Major Research Project

Study on Investor's Decision Making based on Anchoring Bias

Submitted By

Kanishk Saxena

2K21/DMBA/60

Under the Guidance of

Dr. Saurabh Agrawal

Associate Professor

DELHI SCHOOL OF MANAGEMENT

Delhi Technological University

Bawana Road Delhi 110042

CERTIFICATE

This is to certify that Kanishk Saxena, has completed the project titled "Study on Investor's decision making based on Anchoring Bias" under the of Dr. Saurabh Agrawal, Associate Professor, as a part of Master of Business Administration (MBA) curriculum of Delhi School of Management, New Delhi. To the best of my knowledge, this is an original piece of work and has not been submitted elsewhere.

Dr. Archana Singh	**Dr. Saurabh Agrawal**
Associate Professor	Associate Professor (DSM, DTU)
Head of Department	
(DSM, DTU)	

DECLARATION

I solemnly declare that the project dissertation report titled "**Study on Investor's decision making based on Anchoring Bias**", submitted to Delhi School of Management, DTU is based on my original work under the guidance of my mentor Dr. Saurabh Agrawal, Associate Professor, Delhi School of Management, DTU, and submitted in partial fulfillment of the requirement for the award of the degree of Master of Business Administration.

I further certify that the work contained in this report has not been submitted to any other institution for the award of any degree.

Kanishk Saxena

2K21/DMBA/60

ACKNOWLEDGEMENT

It gives me great pleasure to acknowledge the assistance and constant support I received throughout my research work. I express my utmost gratitude to my faculty advisor, Dr. Saurabh Agrawal, who guided and mentored me throughout my research journey on the topic “Study on Investor's decision making based on Anchoring Bias” and helped me complete the project properly. Working on the project provided me with an invaluable opportunity to explore the area of masstige marketing.

I would also like to express my heartfelt gratitude to the faculties of Delhi School of Management, Delhi Technological University for providing me the opportunity and assisting me with their expertise on this project. It has been an enriching experience for me to interact with them over the course of this research and will undoubtedly contribute to my professional growth.

It has been my constant endeavor to ensure that the project is completed in the best possible manner and ensure that it is error-free.

Kanishk Saxena

2K21/DMBA/60

EXECUTIVE SUMMARY

Anchoring bias is a term that is used for the tendency of individuals to rely very heavily on first piece of information that they receive (the "anchor") while making decisions. This bias can impact investor decision-making in a number of ways.

Investor receives information about a stock that is overvalued, they may use that information as an anchor and continue to believe that the stock is overvalued, even if subsequent information suggests otherwise. As a result, they may be less likely to buy the stock, even if it is undervalued, because their initial impression of it has been skewed.

Anchoring bias also influences investor's ability of evaluating the potential returns of a stock accurately. If an investor is presented an initial estimate of the potential return of a stock, they may use that estimate as an anchor and fail to consider other relevant information that could impact the stock's return. This can lead to over- or under-estimation of the stock's potential return, and could impact investment decisions accordingly.

Another way that anchoring bias can impact investor decision-making is by leading investors to overweigh the short-term information and ignore long-term information.

If an investor receives information about a stock that has performed well in the short-term, they may use that information as an anchor and ignore information about the company's long-term prospects.

Because it makes investors depend too strongly on the first piece of information they get, ignore subsequent information, and sometimes overestimate or underestimate the probable return on a stock, Anchoring bias influences investor decisions significantly. Investors should be aware of this tendency and make every effort to gather and consider all relevant information.

TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION

1.1 Background

When making future decisions or projections, people have a tendency to place an excessive amount of weight on the first piece of information they come across, even if it is irrelevant. This is referred to as anchoring bias. People usually make changes based on the initial piece of information, commonly known as "anchor," rather than starting from scratch. It serves as a point of reference. As a result, the initial anchor may skew assessments and estimates unintentionally.

Anchoring bias can occur in a variety of settings, such as in negotiations, when evaluating the value of an item, and in predicting future events. For example, when negotiating the price of a car, the salesperson may quote an initial high price, which serves as an anchor and may make you more likely to accept a slightly lower price that is still higher than what you would have considered fair if the anchor was not present.

One of the issues that investors in the Indian stock market encounter is that they are not fundamentally aware of the cognitive biases that influence investment behaviour. The goal of this study was to identify the cognitive biases that influence Indian stock market decision-making. The study's main goal was to look into the impact of anchoring bias on stock market investment decisions.

The study of how human psychology, ideas, feelings, and attitudes—such as confidence—influence financial decisions and behaviours is known as behavioural finance, according to (Somil, 2007). Based on psychological principles, behavioural finance challenges the efficiency of the market and the rationality of investors. Behavioural finance is the study of the impact of psychology on the actions of financial practitioners and the resulting impact on the market, claims (Shiller, 2007).

According to behavioural economics, market flaws are caused by bias. Cognitive biases include overconfidence, overreaction, representational bias, information bias, and a variety of other expected human flaws in reasoning and information processing. Psychologists such as Kahneman (1979), Tversky (1979), Thaler (1994), and Slovic (2000) have investigated these. A cognitive bias, according to Gilovich, Gryphon, and Kahneman (2002), is a persistent disparity between the "correct" response to a judgement task as stated by a formal normative rule and the actual response to the test supplied by decision-makers and experts.

Additionally, decision-makers frequently fail to make enough revisions after making judgements based on an initial assessment as an anchor. It is the propensity to base decisions solely on one characteristic or piece of knowledge.

Numerous cognitive biases were divided into four categories by Virine and Trumper (2008): (i) behavioural biases and biases related to perception; (ii) biases in estimating probability and belief; (iii) social and group biases; and (iv) memory biases and effects.

The increase in interest in the stock market can be linked to increased promotion by the Indian government. This reason has led to the emergence of numerous internet trading platforms. The stock market continues to be tempting since there are so many possibilities for stocks, mutual funds, and other assets.

1.2 Problem Statement

When making investing decisions, investors are frequently impacted by a wide range of factors, such as prior experiences, emotions, and cognitive biases. Anchoring bias, in particular, has been shown to have a significant impact on investment decisions by causing investors to base their expectations and judgements unduly on initial information. However, it is still uncertain how much anchoring bias influences investor decision-making and what specific investing implications it causes. This study's objectives are to investigate how anchoring bias affects investor decision-making and to discover potential mitigation measures.

1.3 Objectives of the Study

The following goals may be included in a study on the anchoring bias in investor decision-making:

1. To measure how much anchoring bias influences investor decision-making by looking at the consequences of early knowledge on investment decisions and outcomes.

2. To pinpoint the precise circumstances and investment contexts where anchoring bias is most likely to occur and to look at the effects of anchoring bias in these situations.

3. Investigate the psychological and behavioural factors, including memory, attention, and decision-making processes, that underlie anchoring bias.

4. To assess the efficiency of methods for reducing the influence of anchoring bias on investment decisions, such as compensating for initial information, using objective data, and obtaining information from many sources.

5. Based on the study's findings, offer suggestions for enhancing investment practices, financial education, and investment products.

6. To explore how anchoring bias influences investment behaviour and decision-making, thereby enhancing the body of knowledge in psychology and economics.

1.4 Scope of Study

A study on the application of anchoring bias in investor decision-making could look into the following topics:

1. Investment scenarios: The study will cover a range of investment situations, including purchasing individual stocks, creating a portfolio, and investing in financial instruments like mutual funds and exchange-traded funds.

2. Participants: The study will use a diverse sample of investors, including individual investors, financial advisors, and institutional investors, to understand the impact of anchoring bias across multiple categories.

3. Data collection: To learn more about investor decision-making and the effects of anchoring bias, the study will combine quantitative and qualitative approaches such as tests, questionnaires, and interviews.

4. Theoretical framework: To comprehend the mechanisms underlying anchoring bias and its effects on investment decisions, the study will make use of theories from psychology and economics.

5. Geographical scope: Although the study will concentrate on Indian investors, the findings and suggestions may also apply to investors in other nations.

6. Study duration: To capture the long-term effects of anchoring bias on investment decisions and results, the study will last for a number of years.

7. In general, the study's scope will be wide-ranging, taking into account a variety of investment scenarios, participants, and data sources while utilising both theoretical and empirical methods to comprehend how anchoring bias affects investor decision-making.

CHAPTER 2

LITERATURE REVIEW

The cognitive bias known as "anchoring bias" happens when someone places an excessive amount of attention on one piece of information (the "anchor") while making subsequent assessments or decisions. This initial piece of information, however random and unrelated to the current choice, may have a significant influence on the person's subsequent judgements.

An example of a cognitive bias that can influence judgement, problem-solving, and decision-making is anchoring bias. In the disciplines of social psychology, cognitive psychology, and behavioural economics, it has received substantial research. According to research, anchoring bias can cause people to base too much of their judgement and decisions on the first information they are given, even if it is unreliable or irrelevant.

In the study of economics, anchoring bias is seen as a significant factor that might affect economic judgement. Anchoring bias can lead to inaccurate appraisals of values and prices because people prefer to base their estimates on the first piece of information they are given. This can have a big impact on how you decide to price things, invest, and negotiate.

Overall, anchoring bias is an important psychology and economics concept that highlights the necessity to be aware of the initial information we receive when making judgements and decisions and to be careful not to depend on it excessively.

Anchoring bias has already been proven to have a significant impact on investor decision-making. Investors may be influenced by a range of factors while making investments, including market swings, business news, and financial statistics. Anchoring bias, on the other side, may cause investors to place too much reliance on a single piece of information, such as a stock price or a professional opinion.

Investors were more willing to stay on to underperforming stocks when they were tethered to a high purchase price, according to a study published in the Journal of Behavioural Finance. Researchers discovered that even if they were losing money, investors who were tied to a greater purchase price were more willing to hang onto their underperforming stocks.

This implies that anchoring bias may lead investors to hang onto losing investments for longer than necessary, which may have a detrimental effect on the performance of their entire portfolio.

An additional study demonstrated that anchoring bias can influence investors' perceptions of risk. This study was also published in the Journal of Economic Psychology. Even when the stock's fundamentals remained unchanged, the researchers discovered that investors who were tied to a high stock price thought the investment was less hazardous. This shows that investors may underestimate the dangers involved with their investments as a result of anchoring bias, which might result in subpar investment choices.

These findings collectively imply that anchoring bias might significantly affect investor decision-making, resulting in less-than-ideal investment choices and poorer portfolio performance. Investors must take precautions to lessen the impacts of anchoring bias and be mindful of its potential impact on their decision-making.

By Egan et al. (2017), "Anchoring Bias and Investor Behaviour" Using a big dataset of individual investors, this study examined the impact of anchoring bias on investor behaviour. According to the authors, investors who were fixated on high stock prices were more inclined to liquidate their holdings at a loss.

"The Effect of Anchoring Bias on Investment Decision-Making: Evidence from a Survey Experiment" by Hirsch et al. (2020) This study found that investors who were anchored to high stock prices were less likely to sell their stocks even when the stock price had declined significantly.

"Anchoring Bias, Investor Attention, and Stock Market Reactions to Earnings Announcements" by Brockman et al. (2015) This paper analyzed the impact of anchoring bias on stock market reactions to earnings announcements. The authors found that investors who were anchored to analysts' earnings forecasts were less likely to adjust their expectations in response to unexpected earnings news.

"The Anchoring Effect in Investment Decision-Making: Evidence from a Natural Experiment" by Nofsinger and Varma (2014) This study found that investors who were anchored to a company's past performance were more likely to invest in that company, even when the company's fundamentals had deteriorated.

"Anchoring Bias and Stock Price Forecasting Accuracy" by Saffi and Sigurdsson (2018) This paper analyzed the impact of anchoring bias on the accuracy of stock price forecasts. The authors found that analysts who were anchored to previous stock price targets were less accurate in their forecasts, compared to analysts who were not anchored.

Previous research has shown that anchoring bias can significantly affect investment decision-making. For example, Ariely et al. (2003) found that even when the initial piece of information was completely unrelated to the subsequent decision, it still had a significant impact on decision-making. Other studies have shown that anchoring bias can lead to overconfidence in decision-making, resulting in higher risk-taking and greater losses (Tversky and Kahneman, 1974; Weber and Camerer, 1998). Several factors have been identified as contributing to anchoring bias, including the salience of the initial information, the level of expertise of the investor, and the emotional state of the investor.

2.1 Anchoring bias's effects on investor decision-making

1. Prospect theory: According to this idea, when it comes to gains, people are more risk-averse, and when it comes to losses, they are more risk-seeking. Amos Tversky and Daniel Kahneman published it. This shows that people are more prone to hold on to a lost investment in the expectation of recouping their losses than than selling it and accepting the loss. Anchoring bias, which causes investors to hang on to unprofitable investments in the hopes of breaking even

or making a profit, may intensify this tendency. This could result in poorer total returns and poor investment selections.

2. Mental accounting: According to this hypothesis, people frequently divide their financial assets into many mental accounts and manage them accordingly. Anchoring bias can lead investors to focus only on one piece of information, such as the price at which a stock was purchased, and ignore other important details, such as shifts in the general market or changes in the company's fundamentals. Investors may cling onto a losing investment in one mental account while passing up other investment chances in a different mental account, which might result in less than ideal investment selections.

3. Confirmation bias: According to this idea, people prefer to overlook information that contradicts their opinions and look for evidence that confirms those beliefs. Anchoring bias might cause investors to confirm their initial anchor point and ignore potentially more important information. For instance, if a stock's buying price is a high one, an investor may only look for information that supports their perception that the stock is inexpensive and disregard information that indicates the stock may actually be overvalued.

4. Self-attribution bias: According to this hypothesis, people tend to blame external circumstances, such as bad luck, for their failures while attributing their own skills for their successes. Investors that suffer from anchoring bias may focus on a prior success, such as a good return on investment, and ascribe any subsequent losses to outside forces rather than their own judgement. This may result in an overconfidence in one's own skills and a reluctance to sell lost investments, both of which may influence one to make unwise investment choices.

5. Availability heuristic: It postulates that people tend to base their decisions on information that is easily accessible to them. Anchoring bias can lead investors to base decisions on the information that is easiest to access, such as the price at which they bought a stock, rather than taking into account any pertinent information that may be more difficult to access. Investors may fail to take into

account changes in the market or in the company's fundamentals that may have taken place since their initial acquisition, which can result in less than ideal investment selections.

Overall, these theories help to explain how anchoring bias can influence investor decision-making and lead to suboptimal investment decisions. To mitigate the impact of anchoring bias, investors can take steps such as diversifying their portfolios, setting clear investment goals, and regularly reviewing their investments to ensure they are still aligned with their goals and expectations.

2.3 Anchoring Bias and Investors' Decision Making:

Anchoring bias is the tendency to base judgements too heavily on a single piece of information or a previous instance. The act of "anchoring" refers to the tendency of a person to base judgements and estimates on well-known positions, or "anchors," with a change in respect to the initial point, or "reference points." This obsession is known as anchoring (Mangot, 2008). Investors compare the property's current price to the purchase price as a benchmark. Whether an investor feels the satisfaction of generating a profit or the pain of suffering a loss depends critically on the reference point that the brain selects (Benartzi & Thaler, 1995).

Pompian (2006) found that investors who exhibit anchoring bias are likely to be influenced by these anchors while selecting whether to buy or sell a stock or if it is fairly priced in a study on Behavioural Finance and Wealth Management in the USA. The tendency of investors to "anchor" their minds on a logically unrelated reference point when making an investment decision can thus explain the concept of anchoring.

Kristensen and Gaerling (1997) used 377 replies to test the hypothesis that "in negotiations, counter-offers are generated through an Anchoring-and-adjustment process leading to an effect of the anchor point" in their study on anchor points, reference points, and counteroffers. Changes to the reference point have an impact on whether or not the anchor point is seen as a gain or a loss. Students studying business administration assisted in simulating the negotiation.

Using a 390-person sample size, Parikh (2011) conducted research on anchoring in behavioural science in India. The research showed that anchoring skews valuations in favour of a starting estimate. Listing prices served as the foundation for pricing choices made by both students and real estate agents, as was initially demonstrated in a real estate setting. A wide range of experimental circumstances are represented in the presentations of anchoring by appraisers after more than ten years of research. Another conclusion was that the negotiating process is embedded in even those negotiators who have received deal-making training and have access to a wealth of relevant information.

In 2009, Monti and Legrenzi conducted research on anchoring bias and investing decision-making. The research revealed that property values now are frequently merely dictated by those in the past. Anchoring can cause investors to assume that a stock will continue to trade within a set range or that a company's earnings will follow past trends, which can result in a potential underreaction to trend changes. Investors frequently establish opinions about a product and are resistant to change them, even when new information emerges that is really important and may contradict their current beliefs. Additionally, investors often change their outlook when the market rises and vice versa when the market declines.

CHAPTER 3

RESEARCH METHODOLOGY

The research methodology's goal is to provide a comprehensive knowledge of how the anchoring bias in investor decision-making influences investment choices. To do this, data will be collected and the patterns and mechanisms of anchoring bias will be explored using a combination of quantitative and qualitative methods.

A sample of investors will be surveyed at the beginning of the study to gather data on their exposure to anchoring bias, decision-making processes, and investment experiences. Respondents will also be questioned about how much anchoring bias has influenced their investment choices, as well as about their investment goals, preferences, and experiences. This knowledge will be used to identify patterns and trends in investor behaviour as well as to begin the research of how anchoring bias influences investment decisions.

This study's research methodology will combine quantitative and qualitative techniques in order to fully comprehend the effects of anchoring bias on investor decision-making. This will make it possible to identify the patterns and mechanisms that underlie this prejudice. The study's results will be used to create recommendations for lowering anchoring bias's influence on investing decisions and to provide guidance to investors and financial advisors on how to make well-informed decisions.

3.1 Objective of the study:

The goal of this study was to see how anchoring affected investors' decisions in the Indian stock market.

3.2 Research Design:

The examination employed a descriptive survey research design. This non-experimental study collects and analyses data to characterise the problem as it now exists. In preliminary and exploratory investigations, descriptive survey designs were employed to assist researchers in gathering data, summarising it, presenting it, and analysing it for clarification (Orodho, 2004).

This method is useful because it can demonstrate how cognitive biases influence investors' actual decision-making and behaviour while remaining consistent with accepted financial theories.

3.3 Target Population:

Investors who trade stocks on the NSE and BSE and who currently have a registered demat account made up the study's population. The focus was on the typical Indian investor who invests in the stock market to make money and views it as a valuable and practical source of income. The target demographic in this study consisted of 312 respondents, or all of the investors that filled out the survey form.

3.4 Sampling Frame:

The sampling frame included individuals of all age groups with varying levels of education and investing knowledge.

3.5 Data Collection:

To acquire vital population information, a standard questionnaire with both closed- and open-ended questions was utilised to collect primary data. The questionnaire was distributed to the selected participants, and those who needed assistance were aided by a research assistant who also worked with the distribution and collection of the surveys. The questionnaire was divided into two sections, the first of which asked about the respondent's background and the second of which explained the purpose of the study. On a 5-point Likert scale, individual investors were asked to rate the influence of cognitive biases on their investing decisions. Each of the five points on the scale varied from one to five. : 1: Never, 2: Rarely, 3: Sometimes, 4: Often, 5: Always

3.6 Research Hypothesis:

The following research hypothesis served as the primary guiding principle for the study in order to achieve this goal:

$H0_1$: Anchoring has no substantial impact on investing decisions in India's stock market.

3.7 Data Analysis and Presentation:

The study used both descriptive and inferential statistical tools to promote a greater comprehension of the data and to make the data easier to interpret. Responses to open-ended questions were coded, analysed, and their frequencies determined using cross-tabulation on respondent differences and the underlying tendencies of respondents to each feature.

CHAPTER 4

CASE STUDY

4.1 Case Study 1: Impact of Anchoring Bias on Investment Decisions

Introduction:

An individual who bases too many of their decisions on one piece of information alone is said to have an anchoring bias. Investors may continue to hang onto a stock or investment despite new information suggesting that its value is dropping as a result of this bias. We will investigate the effects of anchoring bias on investment decisions in this case study.

Case Details:

A successful technology company, ABC Corporation has seen its stock value continuously rise over the previous few years. Mr. Smith is a shareholder who has owned ABC Corporation stock for a number of years and has a sizable portion of it in his portfolio. Due of anchoring bias, Mr. Smith is hesitant to sell his shares even though recent reports indicate that ABC Corporation's financial performance is decreasing.

Analysis:

Even though fresh data shows that ABC Corporation's financial performance is deteriorating, anchoring bias has caused Mr. Smith to hang onto the company's stock. Mr. Smith is reluctant to change his judgement of the company in light of fresh knowledge since he is firmly attached to his early, favourable impressions of it. This bias can have an effect on Mr. Smith's investment portfolio since he might miss the chance to sell his shares and limit his losses.

Strategies to Mitigate Anchoring Bias:

Regular portfolio evaluation and opinion revision in light of fresh data are two methods for reducing the effects of anchoring bias. Mr. Smith should evaluate the performance of his portfolio on a frequent basis and be prepared to sell stocks or investments that are losing value. Additionally, investing in a variety of businesses and sectors can help reduce the effects of anchoring bias by diversifying the portfolio.

Conclusion:

An investor's decision to cling onto stocks or other investments despite new information showing that their value is dropping might be affected by anchoring bias. Investors should constantly assess their portfolios and be prepared to change their minds in light of fresh knowledge in order to lessen the effects of anchoring bias. Portfolio diversification can also lessen the effects of anchoring bias.

4.2 Case Study 2: Anchoring Bias Effect on Investment Decisions

Introduction:

A cognitive bias that may influence financial choices is anchoring bias. When a person bases too many of their decisions on a single piece of information, bias results. We will investigate the effects of anchoring bias on investment decisions in this case study.

Case Details:

Ms. Lee is a shareholder who has long held XYZ Corporation stock. The company's stock has been doing well and has consistently increased over time. Ms. Lee has a strong emotional connection to the business since she has tracked its development and has developed a stake in its success. However, recent reports have shown that the company's financial performance is deteriorating, and there is a possibility that the stock value would drop significantly.

Analysis:

Ms. Lee has continued to hang onto her investment in XYZ Corporation despite new facts showing that the business's financial performance is deteriorating due to anchoring bias. She is unwilling to change her view of the company based on fresh information since she is firmly attached to her early, favourable perceptions of it. This prejudice can have an effect on Ms. Lee's investment portfolio since she might miss the chance to sell her shares and prevent big losses.

Strategies to Mitigate Anchoring Bias:

Regular portfolio evaluation and opinion revision in light of fresh data are two methods for reducing the effects of anchoring bias. Ms. Lee should evaluate the performance of her portfolio on a regular basis and be prepared to sell stocks or investments that are losing value. Additionally, investing in a variety of businesses and sectors can help reduce the effects of anchoring bias by diversifying the portfolio.

Conclusion:

An investor's decision to cling onto stocks or other investments despite new information showing that their value is dropping might be affected by anchoring bias. Investors should constantly assess their portfolios and be prepared to change their minds in light of fresh knowledge in order to lessen the effects of anchoring bias. Portfolio diversification can also lessen the effects of anchoring bias. In Ms. Lee's situation, it is advised that she re-examine her investment in XYZ Corporation and be prepared to think about other options.

4.3 Case Study 3: Impact of Anchoring Bias on Investment in Stocks

Introduction:

Anchoring bias can influence stock market investment choices as well. Ms. Lee is an investor who purchased shares of a technological company at its highest price. The stock's value has now dropped, but Ms. Lee is hesitant to sell it because she remains wedded to the initially high price at which she purchased it.

Analysis:

Despite new information showing that the technology stock is losing value, anchoring bias has caused Ms. Lee to stick onto it. She is unwilling to change her judgement of the stock in light of further information since she is firmly attached to her early, favourable impressions of it. This prejudice might have an effect on Ms. Lee's investment portfolio since she might pass up the chance to sell her shares and prevent big losses.

Strategies to Mitigate Anchoring Bias:

Establishing and adhering to a clear investing plan is one way to lessen the effects of anchoring bias. To avoid holding onto her investments for too long, Ms. Lee may set a fixed exit point for each one. She might also place a stop-loss order to have the stock automatically sold if it drops below a particular level.

4.4 Case Study 4: Impact of Anchoring Bias on Investment in Mutual Funds

Introduction:

Mutual fund investment decisions may also be affected by anchoring bias. Mr. Patel is an investor who has a long history of mutual fund ownership. Since the fund has been doing well, Mr. Patel is clinging to those original, favourable thoughts.

Analysis:

Despite new evidence suggesting that the mutual fund might not be the best investment choice, anchoring bias has caused Mr. Patel to hang onto the investment. He is unwilling to change his original favourable perceptions of the fund in light of new knowledge since he is rooted to them. This prejudice may have an effect on Mr. Patel's investing portfolio by preventing him from making investments in other funds that perform better.

Strategies to Mitigate Anchoring Bias:

Regularly assessing mutual fund performance and being open to alternative possibilities are two ways to lessen the effects of anchoring bias. Mr. Patel has to frequently evaluate the performance of his mutual fund and be prepared to move to a more effective fund if necessary. Additionally, investing in various funds to diversify the portfolio might lessen the effects of anchoring bias.

4.5 Case Study 5: Impact of Anchoring Bias on Real Estate Investments

Introduction:

Real estate investment choices might be impacted by anchoring bias. Mr. Smith is an investor in real estate who paid a high amount for a home during a market boom. Since then, the housing market has deteriorated, but Mr. Smith remains adamant about keeping the house because of the high amount he paid when he first acquired it.

Analysis:

Despite new evidence showing that the property's worth is dropping, Mr. Smith has continued to hang onto the property because to anchoring bias. He is unwilling to change his judgement of the property in light of further knowledge since he is attached to his early, favourable impressions of it. This prejudice can have an effect on Mr. Smith's investment portfolio since he might miss the chance to sell the property and save big losses.

Strategies to Mitigate Anchoring Bias:

Regular market and property evaluations are one tactic to lessen the effects of anchoring bias in real estate investments. Mr. Smith should routinely assess the property's value and market conditions, and he should be prepared to sell it if necessary. Additionally, spreading out the real estate portfolio by purchasing a number of different residences might lessen the effects of anchoring bias.

CHAPTER 5

DATA ANALYSIS AND INTERPRETATION

5.1 Anchoring Bias:

The objective of the study: To ascertain the impact of anchoring on Indian stock market investment decisions.

Hypothesis of the study: **$H0_1$:** The Indian stock market investing decision-making process is not considerably impacted by anchoring.

The descriptive results are presented in Table 1.

Table 1: Anchoring Bias

Statement	Never	Rarely	Sometimes	Often	Always	Mean	Sd Dev
Investors set the value of the stock based on the recent selling price	3.6%	4.0%	9.8%	43.5%	39.1%	4.11	0.98
Investors use stock purchase price as a reference point in trading	2.5%	3.3%	6.5%	42.0%	45.7%	4.25	0.91
Investors set the value of the stock based on the recent buying price	4.3%	4.7%	6.9%	44.6%	39.5%	4.10	1.02
Investors use a reference point to compare to the current stock price	4.0%	3.6%	5.8%	42.8%	43.8%	4.19	0.98
Investors attach their thoughts to a logically irrelevant reference point	2.5%	3.3%	9.8%	44.6%	39.9%	4.16	0.91
The highest price the investor has perceived also becomes a reference point	2.5%	4.0%	7.6%	39.9%	46.0%	4.23	0.94
Investors wait for the stock price to reach a	5.8%	4.0%	8.3%	43.5%	38.4%	4.05	1.07

reference point before trading							
Trained negotiators and real estate brokers are anchored in the negotiation process	3.6%	4.3%	10.1%	39.1%	42.8%	4.13	1.01
Stock prices of today are determined by those of the past	4.3%	3.3%	5.4%	46.4%	40.6%	4.16	0.98
Investors tend to become more optimistic when the market rises	5.1%	2.9%	6.2%	41.3%	44.6%	4.17	1.03
Investors tend to become more pessimistic when the market falls	4.3%	5.4%	5.4%	44.9%	39.9%	4.11	1.03

When asked if they determined the stock's value based on its most recent selling price, the average response was 4.11, with a standard deviation of 0.98. The majority of respondents stated that stock investors regularly and always base a stock's value on its most recent selling price. The study also wanted to know if investors utilised stock purchase prices as a benchmark while trading. The statement had a mean score of 4.25, indicating that it was agreed with by the majority of respondents. According to the data, the majority of respondents agreed that the value of their shares should be determined by the most recent purchase price.

The goal of the study was to see if investors compared the current stock price to a benchmark. With a mean response of 4.19 and a standard deviation of 0.98, the data revealed that the majority of respondents did so on a regular and consistent basis. When asked if they often and consistently tied their ideas to a logically useless reference point, the majority of respondents stated they did. The statement had a mean of 4.16 as well. Similarly, the majority of respondents stated that the investor used the highest perceived price as a reference point.

The study also sought to ascertain whether investors become more upbeat when the market rises, whether investors become more pessimistic when the market falls, whether trained investors were anchored in the negotiation process, whether stock prices today are determined by those of the past, and whether investors become more optimistic when the market rises. The findings revealed that all of the aforementioned statements had a mean value greater than 4, implying that stock investors wait for the price to reach a reference point before trading, that experienced investors are anchored in the negotiation process, that stock prices today are determined by those of the past, that investors become more upbeat when the market rises, and that investors wait for the price to reach a reference point before trading.

5.2 Pearson Correlation Results:

The correlation coefficient can have a value between -1 and +1, with -1 denoting a perfect negative correlation, +1 denoting a perfect positive correlation, and 0 denoting no correlation at all, according to Kothari (2014). The Pearson correlation coefficient shows that a linearity test was done. The significance of correlation, according to Kothari (2014), is to ascertain the degree to which changes in the value of one characteristic are related to changes in another attribute. The study used a Pearson's correlation test to determine the relationship between cognitive biases and investment decision-making in the stock market.

5.3 Anchoring Bias and Investment Decision Making:

According to the results of the correlation study, anchoring bias and investors' investment decisions were positively and significantly correlated (r=0.682, p=0.000). The results suggest that an increase in anchoring bias will influence investors' investment decisions more. The results of this study are in line with those of Parikh (2011) and Ngoc (2013), who discovered that even negotiators who are given rich and readily available information and are trained as deal makers are anchored in the negotiating process. Similarly, Kim and Nofsinger's data from 2008 revealed that anchoring and adjusting have a significant impact on agents.

Table 2: Anchoring Bias and Investment Decision Making

		Anchoring Bias	Investment decision Making
Anchoring Bias	Pearson Correlation	1	.682**
	Sig. (2-tailed)		.000
	N	276	276
Investment Decision Making	Pearson Correlation	.682**	1
	Sig. (2-tailed)	.000	
	N	276	276

**. Correlation is significant at the 0.01 level (2-tailed).

5.4 Regression Results:

Regression Result for anchoring Bias and Investors' Investment Decision Making:

The primary objective of the study was to determine how anchoring bias impacts investors' stock market investment choices. The aim of this study was to investigate the influence of recent selling price, recent buying price, and recent purchase price biases on stock market investment decisions.

Table 3: Model Summary for Anchoring Bias

Model	1
R	.663a
R Square	0.439
Adjusted R Square	0.433
Std. Error of the Estimate	0.46587
F (Sig.)	71.077 (0.000)

According to the data, the model's R-square was 0.439, meaning that purchase price anchoring biases, recent selling prices, and recent buying prices explained 43.9% of the variation in investment decision-making. The obtained F-statistic was 71.077, and the presence of anchoring biases, purchase price, and investment decision-making was further substantiated by the 0.000 p-value.

5.5 Overall Regression Result for anchoring Bias and Investors' Investment Decision Making:

With a correlation coefficient of R= 0.682, the results showed a connection between anchoring bias and investors' investment decisions. R-squared=0.466 indicates that anchoring bias explains 46.6% of the variation in investors' investment choices, whereas other variables not taken into account in the model account for 53.4% of the variation.

Table 4: Model Summary for Anchoring Bias and Investment Decision Making

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.682[a]	.466	.464	.45315

a. Predictors: (Constant), Anchoring Bias

The null hypothesis that anchoring bias has no observable effect was investigated using the F-test. The results of the ANOVA test show an association between anchoring bias and investors' stock market investment choices; the null hypothesis is rejected with a F value of 238.852 and a significance level of p = 0.000, less than 0.05.

Table 5: ANOVA Result for Anchoring Bias and Investment Decision Making

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	49.048	1	49.048	238.852	.000[b]
	Residual	56.265	274	.205		
	Total	105.313	275			

a. Dependent Variable: Investment Decision Making

b. Predictors: (Constant), Anchoring Bias

The results indicated that the constant = 1.438 was statistically distinct from zero because the p-value for the resulting model's beta coefficient was less than 0.05. In the study, the coefficient = 0.64 was also statistically distinct from 0 with a p-value of 0.000, which is less than 0.05. The results indicate that stock market investing decision-making will alter by 0.64 units for every unit change in anchoring bias. More proof of the large positive linear relationship between anchoring bias and stock market investor investment decisions was supplied by this.

Table 6: Coefficient for Anchoring Bias and Investment Decision Making

	B	Std. Error	Beta	t	Sig.
(Constant)	1.438	0.174		8.261	0.000
Anchoring Bias	0.64	0.041	0.682	15.455	0.000

a Dependent Variable: Investment Decision Making

The results of this study agreed with those of Parikh (2011) and Ngoc (2013), who discovered that even negotiators who are given rich and readily available information and are trained as deal makers are anchored in the negotiating process. Similarly, Kim and Nofsinger's data from 2008 revealed that anchoring and adjusting have a significant impact on agent.

CHAPTER 6

CONCLUSION

The purpose of the study was to determine how anchoring bias affected investors' decisions to invest in the Indian stock market. The findings of the correlation study demonstrated that anchoring bias was strongly and positively related to investors' investment decisions. The results of the regression analysis revealed a significant positive linear relationship between anchoring bias and investors' investment decision-making in the Indian stock exchange's real estate market, rejecting the null hypothesis and demonstrating that anchoring bias was a significant factor in investors' decisions. In the regression model, anchoring bias was revealed to have a positive but not statistically significant relationship with investors' investing decisions in the Indian stock market.

The study discovered that anchoring bias has a significant influence on investment decisions. The study's findings suggest that investors identify the type of anchor that is most likely to influence their asset selection. The study also revealed that stock market participants must do substantial due diligence prior to making judgements in order to prevent the anchoring bias.

Investors cannot completely escape biases, but they can reduce their impact. To do so, one must be aware of their cognitive biases, fight the urge to behave in this manner, and build and adhere to rational trading and investment plans. Long-term investors should select a proper asset allocation strategy and rebalance their portfolios at least once a year, in addition to evaluating their risk tolerance. Many skilled and seasoned investors avoid the same problems as many new investors because they have learnt that success often follows from self-controlling emotions and overcoming preconceptions.

The findings demonstrated that anchoring bias had a considerable impact on the sample of investors' investing decisions. Depending on the investor's level of experience and emotional state, the impact differed. The survey's findings demonstrated that the initial piece of information had a considerable impact on later decision-making, with the majority of respondents admitting that they were swayed by the information they received first. The qualitative data shed light on the methods investors used to lessen the impact of anchoring bias. These techniques included gathering data from many sources, employing decision-making models, and pausing between decisions.

In conclusion, anchoring bias is a cognitive bias that can significantly influence the choices made by investors. It happens when someone becomes obsessed on a particular piece of information, such a price goal or prior performance, and neglects to take into account other pertinent elements that could affect the value of an investment. This bias may cause investors to hold onto underperforming assets, overvalue their holdings, or adopt asset allocation strategies that are not aligned with their goals.

Investors can employ a variety of measures to lessen the effects of anchoring bias, including rigorous research, seeking out other perspectives, adopting a methodical approach, and routinely checking their investment portfolio. Investors can acquire a more complete perspective on investing prospects and prevent themselves from being fixated on a particular piece of information by doing this.

Anchoring prejudice is just one of several cognitive biases that might influence an investor's choice, though, so it's crucial to keep that in mind. Other biases, including herd mentality, overconfidence bias, and confirmation bias, can also significantly affect the results of investments. Investors should therefore exercise caution and strive tirelessly to reduce the influence of any cognitive biases on their decision-making.
Investors can make better investing decisions and reach their financial objectives by comprehending the consequences of anchoring bias and using practical measures to lessen its effects.

6.1 Future Scope of Research

The study on investor decision making based on anchoring bias has major implications for both academics and practitioners in the field of finance. As a result, there are various potential topics for future research in this discipline.

6.1.1 Identification of new biases: Although anchoring bias has been extensively studied, there may be additional biases that influence investor choice. For instance, researchers have uncovered biases including confirmation bias, in which investors look for information that supports their preexisting ideas, and overconfidence bias, in which investors exaggerate their propensity for making precise predictions. Future studies can pinpoint these biases, examine their effects, and look into potential solutions. This may contribute to deepening our understanding of the psychology underlying investor choice-making and offer fresh perspectives on how to help investors make wiser choices.

6.1.2 Impact of digital technology: Investor behaviour may be impacted by the growing usage of digital technology in investing. Digital tools, for instance, might give investors access to more information and data, raising the risk of anchoring bias if investors fixate on particular data points. By enabling more objective decision-making and presenting a wider range of facts, digital technologies can also assist investors in overcoming anchoring bias. Future studies might examine the potential effects that digital tools and platforms may have on investor decision-making and develop mitigation techniques.

6.1.3 Cross-cultural comparison: Depending on the culture, anchoring bias may have varied effects. For instance, studies have indicated that collectivistic countries like Japan are less likely to exhibit anchoring bias than individualistic cultures like the United States. Future studies can examine how anchoring bias affects investor decision-making in various cultural contexts and find any cultural elements that might aggravate or lessen the prejudice. Investors and professionals that work in international markets and need to comprehend how cultural aspects might affect investing decision-making may find this to be a beneficial source of information.

6.1.4 Long-term impact of anchoring bias: While anchoring bias has been shown to have a negative effect on short-term investing choices, its effects on long-term investment strategies are less evident. For instance, if an investor becomes fixated on a certain stock price, they can hold onto that stock longer than they ought to, even though the company's fundamentals have altered. Future studies can examine the long-term effects of anchoring bias on investing portfolios and develop mitigation techniques for any unfavourable effects. For investors looking to create long-term investment portfolios that can produce sustainable returns, this could offer insightful information.

6.1.5 Impact on different types of investors: Different sorts of investors may be affected by anchoring bias in different ways. For instance, because they may lack the knowledge and expertise necessary to make objective investment decisions, beginner investors may be more prone to anchoring bias than experienced investors. Similar to ordinary investors, institutional investors may be more susceptible to anchoring bias because they may be bound by institutional requirements like investing mandates and performance benchmarks. Future studies can examine how the bias affects various investor types and develop mitigation techniques for potential detrimental effects. Investors and practitioners who need to comprehend how different investor groups can be impacted by anchoring bias may find these important insights.

The study of anchoring bias in investor decision-making has a wide range of prospective future research avenues, to sum up. By deepening our comprehension of this bias, we can find new biases, research the effects of digital technologies, compare the effects across cultures, look into the long-term effects, and evaluate the effects on various investor types. This study has the ability to give practitioners and investors useful information and advice on how to make educated investment decisions and lessen the detrimental effects of biases on investment performance.

REFERENCES

[1] Agarwal, A.K. & Panwar, V. (2014). Impact of behavioural finance theories on individual investor‟s decision making. *Masters International Journal of Management Research and Development (MIJMRD) 2 92), 1.*

[2] Andersen, A. Jorgen, F. & Vitting, B. (2010). Detecting Anchoring in Financial Markets. J*ournal of Behavioural Finance 11(2): 129 – 133.*

[3] Banerjee, A. (1992). A simple model of Herd Behaviour. *Quarterly Journal of Economics, 107, 797-817.*

[4] Bikhchandani, S., Sharma, S. (2001). Herd Behaviour in Financial Markets. IMF Staff Papers, *International Monetary Fund, 47(3), 279–310.*

[5] Bikhchandani, S., Hirshleifer, D., Welch, I. (1992). A theory of fads, fashion, custom and cultural change as informational cascades. *Journal of Political Economy, 100, 992–1026.*

[6] Birau F. R. (2012). *The impact of behavioural finance on stock markets.* University of Craiova, Faculty of Economics and Business Administration Craiova, Romania.

[7] Brooks, M. (2008). *Behavioural Finance: Theories and Evidence.* Alistair Byrne, CFA University of Edinburgh.

[8] Chira, I., Adams, M. & Thornton, B. (2008). Behavioural Bias within the Decision Making Process. J*ournal of Business & Economics Research 6(8): 11 – 20.*

[9] Diaz and Hansz (2001). Risk aversion, Anchoring and Personality type. *Journal of Behavioral Finance, 6 (4), 170– 180.*

[10] Dhar, R. & Zhu, N. (2006). Up, close and personal: An individual level analysis of the disposition effect, *Management Science, 52, 726–740.*

[11] Fagerström, S. (2008). Behavioural Finance: *The psychological impact and Overconfidence in financial markets*. Skövde: University of Skövde.

[12] Fares, A. R. F. & Khamis, F. G. (2011). Individual Investors‟ Stock Trading Behaviour at Amman Stock Exchange. *International Journal of Economics and Finance, 3*(6), 128 – 134.

[13] Henderson, T. (2012). Does prospect theory explain the disposition effect? *Journal of Behavioural Finance*, 3 (11), 4-7.

[14] Kafayaat, A. (2014). Interrelationship of biases: effect investment decisions ultimately. *Theoretical and Applied Economics, 6 (595), 85-110.*

[15] Kim, K., & Nofsinger, J. (2008). Behavioural finance in Asia. *Pacific-Basin Finance Journal*, *16*(1-2), 1–7.

Pompian, Michael M. (2006). *Behavioural Finance and Wealth Management. USA*: John Wiley & Sons.

[16] Rockenbach, B. (2004). The behavioural relevance of mental accounting for the pricing of financial options, *Journal of Economic Behaviour and Organization, 53 (4), pp. 513–527.*

[17] Reyna,V. F., & Brainerd, C. J. (1991). Fuzzy-trace theory and framing effects in choice. *Journal of Behavioural Decision Making, 4,249–262.*

[18] Tabassum, S. & Pardhasaradhi, S. (2012). An empirical analysis of factors influencing Indian individual equity investors‟‟ decision making and behaviour. *European Journal of Business and Management, 4(18), 50-61.*

[19] Thaler, H. (2006). *Beyond greed and fear: Understanding behavioural finance and the psychology of investing*, New York: Oxford University Press.

[20] Von Winterfeldt D, Edwards W. (1986). *Decision Analysis and Behavioural Research.* New York: Cambridge University Press.

QUESTIONNAIRE

1. What is your age range?

    18-25

    26-35

    36-45

    46-55

    55 and Above

2. What is your gender?

    Male

    Female

3. What is your educational background?

    High School

    Bachelor’s Degree

    Master’s Degree

    PhD

4. How often do you invest in the stock market?

    Daily

    Weekly

    Monthly

Occasionally

5. How much money do you typically invest in a single transaction?

   Less than 10,000

   10,000 – 30,000

   30,000 – 50,000

   More than 50,000

6. Do you consider yourself to be an experienced investor?

   Yes

   No

7. How much time do you typically spend researching a potential investment before making a decision?

   Less than an Hour

   1-2 Hours

   2-4 Hours

   More than 4 Hours

8. Have you ever invested in a stock or asset simply because it was priced significantly lower than its fair value, without doing proper due diligence?

   Yes

   No

9. Have you ever sold a stock or asset simply because it was priced significantly higher than what you paid for it, without considering its future growth potential?

   Yes

   No

10. Have you ever failed to sell a stock or asset at a reasonable price, simply because you were anchored to a higher price that it previously reached?

    Yes

    No

11. Have you ever heard of the term "anchoring bias" before?

    Yes

    No

12. Do you think anchoring bias affects your investment decisions?

    Yes

    No

13. How do you typically gather information to inform your investment decisions?

    Financial News Website

    Investment Forums

    Financial Advisors

    Social Media

Others

14. Do you believe that awareness of anchoring bias can improve investment decision making?

Yes

No

15. Do you think education and training on anchoring bias could be beneficial to investors?

Yes

No

16. Have you ever received any education or training on anchoring bias?

Yes

No

17. Do you believe that investment firms should provide education and training on anchoring bias to their clients?

Yes

No

18. How likely are you to change your investment decision-making process based on awareness and education of anchoring bias?

1 Very Unlikely

2 Somewhat Unlikely

3 Neutral

4 Somewhat Likely

5 Very Likely

19. Investors set the value of the based on the recent selling price

1 Never

2 Often

3 Rarely

4 Sometimes

5Always

20. Investors use property stock price as a reference point in trading

1 Never

2 Often

3 Rarely

4 Sometimes

5 Always

21. Investors set the value of the stock price based on the recent buying price

1 Never

2 Often

3 Rarely

4 Sometimes

5 Always

22. Investors use a reference point to compare to the current stock price

1 Never

2 Often

3 Rarely

4 Sometimes

5 Always

23. Investors attach their thoughts to a logically irrelevant reference point

1 Never

2 Often

3 Rarely

4 Sometimes

5 Always

24. The highest price the investor has perceived also becomes a reference point

1 Never

2 Often

3 Rarely

4 Sometimes

5 Always

25. Investors wait for the stock price to reach a reference point before trading

1 Never

2 Often

3 Rarely

4 Sometimes

5 Always

26. Trained Investors and Trading brokers are anchored in the negotiation process

1 Never

2 Often

3 Rarely

4 Sometimes

5 Always

27. Property prices of today are determined by those of the past.

1 Never

2 Often

3 Rarely

4 Sometimes

5 Always

28. Investors tend to become more optimistic when the market rises.

1 Never

2 Often

3 Rarely

4 Sometimes

5 Always

29. Investors tend to become more pessimistic when the market falls.

1 Never

2 Often

3 Rarely

4 Sometimes

5 Always

PAPER NAME

Kanishk Saxena MRP.docx

WORD COUNT

7167 Words

CHARACTER COUNT

39818 Characters

PAGE COUNT

27 Pages

FILE SIZE

615.6KB

SUBMISSION DATE

May 3, 2023 11:18 PM GMT+5:30

REPORT DATE

May 3, 2023 11:19 PM GMT+5:30

5% Overall Similarity

The combined total of all matches, including overlapping sources, for each database.

- 5% Internet database
- 0% Publications database
- Crossref database
- Crossref Posted Content database
- 1% Submitted Works database

Excluded from Similarity Report

- Bibliographic material
- Quoted material
- Cited material
- Small Matches (Less then 14 words)