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The Influence of Anchoring, Disposition, Self-Control, and Overconfidence on the Investment Decision Making of Female Investors: An Empirical Study of Delhi, NCR

Bipin Chauhan^a, Pramod Kumar Upadhyay^b, Komal Vishwakarma^c, Sanny Kumar^d, Manish Kumar^e and Santosh Kumar^f

^aResearch Scholar, Mahatma Gandhi Central University, Motihari Bihar. Email: bipinc520@gmail.com

^bAssistant Professor, Department of Commerce, Maharaja Bijli Pasi Govt P.G. College, Lucknow Uttar Pradesh. Email: pramodkrupadhyay76@rediffmail.com

^cResearch Scholar, Department of Commerce, Maharaja Bijli Pasi Govt P.G. College, Lucknow Uttar Pradesh. Email: komalvishwakarma8880@gmail.com

^dResearch Scholar, Mahatma Gandhi Central University Motihari Bihar. Email: skku7635@gmail.com

^eResearch Scholar, Mahatma Gandhi Central University Motihari Bihar. Email: mkcro282@gmail.com

^fAssistant Professor, Department of management, LLDIMS, Mandi, New Delhi. Email: santoshkumar@lldims.org.in

Abstract

According to traditional financial theory, investors are supposed to be rational and make decisions that reflect all available information, but prospect theory explains a number of biases that affect the investor's behavior and lead to irrational decision-making. Therefore, this study is also another effort to assess the impact of how a person's behavior impacts his investment decision. Because in the present era, human behavior is having a lot of impact on his or her investment decision-making. The relationship was examined by administering a questionnaire and collecting empirical data from female investors in Delhi, NCR, about their own perceptions of these biases. A questionnaire was distributed among the sample of 239 female investors. The probability value and the t-statistic value are examined in the partial least squares (PLS) data analysis method. The findings of this study indicate that four types of investing bias behavior—anchoring, disposition, self-control, and overconfidence—have a major favorable impact on the decision-making process. And all four behavioral biases have a significant impact on the investment decisions of female investors in Delhi, NCR. This study holds significance as it offers crucial implications for researchers, market participants, policymakers, and regulators involved in the development of the Indian stock market.

Keywords: Behavioral Bias, Anchoring, Disposition, Self-Control and Overconfidence, Investment Decision Making.

1. INTRODUCTION

Due to its potential for generating wealth, the stock market is advantageous for investors. Stock markets that are in good working order can be very important for arranging the production of products and services that lead to job possibilities as well as for mobilising savings and investments. In the end, this advances the nation's total economic development. Long-term investors, in particular, add to the economy's potential for production by contributing their capital. Due to their preferences for a company's shares based on non-financial factors including returns, liquidity, and hazards, individual investors have a significant influence on the financial markets. Individuals make distinct choices in their lives,

some choices are more important and some are of little importance. In the decision making process of investors, there are some decisions which are very simple and are finalized in one step, but there are also some decisions which are very complex and are completed by going through multiple steps. Rather than gathering informations human beings resolve on the basis of their own knowledge and perceptions, which encourage them in doing good investment decisions (Shah, Ahmad, & Mahmood, 2018). In the financial literature, the conventional wisdom held that classical finance theory, which postulates that investors make thoughtful decisions based on estimates or economic models, is accurate. This belief persisted until the advent of behavioural finance. Conventional finance theory makes the assumption that agents rationally maximise each individual's stable, well-defined preferences. For over fifty years, the idea of the rational man has dominated ideas of finance and economics. It is considered that the rational man is economical, logical, informed, and skilled in estimating the likelihood of each option and selecting the one that will maximize his worth at the lowest value (Simon, 1955).

Nevertheless, a number of experimental studies revealed that human decision-making frequently stems from innate tendencies, instincts, habits, and cognitive or emotional biases (Kahneman, 2013). On the basis of a lot of research and sufficient data, it was seen that the human is not giving that much importance to conventional finance theory even though it led to the development of a new field. Behavioral Finance. "A subject that attempts to explain the behaviour of investors through psychology" is the definition of behavioural finance (Baddeley 2012). It makes an effort to clarify and comprehend how feelings and mistakes in thought affect investors (Shefrin, 2011). Macro Behavioural Finance (MABF) and Micro Behavioural Finance (MIBF) are two division of the broad discipline. The MIBF looks at the irrationality and biases in the behaviour and decision-excuting of individual investors. However, MABF makes an effort to explain stock market oddities that refuse the efficient market theory (Pompian, 2012). The tenet of behavioural finance is that not every investors are logical. Because investors are people, emotions and cognitive psychology may have an impact on their decision-making (Aigbovo & Ezuem, 2018). The majority of us, the "normal" investors, are represented by this kind of investor (Statman, 2014). Ordinary investors are subject to cognitive psychology; people do not make judgements in the same way as a computer programme. Regular investors rely on heuristics (That method of problem solving in which the investor adopts shortcuts and tries to collect as much information as possible in less time because there is so much information. It is not possible to read out and digest all the information. Bias or subpar decisions could result from this. Personal and market portfolio performance are impacted by biased decisions people make, which also have an impact on stock prices and the market (Alsedrah & Noryati, 2014). Behavioural finance promotes an understanding of the different facets of an investor's behaviour, including common sense, psychological, social, and intellectual components, as well as restricted cognitive capacities, which are significant drivers of equity market success (Trifan, 2020). Making investment decisions based on such aspects can be very complex and challenging for investors; in these situations, it is more practical to seek professional counsel. Furthermore, the rapid advancements and expansion of AI applications in the financial services sector are well adapted to the expectations of clients in terms of accessibility, affordability, and transparency (Shanmuganathan, 2020). Given the stock market's rise, individual investors are eager to place their money there as well. However, a variety of circumstances affect how each person makes decisions. Additionally, behavioural finance has a number of biases that affect how these retail investors make investing decisions. Taking into account all of these biases, the

literature analysis has led me to identify four behavioural biases: Anchoring, Disposition, Self-Control and Overconfidence. The study is structured into eight essential parts to comprehensively explore its subject matter. Beginning with an introduction, it sets the stage by outlining the research's context. A thorough review of existing literature follows, providing a foundation for hypothesis development. Section three. Sections four and five delve into the demographics of investors and the chosen research methodology, respectively, ensuring a robust analytical framework. The results and discussions in section six analyze findings and their implications, leading into a conclusive summary in section seven. Finally, section eight explores the broader implications of the study's findings, offering insights into potential practical applications.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Despite the proliferation of contemporary finance, it is challenging to provide a scientific justification for the irrational behaviour people exhibit while handling money (Smit & Moraitis, 2010; Mitroi, Adrian Stancu, 2014). In contrast to the efficient market theory, a novel way to explaining financial market activity is the behavioural approach. According to behavioural finance, stock or security prices fluctuate as a result of investors' irrational behaviour and the inefficiency of the financial markets (Cabral de Avila, Lucimar Antonio de Oliveira, Alanna Santos de Melo Silva Avila, Jessica Rayse Malaquias, 2016); (Kabasinskas & Macys, 2010). Traditional finance held the belief that security prices always perfectly mirrored the information that was available (Fama, 1970). This study describes the literature review of the theoretical model. Thus, a researcher has organised the literature review on the concept of hypothesis. An extensive survey of the literature about the selected variables and their relationship was carried out using primary data sources. In this current study, the researcher described the relationship between four behavioural biases, namely Anchoring, Disposition, Self-Control and Overconfidence, with the investment decision of individual female investors. There are two types of variables involved in this study: Dependent and Independent variables. Investment decision making are treated as dependent variables, and four behavioural biases (i.e. Anchoring, Disposition, Self-Control and Overconfidence) are independent variables.

2.1. Anchoring Bias

The anchoring bias influences the decision-making processes of investors (Wright & Anderson, 1989). Anchoring is a cognitive bias that describes the tendency of ordinary individuals to heavily rely on the initial piece of information while making judgements (Shin & Park, 2018); (Maqsood Ahmad, Syed Zulfiqar Ali Shah, 2018); (Singh, 2016). When faced with a decision, individuals tend to fixate on a certain piece of information or characteristic, a behaviour known as "anchoring". The term "anchoring" is initially employed to denote the act of forecasting the probability of an uncertain event. Anchoring is a phenomena that occurs when previous data is used to set a cutoff point for determining relevance (Tversky & Kahneman, 1974; Farooq & Sajid, 2015). Anchoring occurs when an individual allows a certain piece of information to influence their ability to think logically and make a decision. Individuals in positions of authority who solely base their decisions on initial information, such as the initial price of a stock, are less inclined to reassess their evaluations in response to later events (Baker & Ricciardi, 2014). Anchoring occurs when investors selectively assess a single piece of information from the extensive array of facts available to them prior to making a financial decision (Dickason & Ferreira, 2018). Therefore, the anchoring investor depends

solely on a certain piece of information, primarily related to past equities and based on their previous prices. Consequently, this leads to the formation of a hypothesis.

Hypothesis 1: Anchoring Bias has significant and positive effects on the investment decision making of the female investors in Delhi NCR.

2.2. Disposition Effect

The disposition effect, a recognized phenomenon in behavioral finance, describes the tendency of investors to exhibit specific behaviors regarding their investments. It involves the inclination to sell assets that have appreciated in value quickly while holding onto those that have declined in value for an extended period. This behavior stems from investors' aversion to realizing losses and their eagerness to secure gains swiftly (Boebel and Taylor, 2000; Shefrin and Statman, 1985). Emotions such as regret play a significant role in driving the disposition effect, prompting investors to sell stocks as soon as they see a profit. Research, such as that by Summers and Duxbury (2012), underscores how these emotional factors influence decision-making. Studies examining the effect in various contexts, such as the Taiwanese warrant markets (Chang, 2008), and in the burgeoning Chinese stock market (Gongmeng Chen & Kenneth A. Kim, 2007), consistently highlight the detrimental financial impact of such behavior. The disposition effect leads to suboptimal investment decisions, where investors tend to hold onto losing investments hoping they will recover, while selling winning investments prematurely. This behavior ultimately hampers overall portfolio performance, as poorly performing investments continue to underperform, while successful ones may have further potential for gains (Pelster & Hofmann, 2018; Aspara & Hoffmann, 2015).

Hypothesis 2: Disposition effect has significant and positive effects on the investment decision making of the female investors in Delhi NCR.

2.3. Self-control

Managerial decision-making often reflects a bias towards self-control. Research, such as that by Lauring et al. (2019), underscores the direct link between self-control and both individual and corporate performance. Faced with uncertainty about the future, companies often prioritize immediate income over potential future gains. Similarly, managers frequently opt for projects that promise quick returns rather than investing in ventures that could yield greater long-term benefits. This inclination is primarily driven by the challenge of regulating impulsive behaviors. Factors like uncertainty regarding future profitability and concerns about managerial commitment further exacerbate this bias (Sahi & Arora, 2012). Despite being recognized as a common human behavior, this bias can detrimentally impact a company by limiting its focus to short-term outcomes and hindering innovation. Even when companies pursue innovation, there's a tendency to favor incremental improvements, seen as less risky, over more transformative changes. Consequently, this prevailing preference tends to perpetuate over time within the organization. The behavioral life cycle hypothesis posits an ongoing conflict between a planner, focused on long-term goals, and a doer, concerned with immediate circumstances (Strömbäck et al., 2017). However, individuals often exhibit limited self-control capacity (Shiller, 2006), leading them to prioritize immediate, smaller gains over potentially larger future rewards.

Hypothesis 3: Self-control has significant and positive effects on the investment decision making of the female investors in Delhi, NCR.

2.4. Overconfidence Bias

Overconfidence stands as a cornerstone in the realm of behavioral finance, where its primary psychological impact has been pinpointed as a catalyst for market anomalies. (Ko & James Huang, 2007). The bias of overconfidence leads investors to overestimate their expertise and capabilities, often disregarding the risks inherent in their investment decisions. (Prosad, Kapoor, Sengupta, & Roychoudhary, 2018); (Kamoto, 2014). Confidence, defined as unwavering self-assurance, becomes a double-edged sword for investors when they apply it excessively to their strategies and mindsets in handling securities, thereby falling prey to the bias of overconfidence. (Huang, Tan, & Zhong, 2014). Overconfidence among investors can lead them to dismiss events as inconsequential, whether these are linked to the volatile economic landscape or not. This bias, extensively researched by Kahneman, Tversky, Shiller, Shefrin, Barber, Odean, and others, significantly influences decision-making in investments, as evidenced by increased stock market trading volumes that often stem from overconfident behaviors. (Darrat, Zhong, & Cheng, 2007); Phan, Rieger, & Wang, 2018; Mushinada & Veluri, 2018); Khan, Tan, Chong, & Ong, 2017).

Hypothesis 4: Overconfidence has significant and positive effects on the investment decision making of the female investors in Delhi, NCR.

3. IMPORTANCE OF THE STUDY

The study is significant because it tackles a topic that is crucial, as the decisions and behavior of investors, especially their psychological and behavioral aspects, significantly influence the functioning of the financial market in any given nation. This study aims to test some biases by analyzing investor behavior and examining its impact on the process of making investment decisions. The study of behavioral biases and their influence on female investors is of utmost importance. This study emphasises the impact of psychological characteristics such as anchoring, disposition, self-control, and overconfidence on investment decisions, which can have varying effects on women and potentially impact their financial results. Gaining insight into these biases can result in customised tactics and educational initiatives that reduce risks and improve returns for female investors. Furthermore, by acknowledging and confronting these biases, it cultivates an environment of inclusiveness inside financial markets, which in turn advances the cause of gender equality and empowers women economically. In conclusion, this study enhances our overall comprehension of investor behavior, thereby facilitating the development of more efficient financial planning and asset management techniques for all investors.

4. DEMOGRAPHIC PROFILE OF THE RESPONDENT

The **appendix 1** provides a demographic snapshot of respondents based on age, education, income, and investment experience. The majority of respondents are aged 18 to <30 (58.16%), followed by those with Graduation (43.09%) and Post-graduation (38.49%) qualifications. In terms of annual income, significant proportions fall into the Below 240000 (25.94%) and 240000-420000 (21.75%) brackets. Regarding investment experience, a substantial number have 0 to 1 years (45.19%), indicating a mix of novice and moderately experienced investors. This data underscores the varied demographics and backgrounds of

the study participants, essential for understanding how behavioral biases may influence female investors across different profiles.

5. RESEARCH METHODOLOGY

The study distributed a questionnaire to retail female investors engaged in the Indian stock market, aligning with its research objectives. Employing a quantitative research approach, the study utilized primary data collected and analyzed for its investigation. Dash and Paul (2021) advocate for variance-based PLS-SEM due to its flexibility, improved model fit, and capacity to handle non-normal data compared to covariance-based CB-SEM.

5.1. COMMON METHOD BIAS

Table 1

Factor	Total Variance Explained					
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.335	33.346	33.346	4.698	29.361	29.361
2	1.526	9.539	42.885			
3	1.366	8.538	51.423			
4	1.076	6.727	58.150			
5	1.027	6.421	64.571			
6	.896	5.601	70.172			
7	.769	4.803	74.975			
8	.670	4.188	79.163			
9	.635	3.967	83.130			
10	.601	3.759	86.890			
11	.504	3.148	90.037			
12	.431	2.692	92.730			
13	.360	2.251	94.981			
14	.347	2.167	97.147			
15	.268	1.673	98.820			
16	.189	1.180	100.000			

Harman's single-factor analysis confirmed the absence of common method bias (CMB) in the dataset (Podsakoff et al., 2003). The analysis yielded a single factor derived from 16 items, explaining the highest variance (29.361%) in Table 1, which was below the 50% threshold, validating the chosen hypothesis testing approach following thorough multivariate assumption checks.

5.2. MULTICOLLINEARITY

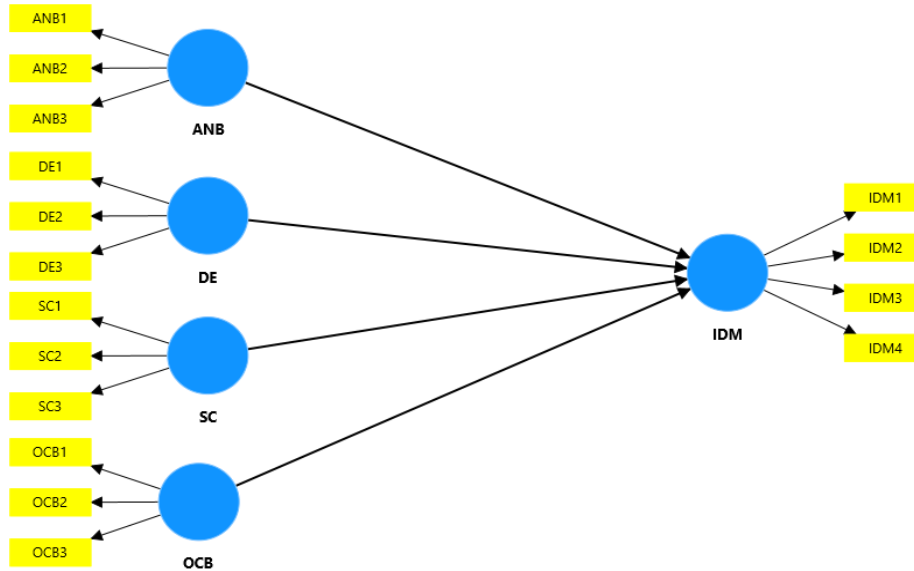
Table 2

	VIF
ANB -> IDM	1.474
DE -> IDM	1.177
SC -> IDM	1.759
OCB -> IDM	1.529

Table 2 displays the test's results. We assessed multicollinearity using the Variance Inflation Factor (VIF), adhering to Ahmad, Shafique, and Jamal's (2020) recommendation that VIF

values above 5 indicate potential issues. However, in our analysis, the highest recorded VIF in Table 2 is 1.759, well below the multicollinearity threshold. This finding confirms that the dataset exhibits no significant multicollinearity concerns, as all VIF values align with the widely accepted benchmark of 5.

Figure 1: Conceptual Framework of the Study



Note. ANB, Anchoring bias; DE, Disposition effect; SC, Self-control; OCB, Overconfidence bias; IDM, Investment decision making.

6. RESEARCH RESULTS AND DISCUSSION

Table 3: Testing Reliability and Validity

	Cronbach's alpha	Composite reliability (rho _a)	Composite reliability (rho _c)	Average variance extracted (AVE)
ANB	0.767	0.792	0.851	0.592
DE	0.731	0.743	0.848	0.650
IDM	0.765	0.771	0.864	0.680
OCB	0.727	0.769	0.843	0.643
SC	0.738	0.758	0.852	0.658

Table 3 displays reliability and validity metrics for five constructs: ANB, DE, IDM, OCB, and SC. The Cronbach's alpha coefficients demonstrate adequate internal consistency for all constructs, with values ranging from 0.727 to 0.767. The composite reliability scores (rho_a and rho_c) are above the required threshold of 0.70, suggesting a high level of dependability for all constructs. The values for Average Variance Extracted (AVE), which assess convergent validity, range from 0.592 to 0.680, above the minimum requirement of 0.50. These findings demonstrate a consistent assessment of the constructs, effectively capturing a substantial amount of variability in their corresponding items. The results of this study are consistent with the recognised criteria for evaluating the psychometric qualities of measuring scales. **J. Hair et al. (2017)**

Table 4: Cross Loading

	ANB	DE	IDM	OCB	SC
ANB1	0.786	0.257	0.414	0.342	0.538
ANB2	0.734	0.221	0.389	0.300	0.225
ANB3	0.645	0.117	0.308	0.264	0.417
DE1	0.305	0.806	0.321	0.310	0.280
DE2	0.059	0.754	0.212	0.210	0.109
DE3	0.225	0.715	0.319	0.225	0.314
IDM1	0.437	0.286	0.800	0.407	0.549
IDM2	0.426	0.363	0.841	0.470	0.573
IDM3	0.355	0.270	0.677	0.313	0.324
IDM4	0.241	0.162	0.535	0.319	0.282
OCB1	0.404	0.316	0.490	0.841	0.578
OCB2	0.321	0.269	0.458	0.866	0.458
OCB3	0.267	0.203	0.285	0.686	0.216
SC1	0.520	0.279	0.580	0.504	0.881
SC2	0.444	0.262	0.483	0.465	0.825
SC3	0.338	0.264	0.447	0.364	0.720

Table 4 displays the correlation coefficients among several components inside five constructs: ANB, DE, IDM, OCB, and SC. Each cell indicates the magnitude and orientation of the correlation between specific pairs of elements within each construct. Within the context of ANB, the correlations vary from 0.645 to 0.786, which suggests that there are moderate to strong connections between ANB1, ANB2, and ANB3. Likewise, different levels of connection are observed among the components of constructs such as DE (disposition effect), IDM (investment decision making), OCB (overconfidence bias), and SC (self-concept). These correlations offer valuable insights into the degree of association or independence between the items within each construct. This aids in assessing the construct validity and the study's underlying linkages.

Table 5: Fornell-Larcker criterion

	ANB	DE	IDM	OCB	SC
ANB	0.724				
DE	0.282	0.759			
IDM	0.515	0.386	0.723		
OCB	0.419	0.334	0.529	0.802	
SC	0.542	0.330	0.625	0.552	0.811

Table 6: HTMT Ratio

	ANB	DE	IDM	OCB	SC
ANB					
DE	0.460				
IDM	0.820	0.546			
OCB	0.651	0.469	0.723		
SC	0.847	0.451	0.837	0.707	

Subsequently, discriminant validity was assessed using the HTMT ratio (**Table 6**) and Fornell-Larcker's criterion (**Table 5**). According to Fornell-Larcker's criterion, the HTMT ratio for each construct remains below 0.85 (**Fornell & Larcker, 1981; Henseler et al., 2015**), and the square root of AVE exceeds the inter-construct correlation values (**refer to Table 3**)

Table 7: R-Square

	R-square	R-square adjusted
IDM	0.488	0.479

Table 7 displays the coefficients of determination for a dependent variable (IDM), namely the R-squared and adjusted R-squared values. The model's independent variables account for nearly half of the dependent variable's variability, as indicated by the R-squared value of 48.8%. The adjusted R-squared value of 0.479 takes into account the number of predictors in the model, resulting in a more cautious estimation of the explained variance. These numbers show that the model explains a lot of the variation in the dependent variable. This shows that it can predict or explain outcomes in the situation that is being studied.

Table 8: Q Square

	Q ² predict
IDM	0.458

Table 8 shows Q²predict (0.458) for the dependent variable (IDM). This metric indicates that the model has substantial predictive relevance, suggesting that 45.8% of the IDM's variance is accurately predicted by the model's predictors, demonstrating its effectiveness in forecasting outcomes.

6.1. HYPOTHESIS TESTING

Table 9: Path Coefficient

Hypothesis	Path	Beta	SD	T-stat	P values	Remarks
H1	ANB -> IDM	0.195	0.055	3.523	0.000	Supported
H2	DE -> IDM	0.145	0.059	2.474	0.013	Supported
H3	OCB -> IDM	0.199	0.069	2.883	0.004	Supported
H4	SC -> IDM	0.362	0.066	5.478	0.000	Supported

The test results determine the acceptance or rejection of the researchers' hypothesis based on their inquiry. The t-statistics value confirms the validity of the hypothesis, requiring a minimum threshold of 1.96 and a p-value below 0.05 for acceptance. The table above determines the acceptance or rejection of each hypothesis.

H1 (Table 9) Anchoring bias (ANB) significantly influences decision-making, as evidenced by a strong statistical significance (P = 0.000, T-stat = 3.523). This bias leads investors to cling to initial information, potentially blinding them to evolving market realities and leading to biased decision outcomes. Such tendencies highlight the need for strategies that encourage flexibility and consideration of all available data points to counteract the anchoring effect. The results of this test indicate that **H1** has been accepted (**Hussain et al., 2023; Robin & Angelina, 2020**), which is fairly similar to this study.

H2 (Table 9) additionally, the disposition effect (DE) demonstrates a notable impact (P = 0.013, T-stat = 2.474), revealing a propensity among female investors to prematurely sell winning investments and hold onto losing ones. This emotional bias not only jeopardies optimal portfolio diversification but also compromises potential returns by delaying necessary adjustments. The test results confirm the acceptance of hypothesis H2. According to earlier studies (**Laxmi et al., 2013; Mohammad et al., 2020; Adil et al., 2021**), the results are fairly similar.

The P-value of 0.004 is statistically significant at the 0.05 level, indicating a strong relationship between the self-control (SC) variable and investment decision-making (IDM). Additionally, the t-statistics value of 2.883 exceeds the critical value of 1.96, further supporting the significance of the relationship. The results of this test indicate that **H3 (Table 9)** has been accepted by **Tabassum and Haroon (2015)**. This bias leads individuals to prioritise short-term gains or emotional comfort, such as selling assets prematurely during market fluctuations or succumbing to herd behavior. Consequently, they may overlook disciplined investment strategies that maximise long-term returns or mitigate risks.

At a significance level of 0.05, the P-value of 0.000 is statistically significant, indicating strong evidence against the null hypothesis. Similarly, the t-statistics value of 5.487 exceeds the critical value of 1.96, providing further support for rejecting the null hypothesis. These results are obtained when testing the impact of overconfidence bias (OCB) on investment decision-making (IDM). This test's results confirm the approval of H4 (Table 9). Overconfidence among investors results in an overestimation of knowledge, an underestimation of dangers, an inability to see opportunities, and a lack of control over events (Nofsinger, 2002). According to earlier studies (**Malik et al., 2019; Chauhan et al., 2024; Manazir et al., 2016; Miller et al., 2015**), the results are fairly similar. Addressing these biases requires tailored educational interventions and investment strategies that empower female investors to make informed decisions based on comprehensive analysis and strategic foresight. By enhancing awareness of cognitive biases and promoting rational decision-making processes, the financial landscape can become more inclusive and conducive to achieving sustainable investment outcomes for female investors.

7. CONCLUSION OF THE STUDY

Based on this analysis, it is evident that cognitive biases significantly impact investment decision-making among female investors. The anchoring bias, disposition effect, self-control bias, and overconfidence bias influence choices, potentially leading to suboptimal outcomes. Awareness of these biases is crucial for female investors to adopt disciplined investment strategies that prioritise long-term goals over short-term emotions. By mitigating these biases through education and structured decision-making processes, female investors can enhance their ability to navigate financial markets effectively, maximise returns, and achieve sustainable wealth growth. Empowering women with knowledge and tools to counteract biases fosters confidence and promotes financial independence in investment decisions.

8. IMPLICATION OF THE STUDY

8.1. Theoretical implications: This study highlights the critical role of cognitive biases—such as anchoring, disposition effect, self-control, and overconfidence biases—in shaping investment decisions among female investors. Understanding these biases enriches behavioral finance theory by illuminating how psychological factors influence financial behaviors differently across gender lines. This contributes to a more nuanced understanding of investor decision-making processes, enhancing theoretical frameworks in finance and psychology.

8.2. Managerial implications: Managers and financial advisors can leverage these insights to develop tailored strategies and educational programs aimed at mitigating biases among female investors. Promoting awareness and providing tools for disciplined decision-making can empower women to make more informed and rational investment choices, optimizing

portfolio performance and long-term financial outcomes. By addressing cognitive biases, managers can foster client trust, improve advisory services, and ultimately contribute to greater financial empowerment and stability among female investors.

References

- Adil, A., Ameer, S., Ghayas, S., Niazi, S., & Yousaf, A. (2021). Mediating role of self-handicapping behaviors between academic Psychological Capital and academic performance among university students. *BPA-Applied Psychology Bulletin (Bollettino di Psicologia Applicata)*, (292).
- Ahmad, S., Shafique, O., & Jamal, W. N. (2020). Impact of perceived corporate social responsibility on banks' financial performance and the mediating role of employees' satisfaction and loyalty in Pakistan. *Journal of Accounting and Finance in Emerging Economies*, 6(3), 765-774.
- Aigbovo, O., & Ilaboya, O. J. (2019). Does behavioural biases influences individual investment decisions. *Management Science Review*, 10(1), 68-89.
- Alsedrah, I., & Ahmed, N. (2018). Behavioral finance and speculative behavior of investors: evidence from saudi stock market. *European Proceedings of Social and Behavioural Sciences*, 44.
- Aspara, J., & Hoffmann, A. O. (2015). Selling losers and keeping winners: How (savings) goal dynamics predict a reversal of the disposition effect. *Marketing Letters*, 26, 201-211.
- Ávila, L. A. C. D., Oliveira, A. S. D., Ávila, J. R. D. M. S., & Malaquias, R. F. (2016). Behavioral biases in investors' decision: studies review from 2006-2015.
- Baddeley, A. (2012). Working memory: Theories, models, and controversies. *Annual review of psychology*, 63, 1-29.
- Baker, H. K., & Ricciardi, V. (2014). How biases affect investor behaviour. *The European Financial Review*, 7-10.
- Bias, O., Manazir, M., Noreen, M., Asif, M., & Aziz, B. (2016). Annals of Education. *Annals of Education*, 2(1), 98-105.
- Boebel, R. B., & Taylor, L. (2000). The disposition effect: Do New Zealand investors keep their mistakes. *Department of Finance and Quantitative Analysis, University of Otago, New Zealand*.
- Chang, H. H., & Chen, S. W. (2008). The impact of online store environment cues on purchase intention: Trust and perceived risk as a mediator. *Online information review*, 32(6), 818-841.
- Chauhan, B., Bhardwaj, P., Singh, D., & Vishwakarma, K. (2024). Examining the Impact of Cognitive Biases on Investment Decision Making of Individual Investros in India: An Integrated Sem-Ann Method. *Journal of Informatics Education and Research*, 4(2).
- Chen, G., Kim, K. A., Nofsinger, J. R., & Rui, O. M. (2007). Trading performance, disposition effect, overconfidence, representativeness bias, and experience of emerging market investors. *Journal of behavioral decision making*, 20(4), 425-451.
- Darrat, A. F., Zhong, M., & Cheng, L. T. (2007). Intraday volume and volatility relations with and without public news. *Journal of Banking & Finance*, 31(9), 2711-2729.
- Dickason, Z., & Ferreira, S. (2018). Establishing a link between risk tolerance, investor personality and behavioural finance in South Africa. *Cogent Economics & Finance*, 6(1), 1519898.
- Fama, E. F. (1970). Session topic: stock market price behavior. *The Journal of Finance*, 25(2), 383-417.
- Farooq, A., & Sajid, M. (2015). Factors affecting investment decision making: Evidence from equity fund managers and individual investors in Pakistan. *Research Journal of Finance and Accounting*, 6(9), 2222-1697.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18(1), 39-50.
- Hair Jr, J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, 1(2), 107-123.

- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science*, 43, 115-135.
- Huang, J. B., Tan, N., & Zhong, M. R. (2014). Incorporating Overconfidence into Real Option Decision-Making Model of Metal Mineral Resources Mining Project. *Discrete Dynamics in Nature and Society*, 2014(1), 232516.
- Hussain, Q., & Pimanmas, A. (2016). Shear strengthening of RC deep beams with sprayed fibre-reinforced polymer composites (SFRP) and anchoring systems: part 1. Experimental study. *European Journal of Environmental and Civil Engineering*, 20(1), 79-107.
- Hussain, W., Ashiq, M., Qazi, M. U., & Ali, M. (2023). The Impact of Cognitive Biases on The Investment Decision of Individual Investors: The Role of Risk Propensity. *Journal of Financial Technologies (Fintech), Inclusion and Sustainability*, 2(1), 47-72.
- Kabasinkas, A., & Macys, U. (2010). Calibration of Bollinger Bands parameters for trading strategy development in the Baltic stock market. *Engineering Economics*, 21(3).
- Kahneman, D., & Tversky, A. (2013). Prospect theory: An analysis of decision under risk. In *Handbook of the fundamentals of financial decision making: Part I* (pp. 99-127).
- Kalra Sahi, S., & Pratap Arora, A. (2012). Individual investor biases: A segmentation analysis. *Qualitative Research in Financial Markets*, 4(1), 6-25.
- Kamoto, S. (2014). Impacts of internal financing on investment decisions by optimistic and overconfident managers. *European financial management*, 20(1), 107-125.
- Khan, M. T. I., Tan, S. H., Chong, L. L., & Ong, H. B. (2017). Investment characteristics, stock characteristics and portfolio diversification of finance professionals. *Borsa Istanbul Review*, 17(3), 164-177.
- Ko, K. J., & Huang, Z. J. (2007). Arrogance can be a virtue: Overconfidence, information acquisition, and market efficiency. *Journal of Financial Economics*, 84(2), 529-560.
- Lakshmi, P., Visalakshmi, S., Thamaraiselvan, N., & Senthilarasu, B. (2013). Assessing the Linkage of Behavioural Traits and Investment Decisions using SEM Approach. *International Journal of Economics & Management*, 7(2).
- Lee, H. J., Park, J., Lee, J. Y., & Wyer Jr, R. S. (2008). Disposition effects and underlying mechanisms in e-trading of stocks. *Journal of Marketing Research*, 45(3), 362-378.
- Liu, J., Wu, C., Yuan, L., & Liu, J. (2022). Opening price manipulation and its value influences. *International Review of Financial Analysis*, 83, 102256.
- Madaan, G., & Singh, S. (2019). An analysis of behavioral biases in investment decision-making. *International Journal of Financial Research*, 10(4), 55-67.
- Malik, M. S., Hanif, M. I., & Azhar, M. Z. (2019). The impact of overconfidence bias on investment decisions: Mediating role of risk tolerance. *International Journal of Research and Innovation in Social Science*, 3(8), 154-160.
- Malmendier, U., & Taylor, T. (2015). On the verges of overconfidence. *Journal of Economic Perspectives*, 29(4), 3-8.
- Maurya, P. K., Bansal, R., Ansari, Y., & Mishra, A. K. (2023). Behavioural Determinants of Health Insurance Buying Intention of Missing Middle Consumers: A Study During Covid-19 Pandemic. *European Economic Letters (EEL)*, 13(5), 1082-1098.
- Mishra, A. K., Bansal, R., & Maurya, P. K. (2023). Investing for a better tomorrow: Values-driven antecedents of investment in socially responsible equity funds by Indian retail investors. *Journal of Cleaner Production*, 420, 138441.
- Mishra, A. K., Bansal, R., Maurya, P. K., Kar, S. K., & Bakshi, P. K. (2023). Predicting the antecedents of consumers' intention toward purchase of mutual funds: A hybrid PLS-SEM-neural network approach. *International Journal of Consumer Studies*, 47(2), 563-587.

- Mozafari, J., Afzalimoghaddam, M., Talebian, M. T., Bahreini, M., & Mohammadnejad, E. (2020). The influence of successfully completed triage courses and work experience of advanced emergency medical technicians on their perception of patient disposition. *Australasian Journal of Paramedicine*, 17, 1-5.
- Mushinada, V. N. C., & Veluri, V. S. S. (2018). Investors overconfidence behaviour at Bombay stock exchange. *International Journal of Managerial Finance*, 14(5), 613-632.
- Odean, T. (1999). Do investors trade too much?. *American economic review*, 89(5), 1279-1298.
- Pelster, M., & Hofmann, A. (2018). About the fear of reputational loss: Social trading and the disposition effect. *Journal of Banking & Finance*, 94, 75-88.
- Peterson, C., Ruch, W., Beermann, U., Park, N., & Seligman, M. E. (2007). Strengths of character, orientations to happiness, and life satisfaction. *The journal of positive psychology*, 2(3), 149-156.
- Phan, T. C., Rieger, M. O., & Wang, M. (2019). Segmentation of financial clients by attitudes and behavior: A comparison between Switzerland and Vietnam. *International Journal of Bank Marketing*, 37(1), 44-68.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of applied psychology*, 88(5), 879.
- Pompian, M. M. (2012). *Behavioral finance and wealth management: how to build investment strategies that account for investor biases* (Vol. 667). John Wiley & Sons.
- Prosad, J. M., Kapoor, S., Sengupta, J., & Roychoudhary, S. (2017). Overconfidence and disposition effect in Indian equity market: An empirical evidence. *Global Business Review*, 19(5), 1303-1321.
- Robin, R., & Angelina, V. (2020). Analysis of the impact of anchoring, herding bias, overconfidence and ethical consideration towards investment decision. *JIMFE (Jurnal Ilmiah Manajemen Fakultas Ekonomi)*, 6(2), 253-264.
- Shah, S. Z. A., Ahmad, M., & Mahmood, F. (2018). Heuristic biases in investment decision-making and perceived market efficiency: A survey at the Pakistan stock exchange. *Qualitative Research in Financial Markets*, 10(1), 85-110.
- Shah, S. Z. A., Ahmad, M., & Mahmood, F. (2018). Heuristic biases in investment decision-making and perceived market efficiency: A survey at the Pakistan stock exchange. *Qualitative Research in Financial Markets*, 10(1), 85-110.
- Shanmuganathan, M. (2020). Behavioural finance in an era of artificial intelligence: Longitudinal case study of robo-advisors in investment decisions. *Journal of Behavioral and Experimental Finance*, 27, 100297.
- Shefrin, H., & Statman, M. (1985). The disposition to sell winners too early and ride losers too long: Theory and evidence. *The Journal of finance*, 40(3), 777-790.
- Shefrin, H., & Statman, M. (2011). Behavioral finance in the financial crisis: market efficiency, Minsky, and Keynes. *Santa Clara University*, November.
- Shim, I., & Shin, K. (2021). Financial stress in lender countries and capital outflows from emerging market economies. *Journal of International Money and Finance*, 113, 102356.
- Simon, H. A. (1955). A behavioral model of rational choice. *The quarterly journal of economics*, 99-118.
- Stancu, A., Panait, M., Raimi, L., & Palazzo, M. (2020, October). Financial consumers—promoters of sustainable development? Evidences from Europe and Central Asia. In *Proceedings of the International Conference on Economics and Social Sciences* (pp. 841-850).
- Statman, M. (2014). Behavioral finance: Finance with normal people. *Borsa Istanbul Review*, 14(2), 65-73.
- Strahilevitz, M. (2017). Consequences of Frequent Stock Trading. *Financial Behavior: Players, Services, Products, and Markets*.
- Strömbäck, C., Lind, T., Skagerlund, K., Västfjäll, D., & Tinghög, G. (2017). Does self-control predict financial behavior and financial well-being?. *Journal of behavioral and experimental finance*, 14, 30-38.

- Summers, B., & Duxbury, D. (2012). Decision-dependent emotions and behavioral anomalies. *Organizational Behavior and Human Decision Processes*, 118(2), 226-238.
- Tabassum, R., & Haroon, I. (2015). Impact of Overconfidence, Illusion of Control, Self-Control and Optimism Bias on Investor Decision Making. Evidence from Developing Markets. *Research Journal of Finance and Accounting*, 6(11), 110-115.
- Trifan, R. (2020). Behavioural biases and stock market reaction: Evidence from six post-communist countries. *Ekonomický časopis*, 68(08), 811-826.
- Tversky, A., & Kahneman, D. (1974). Judgment under Uncertainty: Heuristics and Biases: Biases in judgments reveal some heuristics of thinking under uncertainty. *science*, 185(4157), 1124-1131.
- Wright, W. F., & Anderson, U. (1989). Effects of situation familiarity and financial incentives on use of the anchoring and adjustment heuristic for probability assessment. *Organizational Behavior and Human Decision Processes*, 44(1), 68-82.

Appendix 1

Respondent demographic Profile			
		Frequency	Percentage (%)
Age group	18 to <30	139	58.16%
	30 to 40	43	17.99%
	40 to 50	29	12.13%
	50 and above	28	11.71%
Educational Qualification	Graduation	103	43.09%
	Post-graduation	92	38.49%
	Doctorate	18	7.53%
	Other	26	10.87%
Annual Income	Below 240000	62	25.94%
	240000-420000	52	21.75%
	420000-600000	46	19.24%
	600000-1200000	39	16.13%
	Above 1200000	40	16.73%
Investment Experience	0 to 1	108	45.19%
	1 to 3	58	24.26%
	3 to 5	38	15.89%
	More than 5	35	14.64%