the process of choosing alternatives from various alternatives. Making investment decisions is an important challenge faced by investors. An investment decision according to Ariffin (2005) is said to be optimal if the investment timing can maximize profit expectations. According to Muhardi (2009), an investor buys a stock with the hope of obtaining high returns during the life of his investment. Investors in practice face a reality where the actual return obtained is different from the expected return. Such differences are known as risks. Risk can also be defined as deviations that occur in investment decisions. Risk is measured using standard deviation, the higher the standard deviation, the higher the risk of the asset. In the decision-making process, there are two ways used, namely rational decisions and decision-making using intuition or irrationality. Rational decision-making is a decision taken with a rational approach or rationalization based on logic and information about the investment.

This study was made to see what variables of overconfidence, herding, loss aversion, and anchoring have a significant effect on investment decision-making. This research arises because of the many decision-making that is not optimal, and of course, it is related to the returns generated or losses arising from an investment, if a model is made, the form will be as follows:

### Self Deception Theory



### III. RESEARCH METHODS

This type of research is a causality research. This research is also included in the category of explanatory research. Explanatory research is a research method that intends to explain the position of the variables studied and the influence between one variable and another. Data collection using research instruments, and quantitative or statistical data analysis, to test hypotheses that have been determined and then processed using descriptive and quantitative analysis tools using testing tools in the form of SPSS. Data collection using a questionnaire method that is distributed directly to respondents through questionnaires. The data measurement scale used is the Likert scale, which is a scale based on the sum of respondents' attitudes in responding to statements related to indicators of a variable (Abdullah, 2015). The respondents in this study were BCA employees in the JABODETABEK area who invested in shares. The sampling technique uses purposive sampling, where sampling is done by selecting respondents because they have certain considerations. The researchers' considerations in taking this sample are as follows:

1. Employees who graduated from the BCA Accounting Education program from 2015 to 2017
2. Working period of more than 3 years.

### IV. RESULT AND DISCUSSION

The respondents of this study were BCA employees with a total of 155 respondents, including the following:

**Table 1. Profile Respondents**

Variable	Information	Number Of Respondents	Percentage (%)
Gender	Female	79	52,97
	Male	76	49,03
Age	24 Years	52	33,5
	25 Years	40	25,8
	26 Years	63	40,7

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	Senior High School	8	5,2
<b>Education Level</b>	Bachelor (S1)	135	87,1
	Master (S2)	12	7,7
<b>Duration of</b>	3 Tahun	52	33,5
<b>Stock Account</b>	4 Tahun	40	25,8
<b>Ownership</b>	5 Tahun	63	40,7

The majority of respondents are women, based on PPA BCA graduates, it is dominated by women. The respondents were those who had graduated from 2015 to 2017 so their ages ranged from 24 - 26 years. PPA BCA is a non-degree program for students who do not continue their education at regular universities, then non-degree education so there are respondents who are still high school graduates.

### Validity and Reliability Test

A validity test is a measure that serves to show that the variables measured are indeed in accordance with the variables to be studied by researchers (Cooper and Schindler, in Zulganef, 2006). Reliability is an instrument used in research to obtain information that is used reliably as a data collection tool and is able to reveal actual information in the field (Sugiharto; Situnjak, 2006). To conduct validity and reliability tests using the SPSS program. All question items used in this study are valid and reliable.

**Table 2. Results of the Validity Test and Reliability Test**

<i>Construct/Variable</i>	<i>Item Questioner</i>	<i>r Pearson Correlation</i>	<i>Sig.</i>	<i>Keputusan</i>	<i>Cronbach's Alpha</i>
<b>Overconfidence</b>	OV1	0,813**	0,000	Valid	0,789
	OV2	0,855**	0,000	Valid	0,792
	OV3	0,853**	0,000	Valid	0,794
	OV4	0,783**	0,000	Valid	0,797
<b>Herding</b>	Her1	0,780**	0,000	Valid	0,793
	Her2	0,783**	0,000	Valid	0,790
	Her3	0,608**	0,000	Valid	0,794
	Her4	0,726**	0,000	Valid	0,793
<b>Anchoring</b>	Anc1	0,650**	0,000	Valid	0,809
	Anc2	0,701**	0,000	Valid	0,809
	Anc3	0,651**	0,000	Valid	0,805
	Anc4	0,567**	0,000	Valid	0,789
<b>Investment Decision</b>	Kpi1	0,670**	0,000	Valid	0,802
	Kpi2	0,793**	0,000	Valid	0,799
	Kpi3	0,551**	0,000	Valid	0,801
	Kpi4	0,676**	0,000	Valid	0,799

The r-table value for degree freedom (df) is 153 and trust 0.05 is 0.1326. Based on Table 2 above, it can be seen that all question items in the questionnaire are valid because the value of the Pearson correlation coefficient has a value greater than 0.1326 with the significance value of each question item smaller than 0.05, so it is concluded that all question items used in this study are valid. Based on Table 2 above, So it can be seen that all the constructs of question variables in the questionnaire are reliable because the value of Cronbach's Alpha of each variable > 0.600, so it is concluded that each variable tested in this study is reliable.

### Hypothesis Testing

The results of the analysis can be seen through the summary in Table 3 below :

<i>Model</i>	<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients</i>		
	<i>B</i>	<i>Std. Error</i>	<i>Beta</i>	<i>t</i>	<i>Sig.</i>
<i>(Constant)z</i>	8,515	1,441		5,910	,000
<i>Overconfidence (X<sub>1</sub>)</i>	,291	,037	,540	7,868	,000
<i>Herding (X<sub>2</sub>)</i>	,089	,051	,142	1,751	,082
<i>Anchoring (X<sub>3</sub>)</i>	,224	,064	,230	3,468	,001

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Hypothesis 1: Overconfidence has a regression coefficient ( $\beta_1$ ) = 0.291 with sig. 0.000. Sig value. less than the probability value of 0.05 or  $0.000 < 0.05$ , then  $H_0$  is rejected and  $H_1$  is accepted. Overconfidence has a significant effect on investment decisions in ESOP holders of PT Bank Central Asia. The results of this study, support research conducted by Shah et al, (2017), Raut et al, (2018), Shah et al, (2017), Hafez et al, (2021), Jain et al (2019), Weixiang et al (2022), but do not support the research of Hossain et al, (2022) which states that overconfidence does not have a significant effect on the investment decision-making process. Thus, this study found that BCA employees are exposed to overconfidence bias in making investment decisions. This shows that BCA employees are still too confident in making investment decisions, so they tend to underestimate information from external parties which will further lead to biased and inaccurate decision making.

Hypothesis 2: Herding has a regression coefficient ( $\beta_2$ ) = 0.089 with sig. 0.082. Sig value. greater than the probability values of 0.05 or  $0.082 > 0.05$ , then  $H_0$  is accepted and  $H_2$  is rejected. Herding has no significant effect on investment decisions in ESOP holders of PT Bank Central Asia. The results of this study support the research conducted by Hossain et al, (2022) but do not support the research of Cao et al, (2021), Raut et al, (2018), Hafez et al, (2021), Jain et al, (2019), which states that herding has a significant effect on the investment decision-making process. The results of the study prove that BCA employees are not exposed to herding bias in making investment decisions. This shows that BCA employees do not follow the decisions or information of others when making investment decisions. They tend to be more confident in their own analysis and the information they get themselves.

Hypothesis 3: Anchoring has a regression coefficient ( $\beta_3$ ) = 0.224 with sig. 0.001. Sig value. greater than the probability value of 0.05 or  $0.001 < 0.05$ , then  $H_0$  is rejected and  $H_3$  is accepted. Anchoring has a significant effect on investment decisions for ESOP holders of PT Bank Central Asia. The results of this study support research conducted by Cao et al, (2021), Shah et al, (2017), and Luong, et al, (2011), which states that anchoring has a significant effect on the investment decision-making process. Thus, this study found that BCA employees are exposed to anchoring bias in making their investment decisions. This shows that BCA employees tend to use references to past events as a basis for making their investment decisions.

## CONCLUSIONS

Based on the research results that have been explained, the researcher found that the behavior of overconfidence, and anchoring, positively has a significant effect on investment decisions of ESOP Holders of PT Bank Central Asia. Meanwhile, herding behavior bias does not affect investment decisions. This research has been carried out by scientific procedures, but all of them have limitations, there are only three variables that influence the investment decision-making process in this study: overconfidence, herding, and anchoring, although there are other factors that can affect the investment decision-making process, such as mental accounting, self-attribution and the illusion of control and limited supporting journals obtained by the author. The author advises BCA employees to be more critical in making investment decisions. At least find out all the data and information first, after knowing thoroughly and objectively then they can be wiser in making investment decisions. The author suggests that employees are also more careful in observing portfolio conditions, which are more selective and do not rely on events or events in the past in making investment decisions should be based on elements of rationality, such as doing fundamental calculations or forecasting.

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