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# Effect of Representativeness Bias, Availability Bias and Anchoring Bias on Investment Decisions

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## Abstract

This study aims to determine the effect of three types of financial behavioral bias, namely representativeness bias, availability bias, and anchoring bias on investment decisions. This study uses a quantitative method with a purposive sampling technique. Data were collected through questionnaires and analyzed using Structural Equation Modeling (SEM) with the help of SmartPLS 3.0 software. The results of the study show that the two types of financial behavioral bias have a significant effect on investment decisions which are the representativeness bias and the availability bias on investment decisions, while anchoring bias does not have an effect on investment decisions. This research can contribute to investors to better understand the effect of financial behavior bias on investment decisions and to take wiser actions in investing.

**Keywords:** Behavioral Finance, Investment Decision, Financial Bias

## 1. Introduction

Since decades ago, the traditional financial model has dominated the financial sector. Traditional finance, also known as standard finance, is based on theories and principles that assume that investors behave rationally. Within this framework, the focus is given to models that take into account the assumptions of rationality. Some of the theories that form the basis of traditional finance include the arbitrage principle of Modigliani and Miller, the portfolio principle of Markowitz, the theory of capital asset pricing by Sharpe, Lintner, and Black, and the efficient market hypothesis put forward by Fama. In this view, the market is considered efficient and investors are considered to behave rationally in making investment decisions. In essence, traditional finance emphasizes the importance of the information included in the price of financial assets and investors seek to avoid risk by considering the tradeoff between return and risk. However, recurring financial crises and unanswered stock market anomalies have called into question the hypotheses of market efficiency and investor rationality. In 1979, Daniel Kahneman and Amos Tversky issued their important work entitled "Prospect Theory: An analysis of decision under risk", in which they criticized the expected utility theory as a model describing decision making in risk situations and developed an alternative model known as as Prospect Theory. This theory explains the irregularities

in human behavior when assessing risk in uncertain situations. They rejected the idea of an efficient market and investors who were always rational and consistently risk averse, thus paving the way for the development of a new academic discipline, namely Behavioral Finance.

Daniel Kahneman, a psychologist, and Vernon Smith, an economist, are recognized as major figures in the development of behavioral finance and received the Nobel Prize in Economics in 2002. Kahneman examines how humans evaluate and make decisions in situations full of uncertainty, while Smith studies market mechanisms through experimental research. Behavioral finance combines aspects of psychology and economics to explain why and how people make irrational and suboptimal financial decisions, and the impact these decisions have on market efficiency, individual wealth, and corporate performance. This approach emphasizes that the investment decision-making process is influenced by various unavoidable behavioral biases, and that the human mind uses shortcuts and emotional filters even in the context of investment decisions. In this context, the psychological dimension in behavioral finance has a significant influence on the process of making investment decisions. Rather than relying on a universal theory of investment behavior, research in behavioral finance has relied on widespread evidence demonstrating human ineffectiveness in making economic decisions in a wide variety of decision-making situations. Initially, the traditional field of finance may have been reluctant to accept the views of psychologists, but it has since succeeded in providing explanations for several reasons why investors often deviate from making rational financial decisions and why sudden and unpredictable stock price fluctuations occur. Research has revealed that some irrational behavior in the market includes over trading, buying and selling of stocks without considering their fundamental value, making decisions based on the stock's past performance and what other people are doing in buying and selling, and the habit of holding on to losing stocks while selling profitable stock. Some of the behavioral biases that have been studied include overconfidence, disposition effects, representativeness, retention, availability, herd behavior, and propensity bias towards local assets.

One form of behavioral bias that exists in financial behavior is a heuristic bias. Heuristics are rules of thumb that support investors to make decisions only in complex and uncertain situations (Ritter, 2003). The various types of methods adopted by investors to reduce the effort associated with their task are referred to as heuristics. Representativeness bias, availability bias, anchoring bias, and overconfidence bias are some important forms of heuristics. (Subramaniam & Velnampy, 2017). Kahneman and Tversky (1974) show that humans tend to classify events as representatives of familiar categories, and this type of bias is known as representative bias. Availability bias occurs when investors evaluate the frequency of a category or the probability of an event based on how easy the example or event is to remember (Tversky & Kahneman, 1974). Anchoring is the tendency for investors to rely too heavily on one trait or information when making investment decisions. (Lord, Ross and Lepper, 1979). By looking at this background, the researcher is interested in conducting further research which aims to determine the effect of representative bias, availability bias and anchoring bias.

## **2. Literature Review**

### *2.1. Behavioral Finance*

Behavioral finance is defined as the study of the impact of psychological and cognitive factors on the decision behavior of financial practitioners and their subsequent effects on markets (Javed et al., 2017). In their early publications on bias and heuristics, Tversky and Daniel Kahneman (1972) identified three main types of heuristics, namely brief thinking strategies: the representativeness heuristic, the availability heuristic, and the adjustment and containment heuristic. According to them, these heuristics provide an explanation for the emergence of biases and errors in judgment and decision making, which may violate normative principles or axioms. In behavioral finance, it is assumed that investment decisions can be irrational due to several factors, such as limited imperfect information, limited rationality, anomalies, use of basic heuristics, and behavioral and psychological biases (Shah et al., 2018). In addition, the role of investors' mental status is also an important factor in understanding irrational decision-making processes. Investors often use behavioral heuristics to simplify their decision-making process, which can produce systematic errors in judgment and lead to satisfactory investment choices, but do not achieve maximum utility (Kahneman & Tversky, 1979). Heuristic biases such as representativeness, availability, overconfidence, and anchoring are used by investors to reduce the risk of loss in uncertain situations. When

individual investors use this heuristic, they reduce mental effort in the decision-making process (Shah et al., 2018). However, this can also lead to errors in judgment, and as a result, investors can make the wrong investment decisions. This wrong decision can lead to market inefficiencies.

## *2.2. Investment Decision*

The process of making investment decisions involves making choices regarding the allocation of funds to achieve the desired investment returns. This includes deciding which assets to invest, how much to invest, and when to buy or sell assets. Investment decisions are influenced by a variety of factors, including financial goals, tolerance for risk, market conditions and personal biases. Investors can use a variety of methods to analyze a potential investment, such as fundamental analysis, technical analysis or a combination approach. Ultimately, the goal of making investment decisions is to achieve maximum profit by reducing risk as much as possible. However, studies over the past two decades have highlighted the behavioral phenomena of investor psychology related to perception, memory, and non-conscious thoughts (Dangol & Manandhar, 2020). Hilton (2001) and Baker & Nofsinger (2002) stated that behavior explained through the thoughts and feelings of investors can change the decision-making process from initially rational to irrational. Behavioral finance assumes that in making investment decisions, there is a possibility of irrationality (Shah et al., 2018). This can be caused by limitations of imperfect information, limitations in rationality, the existence of anomalies, the use of basic heuristics, and the presence of psychological or behavioral biases. In addition, investors' mental status also plays an important role in understanding why irrational decision making occurs.

## *2.3. Representative Bias*

Representative bias is a form of cognitive heuristic bias which can be explained as a brief thinking strategy that involves making decisions based on mental stereotypes (Shefrin, 2005). Representativeness can be defined as the extent to which an event has something in common with its parent population. In other words, representativeness reflects the extent to which an event represents the general population. There are two types of representativeness bias, namely baseline level neglect and sample size neglect. Baseline neglect means that decision makers ignore irrelevant or inaccurate information when evaluating the likely return of a particular investment. In other words, they tend to rely on stereotypes when making investment decisions, without adequately considering the possible basis for emerging stereotypes (Pompian, 2006). Many studies have been conducted on the relationship between representativeness bias and investment decisions. Some of these studies show a positive relationship between representativeness bias and improvements in investment decisions. That is, because of the representation bias, the investment decision is better. Elhoussein & Abdelgadir (2020) investigate behavioral finance by investigating the impact of behavioral biases on individual investment decision making in a developing country's stock market, the Sudan Stock Exchange Market. This paper finds that representative bias has a significant impact on individual investment decision making at the Khartoum Stock Exchange. Alrabadi, et al (2018) also conducted research which found that representative bias has a significant effect on investment performance. Meanwhile, Dangol & Manandhar (2020) investigated the effect of representativeness bias in making investment decisions and its relationship with the level of irrationality in making investment decisions. This paper presents a conceptual framework that includes representativeness bias as one of the four heuristic biases that influence investment decision making.

## *2.4. Availability Bias*

Availability bias occurs when decision makers rely on available information (Siraji, 2019). This refers to the tendency of people to judge the likelihood of an event based on the degree to which they easily remember similar events. In other words, they are more likely to give more weight to currently available information than to process all relevant information. This can lead to an overestimation of the likelihood of certain events occurring, which in turn can lead to sub-optimal investment decisions. For example, an investor may be swayed by a recent news report or social media post about a stock, without considering other factors that may affect the stock's performance. Research has shown that availability bias can have a negative impact on investment decisions, along with other biases such as overconfidence bias, herding bias, anchoring bias, and representativeness bias. Therefore, it is

important for investors to be aware of the existence of these biases and take steps to reduce their impact on the investment decision-making process. In the same study, Elhussein & Abdelgadir (2020) and Alrabadi, et al (2018) found that the availability bias has a significant effect on investment decisions. Ikram (2016) conducted research to explore the influence of the factors that influence the trading decisions of individual investors on the Islamabad Stock Exchange. The results of this study indicate that the existence of an availability bias has a positive impact on their investment decisions. In other words, the presence of such availability bias contributes to the increased returns earned by individual investors.

### 2.5. Anchoring Bias

Kahneman and Tversky (1974) explain that Anchoring is a strategy used in situations where people make estimates or estimates by referring to certain initial values. This approach tends to affect the final estimate, because different initial values may result in different estimates. Anchoring bias refers to the tendency of investors to use stock price levels that are not logically relevant as a basis for their decision making (Jain et al., 2020). Investors affected by this bias tend to set buy and sell prices for stocks based on past information. This method is actually not the right method, so investors buy stocks when prices go up or sell when prices are down. Anchoring bias is also related to representativeness because it indicates that investors' decisions are influenced by recent experience, where they tend to be more optimistic when the market is rising and more pessimistic when the market is down (Waweru et al., 2008). Various studies have also been conducted to investigate the effect of anchoring bias on investment decisions. Subramaniam & Velnampy (2017) found that anchoring bias is one of the factors influencing the investment decisions of household investors in the Northern Province of Sri Lanka. The initial model of the Behavioral Finance-Based Investment Decision construct has Anchoring as one of eight factors. (Dangol & Manandhar, 2020) examines the impact of anchoring bias on investment decision making and its relationship to the level of irrationality in investment decisions. The conceptual framework presented in this paper includes anchoring and adjustment biases as one of the four heuristic biases that influence investment decision making.

### 2.6. Conceptual Framework

This research framework aims to examine the effect of representativeness bias, availability bias and anchoring bias on investors' investment decisions in financial markets. In this context, representativeness bias refers to a short thinking strategy that involves making decisions based on mental stereotypes, whereas availability bias occurs when decision makers rely on available information and anchoring bias is a strategy used in situations where people make estimates or estimates by referring to at a certain initial value. This research framework is based on behavioral finance theory which recognizes that the behavior and psychological attitudes of investors can influence their investment decisions. The independent variables in this study are representativeness bias, availability bias, anchoring bias and the dependent variable is the investment decision.

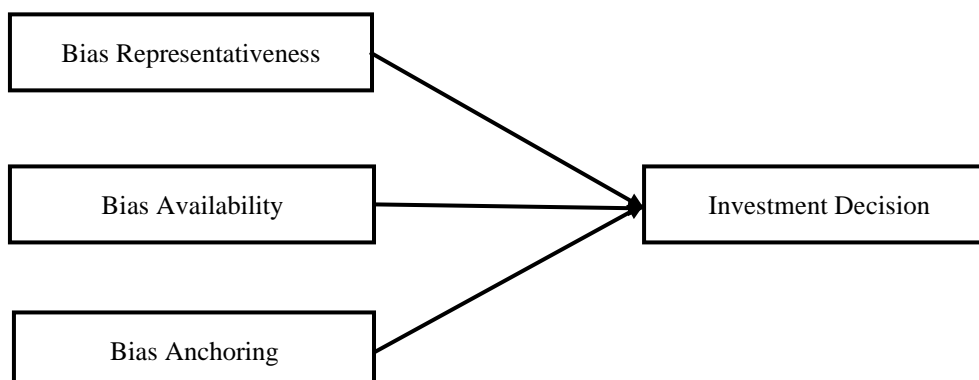


Figure 1: Research Framework

Thus, the hypotheses of the study are:

H1: Representativeness bias has a significant effect on investment decisions in the Indonesian Capital Market

H2: Availability bias has a significant effect on investment decisions in the Indonesian Capital Market

H3: Anchoring bias has a significant effect on investment decisions in the Indonesian Capital Market

### 3. Method

This research is descriptive quantitative research that uses primary data directly obtained from the research subjects. In this study the quantitative method was used to examine the effect of Representative Bias, Availability Bias, and Anchoring Bias on Investment Decisions. In this study, the research variables are discussed in stages, starting with the dependent variable which is the central theme, and then continuing with a discussion of the independent variables. There are dependent variables and independent variables in this study. The dependent variable, also known as the dependent variable, is the variable which is functionally affected by the independent variable. In quantitative research, the dependent variable is the main focus and center of attention for researchers (Wahyudin, 2015). The dependent variable in this study is investment decisions. Independent variable (X) in the form of representativeness, availability & anchoring. In this study, the Structural Equation Modeling (SEM) method was used as a data analysis technique. Data processing uses smartPLS v3.0 software. SEM method is used to overcome the weaknesses contained in the regression method. This method was chosen because the variables examined in this study are latent variables. Partial Least Square is the most powerful analysis method which in this method is not based on many assumptions. Partial Least Square (PLS) can be used to explain the relationship between latent variables. PLS is able to analyze construct models formed from reflective and formative indicators, so indicators can be based on theory or adopt indicators that have been used by previous researchers. This method is categorized as non-parametric, so it does not require data that has a normal distribution in the Partial Least Square model. The use of Partial Least Square aims to predict the relationship between constructs, helping researchers in their research to identify latent variables related to the desired predictions (Ghozali, 2014).

### 4. Results

#### 4.1. Descriptive Analysis

Based on the data gathered through the questionnaire the majority respondents are college students with 53% percentage followed by employees with 24% share. Meanwhile, based on age the majority are respondents at < 25 years old with 58% and between 25-40 years old with 38%.

Table 1: Respondent Descriptive Profile

Characteristic		Frequency	Percentage
Gender	Male	49	37%
	Female	51	63%
Age	≤ 25 tahun	58	58%
	> 25 - 40 tahun	38	38%
	> 40 - 55 tahun	4	4%
Occupany	Employee	24	24%
	Professional	6	6%
	Entrepreneur	7	7%
	Student	53	53%
	Civil Servants	7	7%
	Other	3	3%

#### 4.2. Partial Least Square

The outer model is used in analyzing the relationship between indicators and constructs. It is also used to ensure the validity and reliability of the data used. Tests were carried out using Composite Reliability (CR), Average Variance Extracted (AVE) and Alpha Cronbach.

Table 2: Composite Reliability, Cronbach's Alpha &amp; AVE

Variable	Composite Reliability	Cronbach's Alpha	AVE
Representativeness	0.911	0.877	0.674
Availability	0.895	0.855	0.631
Anchoring	0.873	0.802	0.634
Investment Decision	0.865	0.808	0.565

The AVE value for all variables ranging from ordinary representative, availability bias, anchoring bias and investment decision has a value of more than 0.5, which is acceptable. While the value of composite reliability is at an acceptable level, which is more than 0.7.

Table 3: Hypothesis Testing

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	P Values
Anchoring -> Investment Decision	0.201	0.205	0.109	1.848	0.065
Availability -> Investment Decision	0.248	0.268	0.092	2.700	0.007
Representativeness -> Investment Decision	0.387	0.391	0.098	3.952	0.000

Based on the test criteria, exogenous variables have a significant impact on endogenous variables if the t-statistic value exceeds 1.96. In terms of the relationship between representativeness bias and investment decisions, the t-statistic value is 3,952. Therefore, it can be concluded that H1 is proven and representativeness bias has a very significant influence on investment decisions. Meanwhile, the value of the t-statistic in the relationship between availability bias and investment decisions is 3.952, indicating that availability bias has a significant effect on investment decisions, so that H2 can be accepted. In addition, anchoring bias has a t-statistic of 1.848 so that anchoring bias does not have a significant effect on investment decisions.

## 5. Discussion

### 5.1. The Effect of Representativeness Bias towards Investment Decision

Investment decisions are directly influenced by representativeness bias with a p-value of 0.000. This study shows that representativeness bias has a significant influence on investment decisions. This is also in line with some of the investment results that have been made. However, it is different from what has been done by Suci Sudani & Putri Pertiwi (2022) who found that representativeness bias does not have a significant effect on investment decisions. Similar to that produced by Shah et al. (2018)

### 5.2. The Effect of Availability Bias towards Investment Decision

Investment decisions are directly influenced by availability bias with a p-value of 0.007, which means it is lower than the significance value of 0.05. This study shows that the availability bias has a significant influence on investment decisions. The results of this study are in line with previous studies. As research conducted by Shah et al. (2018).

### 5.3. The Effect of Anchoring Bias towards Investment Decision

Investment decisions are indirectly influenced by Anchoring Bias with a p-value of 0.065, which means that it is higher than the alpha significance value of 5%. This study shows that anchoring bias does not have a significant effect on investment decisions. The results of this study are not in line with research conducted by Shah et al., (2018) which found that anchoring bias has a significant effect on investment decisions.

## 6. Conclusion

This study found that representativeness bias and availability bias have a significant influence on investment decisions. Previous studies have found that representativeness bias and availability bias can negatively affect investment decisions where the decisions taken produce investment returns that are detrimental to investors. In contrast to other studies, the variable anchoring bias does not have a significant influence on investment decisions. The results of this study have contributed to the body of knowledge in financial management science, especially in financial behavioral theory. The results of this research can also contribute to the world of investment, especially in the capital market.

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## References

- Baker, H. K., & Nofsinger, J. R. (2002). Psychological biases of investors. *Financial Services Review*, 11(2), 971-16.
- Ikram, Z. (2016). An Empirical Investigation on Behavioral Determinants, Impact on Investment Decision Making, Moderating Role of Locus of Control. *Journal of Poverty, Investment and Development*, Vol.26.
- Ritter, J. R. (2003). Behavioral Finance. *Pacific-Basin Finance Journal*, 11(4), 429-437.
- Kahneman, D., & Tversky, A. (1974). Judgment under uncertainty: *Heuristics and biases*. *Science*, 185, 1124-1131.
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica: Journal of the econometric society*, 47(2), 263-291.
- Lord, C. G., Ross, L., & Lepper, M. R. (1979). Biased assimilation and attitude polarization: The effects of prior theories on subsequently considered evidence. *Journal of personality and social psychology*, 37(11), 2098-2109.
- Pompian, M. M. (2006). *Behavioral finance and wealth Management (How to Build Optimal Portfolio That Account for Investor Biases)*: Wiley & Sons
- Shefrin, H. (2005). *A behavioral approach to asset pricing*. Burlington, MA: Elsevier
- Alkhars, M., Evangelopoulos, N., Pavur, R., & Kulkarni, S. (2019). Cognitive biases resulting from the representativeness heuristic in operations management: An experimental investigation. *Psychology Research and Behavior Management*, 12, 263–276. <https://doi.org/10.2147/PRBM.S193092>
- Badshah, W., Irshad, S., & Hakam, U. (2016). Effect of Representativeness Bias on Investment Decision Making. *Management and Administrative Sciences Review*, 5(1), 26–30. <https://www.researchgate.net/publication/328996161>
- Dangol, J., & Manandhar, R. (2020). Impact of Heuristics on Investment Decisions: The Moderating Role of Locus of Control. *Journal of Business and Social Sciences Research*, 5(1), 1–14. <https://doi.org/10.3126/jbssr.v5i1.30195>
- Elhussein, N. H. A., & Abdelgadir, J. N. A. (2020). Behavioral Bias in Individual Investment Decisions: Is It a Common Phenomenon in Stock Markets? *International Journal of Financial Research*, 11(6), 25. <https://doi.org/10.5430/ijfr.v11n6p25>
- Jain, J., Walia, N., & Gupta, S. (2020). Evaluation of behavioral biases affecting investment decision making of individual equity investors by fuzzy analytic hierarchy process. *Review of Behavioral Finance*, 12(3), 297–314. <https://doi.org/10.1108/RBF-03-2019-0044>
- Javed, H., Bagh, T., & Razzaq, S. (2017). Herding Effects, Over Confidence, Availability Bias and Representativeness as Behavioral Determinants of Perceived Investment Performance: An Empirical



