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# Impact of Human Psychology on Investment Decision-Making: A Study of Mutual Fund Investors

**Dr. Sharanraj[1], Mr. Shashidhar Channappa Chatni[2]**

[1]Assistant Professor, Department of Studies in Commerce, Davangere University, Shivagangothri Davangere, Karnataka. Email: sharanraj.60@gmail.com

[2]Research Scholar, Department of Studies in Commerce, Davangere University, Shivagangothri Davangere, Karnataka. Email: shashidharchatni.phd@gmail.com

***Abstract***

***Purpose****: The purpose of this study is to investigate the impact of cognitive factors such as Herd, Representativeness, Availability, Mental Accounting, Conservatism, Familiarity, Anchoring, and Overconfidence biases on mutual fund investment decision making.*

***Methodology****: The study used quantitative methods to evaluate behavioral factors effect on mutual fund investments. 592 questionnaires were distributed to retail investors in Karnataka using the snowball sampling technique. Of these, 543 responses were received, and 520 were valid, achieving an 87% response rate.*

***Findings:*** *The result of the study revealed that cognitive factors such as herd behavior, representativeness, availability, mental accounting, conservatism, familiarity, anchoring, and overconfidence biases have a significant impact on the investment decision-making of mutual fund investors. The R-squared value of 0.616 indicates that 61.67% of the variation in investment decision-making can be explained by these cognitive factors.*

***Keywords****: Behavioural Bias, Cognitive Factors, Mutual fund, and Investment-Decision.*

## ***Segment-A***

### ***A-1.*** Introduction

Investment is a process that involves selecting a financial asset to allocate savings with a goal of generating future returns *(Ghmari et al., 2024)*. This process requires potential time to evaluate investment based on factors such as risk, return, market conditions and personal financial goal. However, rational investment decision theories like Efficient market hypothesis, Modern Portfolio Theory (MPT) and Capital Asset Pricing Model (CAPM) assumes that investors use all the available information to make optimal investment choices *(Markowitz, H.M. 1952)*. According to *(Metawa et al., 2018)* Investors make decision rationally, by changing their beliefs with latest information to maximize expected returns for the given risk level. while *(Krishnamurti, 2009)* retail and professional investors often do not make purely analytical decisions by neglecting emotions. Means investors incorporate some of the psychological insights during investment like fear, emotion, and greed during investment, these insights lead to deviation from rationality. It was identified that while investors are trying to be a rational investor their investment are influenced by emotions and cognitive biases leading to occasional irrational behaviour *(Asaad, 2012)*. As concluded by the *(Kahneman, 2003)* humans adopt some shortcuts or rules of thumb for processing the decision process. Sometime these shortcuts act as beneficial or detrimental. In order to challenge the assumption of traditional financial theories some of the economist started to work on the alternative financial theories which lead to development of new field called behavioural finance. Behavioural finance examines how psychological factors of investors influences the financial decision making and market, by challenging the rational assumptions of traditional finance theories. Behavioural finance emerged as an alternative to address the drawbacks of traditional financial theories *(Bikas et al., 2013)*. As

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demonstrated by the (*Kahneman and Tversky 1979*) Individuals differentiate the gains and losses relative to a reference point based on absolute terms. It shows that individuals are more sensitive to losses than gains, leading to risk-averse behavior when facing gains and risk-seeking tendencies when facing potential losses. Hence it was concluded that investors are not rational. Either they are quasi rational or irrational during decision making.

So, the aim of the study is to explore weather human psychological behaviour does create deviation on the investment decision making among Indian investors. This study helps to understand the significance of behavioural factors on investment decision making. The Study is bifurcated into five segments. *Segment-A* containing introduction part which provide over view about the classical and behavioural finance theory. *Segment-B* describes Literature study and Research Gap. *Segment-C* displays Objective, Research methodology and Hypothesis formulation. *Segment-D* provides data analysis and interpretation of the study. *Segment-E* discusses the findings, suggestions and conclusion followed by references.

## ***Segment-B***

### ***B1-*** **Literature review**

Literature study is divided into two parts. Phase-1 explores the influence of human psychological factors on investment decision through focus on recent researches. Phase-2 provides a bibliometric study on behavioural finance to provide a recent trend in research domain.

### ***B2-*** **Psychological factors on investment decision**

*(Baker et al., 2018)* highlight that investor exhibit biases like mental accounting, overconfidence, and herding, influenced by demographics and financial literacy. As concluded by *(Kiruthika & Ramya, 2023)* Cognitive factors like confirmation bias, loss aversion, and illusion of control also significantly impact the decisions during equity investment. *(Chandra, 2008)* highlights behavioral factors and cognitive psychology, such as greed, fear, and mental accounting, influence investment decisions, often leading to irrational choices. *(Hassan et al., 2023)* identifies factors such as personal and social influences, market information, and demography impacting investor behavior, with theories like TRA, TPB, and Prospect Theory factors were identified in the investor during equity investment decision. *(Okoth O, W., 2023)* concludes that investors often deviate from the rational decision process due to factors like affordability, information gathering, and behaviour like loss aversion and herd behavior significantly influence the investors of Kenya during mutual fund selection. *(Khan et al., 2023)* found that overconfidence, disposition effect, herding, and loss aversion impact investors during stock investment, an increased financial literacy can reduce these biases, thereby enhancing investment portfolio efficiency. *(Waweru et al., 2008)* found that availability bias, anchoring, overconfidence, and representativeness impact institutional investors during investment in Indian stock exchange. *(Adil et al., 2021)* found that herding and risk aversion significantly impact investment decisions for both genders, while financial literacy reduces the influence of biases. *(Suresh, 2021)* identifies that heuristic bias significantly contributes to development of behavioral biases, while framing effect, cognitive illusions, and herd mentality are negatively impact on decision process. *(Metawa et al., 2018)* found that sentiment, overreaction, overconfidence, and herd behavior significantly impact securities investment decisions, with demographic factors like age, gender, and education mediating this behaviour.

### ***B3-*** **Bibliometrics**

Bibliometric analysis uses math, statistics, and algorithms to analyze large data sets, revealing patterns in literature. It helps assess research productivity, identify key texts, and monitor trends over time, proving valuable in scientific and business research by examining citations, journals, and authors *(Donthu et al., 2021; Kraus et al., 2022)*. Following diagram will provide overview of the bibliometric study:

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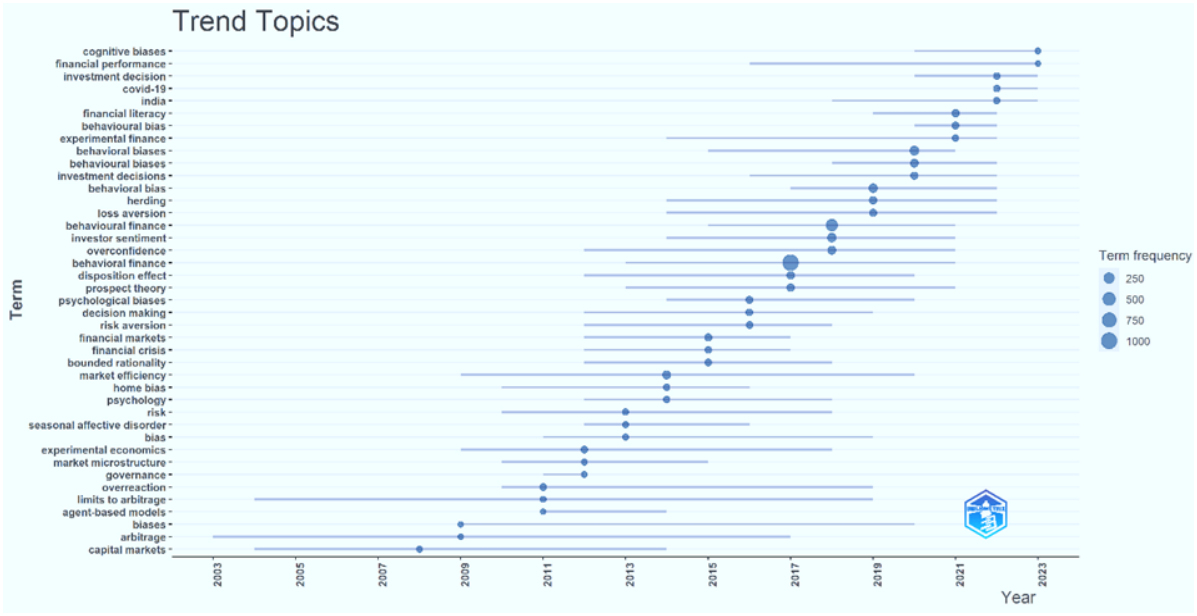


**Diagram- 01 Trending Topics**

Diagram 01 reflects the most widely discussed topics in the behavioural finance field. Among the most popular topics in the field of behavioural finance include prospect theory, behavioural biases like overconfidence, herding, disposition effect, risk aversion loss aversion, home bias, investors' sentiment and market efficiency. Whereas least studied topics are risk financial literacy and impact on investment decision.

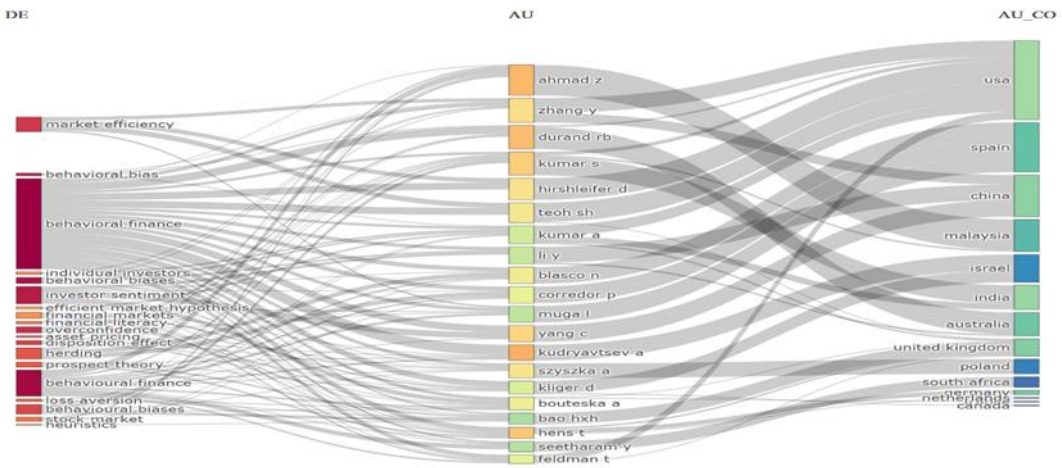


**Diagram 02- Three Field Analysis**

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Diagram 02 reveals that most behavioural finance research are conducted in the United States, Spain, China, Malaysia, and Israel. There is a notable gap in research on Indian investors, highlighting the need for further study to understand their behavior better.

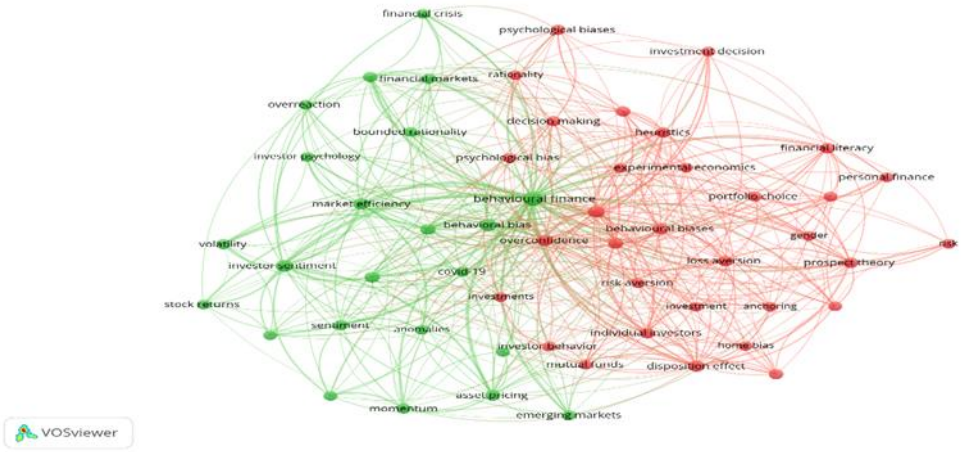


**Diagram 03- Co-occurrence of Keywords**

Figure 03 analyzes keyword co-occurrence, using fractional counting to minimize the impact of articles with many keywords *(Kashi & Shah, 2023)*. study shows strong links with investor sentiment, market efficiency, and asset pricing but weak links with mutual fund market, investment decisions, and financial literacy, indicating less research in those areas.

### ***B4-*** **Research gap**

From the literature and bibliometric study, it is identified that most studies on behavioral finance have focused on developed countries like the USA, Japan, and China, with fewer studies conducted in developing countries such as India. Researchers in India has mainly looked at how psychological factors affect retail investors' decisions during equity and derivatives investment, with less focus on mutual fund investments. The current study aims to explore key behavioral factors like Herd bias, Representativeness, Availability, Mental accounting, Conservatism, Familiarity, Anchoring, and Overconfidence bias and their impact on mutual fund investment decisions in Karnataka, which has been neglected in previous studies.

## ***Segment-C***

### ***C1-*** **Objectives**

The study aims to determine whether cognitive factors such as Herd, Representativeness, Availability, Mental Accounting, Conservatism, Familiarity, Anchoring, and Overconfidence biases significantly impact investors' mutual fund decision-making.

### ***C2-*** **Research Methodology**

Study adopted the quantitative and empirical research approach to know the impact of behavioural factors on mutual fund investment decision. Following section will provide the details regarding methodology of the study

The study used a structured questionnaire with 45 questions, sourced from various authors namely *(Adil et al., 2021)*, *(Almansour & Arabyat, 2017)*, *(Waweru et al., 2008)*, *(Baker et al., 2018)*, *(Mahmood, Z., 2016)*, *(Laryea & Owusu, 2022)*, *(Sasikal V, 2015)*, and for investment decision

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making (Scott & Bruce, 1995) respectively. Non-probability snowball sampling was used to gather information. 592 questionnaires were distributed to mutual fund investors in Karnataka. 543 responses were collected, and 520 were finalized after removing incomplete responses, by achieving an 87% response rate.

**C2- Hypothesis**

Following hypotheses were tested to find out the impact of cognitive factors on mutual fund investment decision.

***Hypothesis 01: "There is a significant impact of Cognitive factors on mutual fund investment decision making"***

On the basis of above hypothesis following sub-hypothesis are proposed

***H01a:*** *"There is a significant impact of Herd bias on mutual fund investment decision making".*

***H01b:*** *"There is a significant impact of Availability bias on mutual fund investment decision making"*

***H01c****: "There is a significant impact of Representativeness bias on mutual fund investment decision making"*

***H01d****: "There is a significant impact of Mental accounting bias on mutual fund investment decision making"*

***H01e****: "There is a significant impact of Conservatism bias on mutual fund investment decision making"*

***H01f****: "There is a significant impact of Familiarity bias on mutual fund investment decision making"*

***H01g****: "There is a significant impact of Anchor bias on mutual fund investment decision making"*

***H01h****: "There is a significant impact of Overconfidence bias on mutual fund investment decision making"*

***Segment-D***

**Data Analysis and Interpretation**

***D1-*** **Measurement Model Assessment of the Influence of Cognitive Factors on Mutual Fund Investment Decision-Making**

**Table 1.1**
**Factor loadings, Reliability and Validity analysis**

| Latent Variable | Observed Variable | Loadings | Cronbach Alpha | Composite Reliability | Average Variance Extracted (AVE) |
|---|---|---|---|---|---|
| **Herd** | CF-01 | 0.855 | 0.912 | 0.932 | 0.694 |
| | CF-02 | 0.845 | | | |
| | CF-03 | 0.869 | | | |
| | CF-04 | 0.816 | | | |
| | CF-05 | 0.782 | | | |
| | CF-06 | 0.831 | | | |
| **Availability** | CF-12 | 0.855 | 0.842 | 0.893 | 0.677 |
| | CF-13 | 0.821 | | | |
| | CF-14 | 0.806 | | | |
| | CF-15 | 0.809 | | | |
| **Representativeness** | CF-07 | 0.823 | 0.857 | 0.902 | 0.697 |
| | CF-08 | 0.836 | | | |

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| | | | | | |
|---|---|---|---|---|---|
| | CF-09 | 0.864 | | | |
| | CF-11 | 0.814 | | | |
| **Mental Accounting** | CF-16 | 0.867 | 0.855 | 0.902 | 0.697 |
| | CF-17 | 0.835 | | | |
| | CF-18 | 0.849 | | | |
| | CF-19 | 0.786 | | | |
| **Conservatism** | CF-20 | 0.847 | 0.824 | 0.895 | 0.740 |
| | CF-21 | 0.837 | | | |
| | CF-23 | 0.894 | | | |
| **Familiarity** | CF-24 | 0.923 | 0.866 | 0.918 | 0.789 |
| | CF-25 | 0.852 | | | |
| | CF-26 | 0.889 | | | |
| **Anchoring** | CF-27 | 0.860 | 0.883 | 0.919 | 0.740 |
| | CF-28 | 0.873 | | | |
| | CF-29 | 0.844 | | | |
| | CF-30 | 0.865 | | | |
| **Overconfidence** | CF-32 | 0.869 | 0.795 | 0.878 | 0.707 |
| | CF-34 | 0.752 | | | |
| | CF-35 | 0.895 | | | |
| **Investment Decision Making** | IDM1 | 0.848 | 0.933 | 0.944 | 0.651 |
| | IDM2 | 0.866 | | | |
| | IDM4 | 0.806 | | | |
| | IDM5 | 0.767 | | | |
| | IDM6 | 0.794 | | | |
| | IDM7 | 0.786 | | | |
| | IDM8 | 0.817 | | | |
| | IDM9 | 0.753 | | | |
| | IDM10 | 0.817 | | | |

***Source:*** *Author Calculation*

Table 1.1 present the result of factor loadings, reliability, and Convergent validity analyses for cognitive factors measurement models with eight exogenous latent variables namely Herd, Representativeness, Availability, Mental accounting, Conservatism, Familiarity, Anchor, and Overconfidence bias and one endogenous latent variable investment decision making with their observed indicators. Reliability is measured with Cronbach's Alpha, Composite Reliability (CR), and convergent validity is measured through Average Variance Extracted (AVE). according to (Hair et al., 2014) factor loadings should be above 0.700, Cronbach's alpha and Composite reliability must be more than 0.70, lastly average variance extracted should be greater than 0.50 to conclude the better measurement model fit in PLS-SEM.

It was identified from the study that all cognitive factors had loadings above 0.70, indicating a strong relationship with the latent variable. The Cronbach's Alpha values for all the factors ranged from 0.795 to 0.912, and Composite reliability (CR) values ranged from 0.878 to 0.932, showing higher reliability and internal consistency. All AVE values were greater than 0.50, indicating that a significant proportion of variance in the observed variables is explained by the latent constructs.

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For investment decision making, the Cronbach's Alpha was 0.933 and CR was 0.944, both indicating higher reliability and internal consistency, and the AVE was 0.651, showing substantial variance explanation.

Overall, measurement table indicate all the latent variables has a strong internal consistency with (Cronbach's Alpha above 0.7), strong composite reliability (above 0.8), good amount variance explained (AVE above 0.5). finally results suggest the measurement model has both reliability and validity, with observed variables indicating strong relation to their respective latent constructs.

**Table-1.2**
**Discriminant Validity**

| | Anchoring | Availability | Conservatism | Familiarity | Herd | Investment Decision | Mental Accounting | Overconfidence | Representativeness |
|---|---|---|---|---|---|---|---|---|---|
| **Anchoring** | **1** | | | | | | | | |
| **Availability** | 0.450 | **1** | | | | | | | |
| **Conservatism** | 0.628 | 0.461 | **1** | | | | | | |
| **Familiarity** | 0.416 | 0.558 | 0.510 | **1** | | | | | |
| **Herd** | 0.438 | 0.389 | 0.457 | 0.471 | **1** | | | | |
| **Investment Decision** | 0.616 | 0.568 | 0.635 | 0.628 | 0.571 | **1** | | | |
| **Mental Accounting** | 0.610 | 0.403 | 0.529 | 0.577 | 0.570 | 0.651 | **1** | | |
| **Overconfidence** | 0.541 | 0.505 | 0.578 | 0.530 | 0.375 | 0.647 | 0.556 | **1** | |
| **Representativeness** | 0.471 | 0.551 | 0.437 | 0.556 | 0.435 | 0.632 | 0.623 | 0.528 | **1** |

***Source:*** *Author Calculation*

Table 1.2 displays Heterotrait - Monotrait (HTMT) ratio of nine constructs: Anchoring, Availability, Conservatism, Familiarity, Herd, Mental accounting, Overconfidence, Representativeness and Investment decision making. Diagonal value of HTMT ratio indicate internal consistency within the construct and off-diagonal value indicate HTMT ratio between pairs of constructs. Generally, HTMT ratio below 0.85 indicate good discriminant validity, supporting the better model in PLS-SEM, here all the HTMT ratio value are within the threshold limit (HTMT <0.85) displaying better indication of discriminant validity for the model.

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***D-2*** **Structural Model Assessment of the Influence of Cognitive Factors on Mutual Fund Investment Decision-Making**

**Table: 1.3**

**Hypothesis Testing and Results of the Lower-Order Structural Model for Cognitive Factor**

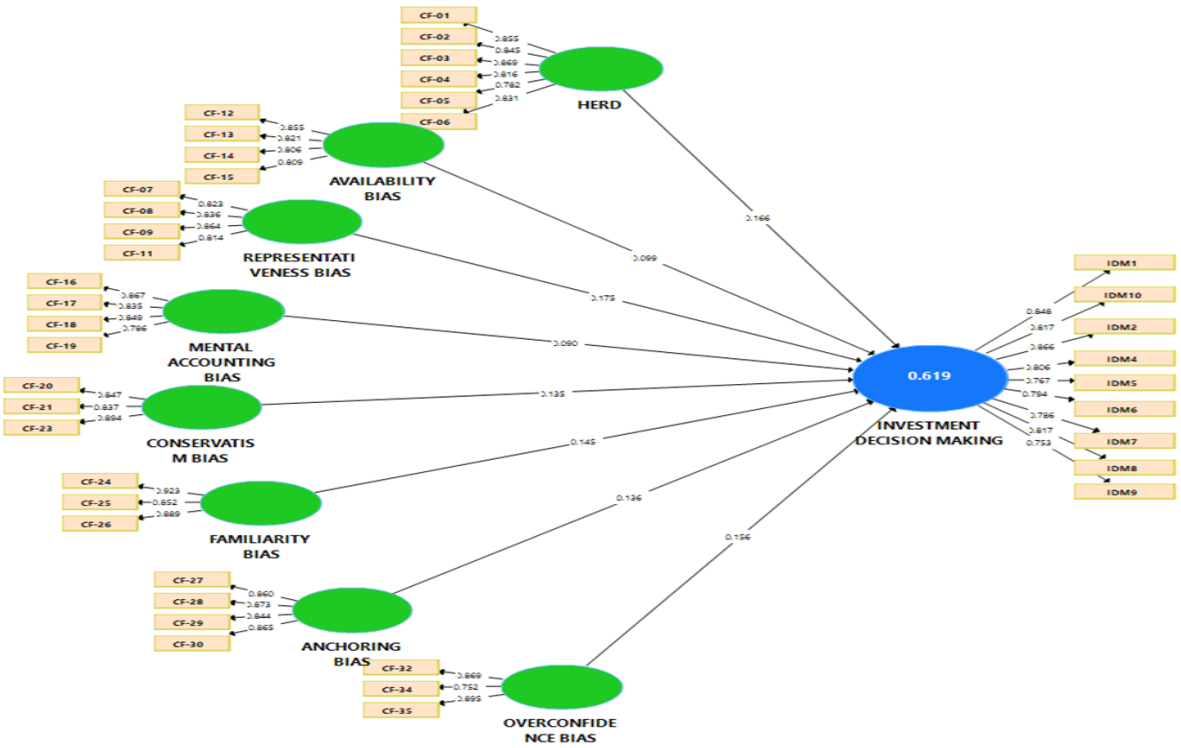
| Sl. No. | Hypothesis | Beta | SD | T Statistics | P Values | Results |
|---|---|---|---|---|---|---|
| **1** | Herd -> Investment Decision Making | 0.166 | 0.030 | 5.472 | 0.000* | *Supported* |
| **2** | Availability Bias -> Investment Decision Making | 0.099 | 0.031 | 3.251 | 0.000* | *Supported* |
| **3** | Representativeness Bias -> Investment Decision Making | 0.176 | 0.041 | 4.286 | 0.000* | *Supported* |
| **4** | Mental Accounting Bias -> Investment Decision Making | 0.090 | 0.040 | 2.232 | 0.026 | *Supported* |
| **5** | Conservatism Bias -> Investment Decision Making | 0.135 | 0.029 | 4.605 | 0.000* | *Supported* |
| **6** | Familiarity Bias -> Investment Decision Making | 0.145 | 0.037 | 3.930 | 0.000* | *Supported* |
| **7** | Anchoring Bias -> Investment Decision Making | 0.136 | 0.035 | 3.882 | 0.000* | *Supported* |
| **8** | Overconfidence Bias -> Investment Decision Making | 0.156 | 0.025 | 6.273 | 0.000* | *Supported* |

***Source:*** *Author Calculation*

***Note***: P value= Probability value, SD= Standard Deviation, * Relationships are significant at P<0.001.

**Diagram 04**

**Lower-Order Structural Model for Cognitive Factor**



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The Diagram 04 shows Lower-Order Structural Model for Cognitive Factor. Result shows the impact of Herd, Availability, Representativeness, Mental accounting, Conservatism, Familiarity, Anchoring and Overconfidence bias on Mutual fund investment decision making of investors.

**Table 1.4**

**Summary of Hypothesis Testing Results**

| Hypotheses Description | | Remark |
|---|---|---|
| $H_{01a}$: | *"There is a significant impact of Herd bias on mutual fund investment decision making"* | *Accepted* |
| $H_{01b}$: | *"There is a significant impact of Availability bias on mutual fund investment decision making"* | *Accepted* |
| $H_{01c}$: | *"There is a significant impact of Representativeness bias on mutual fund investment decision making"* | *Accepted* |
| $H_{01d}$: | *"There is a significant impact of Mental accounting bias on mutual fund investment decision making"* | *Accepted* |
| $H_{01e}$: | *"There is a significant impact of Conservatism bias on mutual fund investment decision making"* | *Accepted* |
| $H_{01f}$: | *"There is a significant impact of Familiarity bias on mutual fund investment decision making"* | *Accepted* |
| $H_{01g}$: | *"There is a significant impact of Anchor bias on mutual fund investment decision making"* | *Accepted* |
| $H_{01h}$: | *"There is a significant impact of Overconfidence bias on mutual fund investment decision making"* | *Accepted* |

The table 1.4 shows the remarks for cognitive factors hypothesis. The results of the path model support the ***H01a*** hypothesis, indicating that herd bias significantly impacts mutual fund investment decision-making with (B=0.166, T=5.472, P<0.001). Hence, null hypothesis is rejected and alternate hypothesis ***H01a*** is accepted.

The ***H01b*** hypothesis assesses the impact of availability bias on mutual fund investment decision making. The results of the path model with (B=0.099, T=3.251, P<0.001) indicate that availability bias significantly impacts mutual fund investment decision-making. Hence, the null hypothesis is rejected, and the alternate hypothesis ***H01b*** is accepted.

The ***H01c*** hypothesis indicates the significance of representativeness bias on mutual fund investment decision-making. The results of the path model with (B=0.176, T=4.286, P<0.001) indicate a strong impact on mutual fund investment decision-making. Hence, the null hypothesis is rejected, and the alternate hypothesis ***H01c*** is accepted.

The results of the path model support ***H01d*** hypothesis with (B=0.090, T=2.232, P=0.026), specifying the significant impact of mental accounting bias on mutual fund investment decision-making. Hence, null hypothesis is rejected and alternate hypothesis ***H01d*** is accepted.

***H01e*** hypothesis evaluate the impact of Conservatism bias on mutual fund investment decision making. the results of path model with (B=0.135, T=4.605, P<0.001) illustrating Conservatism bias significantly impact the mutual fund investment decision-making. Hence, null hypothesis is rejected and alternate hypothesis ***H01e*** is accepted.

The results of the path model support the ***H01f*** hypothesis, indicating that familiarity bias significantly impacts mutual fund investment decision-making with (B=0.145, T=3.930, P<0.001). Hence, the null hypothesis is rejected, and the alternate hypothesis ***H01f*** is accepted.

The ***H01g*** hypothesis evaluates the magnitude of anchor bias on the predictor variable. The results

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(B=0.136, T=3.882, P<0.001) illustrate that anchor bias significantly impacts mutual fund investment decision-making. Hence, the null hypothesis is rejected, and the alternate hypothesis ***H01g*** is accepted.

The results of the path model support the ***H01h*** hypothesis, indicating that Overconfidence bias significantly impacts mutual fund investment decision-making with (B=0.156, T=6.273, P<0.001). Hence, null hypothesis is rejected and alternate hypothesis ***H01h*** is accepted.

Overall, the results strongly support all the hypotheses, namely that herd, availability, representativeness, conservatism, familiarity, anchor, and overconfidence biases significantly influence "Investment Decision Making," with statistical significance at the 0.001 level. Meanwhile, mental accounting is statistically significant at the 0.05 level.

**Table: 1.5**

**Hypothesis Testing and Results of the Second-Order Structural Model for Cognitive Factor**

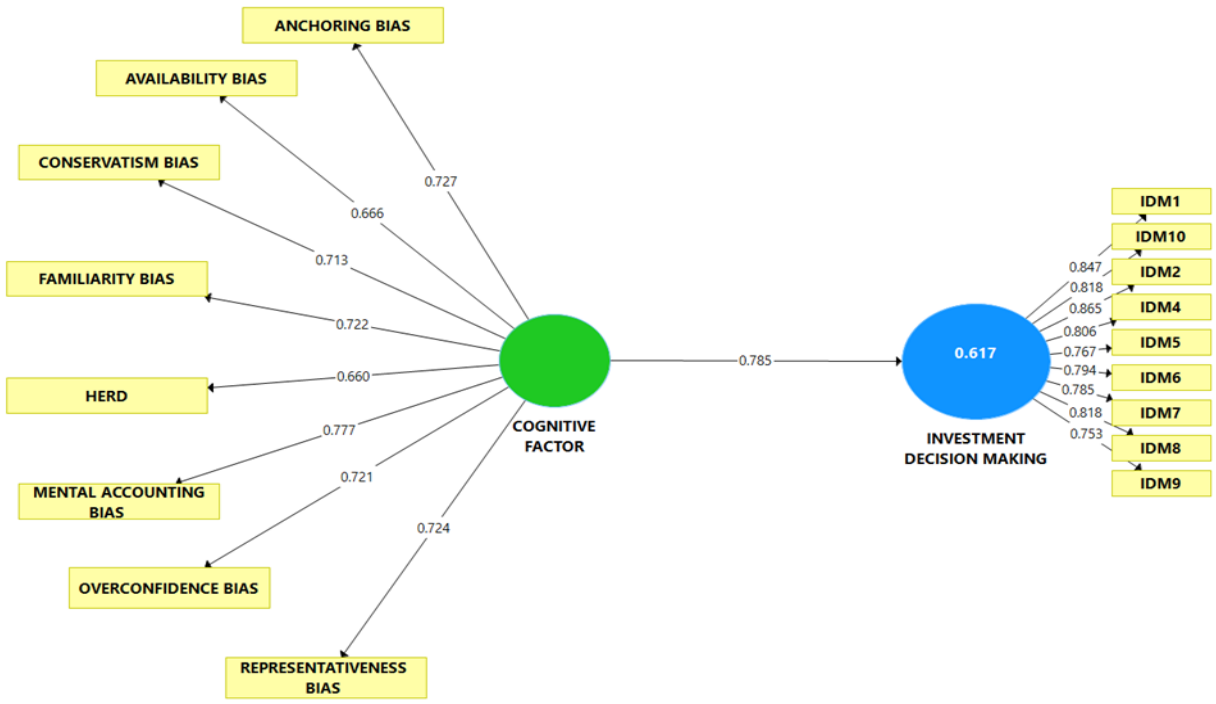
| Sl. No. | Hypothesis | Beta | SD | T Statistics | P Values | Results |
|---|---|---|---|---|---|---|
| **1** | Cognitive factor-> Investment Decision Making | 0.785 | 0.014 | 54.849 | 0.000* | *Supported* |

***Source:*** *Author Calculation*

***Note***: P value= Probability value, SD= Standard Deviation, * Relationships are significant at P<0.001.

**Diagram 05**

**Second-Order Structural Model for Cognitive Factor**




The Diagram 05 shows Second-Order Structural Model for Cognitive Factor. The structural model shows the impact of a higher-order predictor variable (cognitive factor) derived from eight lower-

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order constructs, namely herd, availability, representativeness, mental accounting, conservatism, familiarity, anchoring, and overconfidence biases, on mutual fund investment decision-making by investors.

**Table 1.6**
**Summary of Hypothesis Testing Results**

| Hypothesis Description | | Remark |
|---|---|---|
| *Hypothesis 01:* | *"There is a significant impact of Cognitive factors on mutual fund investment decision"* | *Accepted* |

The ***H01*** hypothesis indicates the significance of cognitive factor on mutual fund investment decision-making. The results of the path model with (B=0.785, T=54.849, P<0.001) indicate a strong impact on mutual fund investment decision-making. Hence, the null hypothesis is rejected, and the alternate hypothesis ***H01*** is accepted.

**Table 1.7**

**R- square and Adjusted R- square values**

| Particular | R Square | R Square Adjusted |
|---|---|---|
| Investment Decision Making | 0.6167 | 0.6160 |

***Source:*** *Author Calculation*
***Note:*** *Predictor (Constant): - Cognitive factor*

Table 1.7 shows that 61.67% variation in mutual fund investment decision-making can be explained by the cognitive factor (R-squared = 0.6167). The close adjusted R-squared (0.6160) suggests the model's accuracy remains stable, indicating moderate predictive accuracy *(Peng & Lai, 2012)*.

**Table 1.8**

**Predictive relevance $Q^2$**

| Endogenous Construct | Q-Squared |
|---|---|
| Investment Decision Making | 0.396 |

***Source:*** *Author Calculation*

Predictive relevance of the model was conducted using the Stone-Geisser Q-Squared criterion. A Q-Squared value greater than 0.02 indicates small predictive relevance, greater than 0.15 indicates medium predictive relevance, and greater than 0.35 indicates strong predictive relevance. Hence, as shown in Table 1.8, the Q-Squared value for the endogenous construct, i.e., mutual fund investment decision-making, is 0.396, indicating the strong predictive validity of the model.

***Segment-E***

***E1-*** **Findings**

Study reveal that all cognitive biases significantly influence mutual fund investment decisions. Herd bias shows a notable effect, with a 1-unit increase in herd behavior results in a 0.166-unit rise in poor investment choices. Similarly, availability bias significantly impacts decisions, with a 1-unit increase leading to a 0.099-unit increase in irrational investments. Representativeness bias also has a

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substantial impact, through a 0.176-unit increase in suboptimal decisions with 1-unit increase representativeness. Mental accounting bias affects decisions by leading to a 0.090-unit rise in poor choices for each unit increase. Conservatism bias significantly impacts investment decisions, with a 1 percent change in conservatism bias leading to a 0.135 percent increase in irrational investment decisions. Familiarity bias demonstrates a strong effect, where a 1-unit increase in familiarity bias results in a 0.145-unit rise in irrational or sub optimal investment decisions. Anchor bias also had a significant influence, effecting a 0.136-unit increase in suboptimal decisions per unit change. Lastly, Overconfidence bias has a similarly impact, leading to a 0.156-unit increase in irrational investment decisions for each unit increase in overconfidence bias.

The second-order structural analysis with (B=0.785, T=54.849, P<0.001) demonstrate that cognitive factors significantly influence investment decisions. The R-squared value of 0.616 indicates that 61.67% of the variation in investment decision-making can be explained by these cognitive factors. This implies that cognitive factors, including herd behavior, availability bias, representativeness, mental accounting, conservatism, familiarity, anchoring, and overconfidence bias, account for 61.67% of the changes in irrational or suboptimal mutual fund investment decisions. Hence, the study conclusively shows that these cognitive biases play a critical role in shaping investment decisions.

### ***E2-*** Suggestions

In order to make an optimal investment decision, investors should improve their financial and investment knowledge. They should choose mutual funds based on some fundamental research's, including factors like past performance, fund manager expertise, compound annual growth rate (CAGR), investment patterns of the schemes, Sharpe ratio, and benchmark comparisons, rather than following market trends or crowds. Diversifying investments across various mutual fund schemes will help in minimize risk. Investors should avoid relying on opinions from social media or forums, as these can lead sub optimal investment choices. Instead, they should focus on long-term financial goals, make data-driven decisions, and stay aware of common behavioral biases like herd mentality and availability bias. Investor should take professional financial advice or automated tools like robo advisory service to get an objective guidance, that helps investors make rational and informed choices while reducing the influence of cognitive or psychological factors.

### ***E3-*** Conclusion

The study highlights the significant role of cognitive biases in shaping investment decisions, particularly in the context of mutual fund investments. Traditional financial theories like the Efficient Market Hypothesis, Modern Portfolio Theory, and CAPM assume that investor is rational, but in real-world investors deviates from rational behaviour due to emotional and psychological factors. The findings reveal that biases such as herd behavior, availability, representativeness, mental accounting, conservatism, familiarity, anchoring, and overconfidence significantly influence irrational or suboptimal investment decisions. Specifically, herd behaviour, representativeness, and overconfidence bias are considered as major contributors to suboptimal investment choices. Collectively, these cognitive factors explain 61.67% of the variance in investment decisions, indicating the significant impact. Behavioral finance, as an alternative to traditional theories, highlights the limitations of rational assumptions and explores how psychological factors shape market behavior. To minimize these biases and enhance decision-making, investors should focus on increasing their financial literacy, base decisions on fundamental research, diversify investments, and avoid reliance on market trends or social media information. In conclusion, findings emphasize the need for a balanced approach that combines behavioral insights with sound financial practices to make more informed and optimal investment decisions, particularly in emerging markets like India.

### References

1. Adil, M., Singh, Y., & Ansari, M. S. (2021). How financial literacy moderate the association between behaviour biases and

investment decision? AJAR (Asian Journal of Accounting Research), 7(1), 17–30. https://doi.org/10.1108/ajar-09-2020-0086
2. Almansour, B. Y., & Arabyat, Y. A. (2017). Investment Decision Making Among Gulf Investors: Behavioural Finance Perspective. International Journal of Management Studies, 24.https://doi.org/10.32890/ijms.24.1.2017.10476
3. Aria, M. & Cuccurullo, C. (2017) bibliometrix: An R-tool for comprehensive science mapping analysis, Journal of Informetrics, 11(4), pp 959-975, Elsevier.
4. Asaad, C. T. (2012). Experimental finance: a cross-disciplinary exploration linking expectations and behaviours. International Journal of Behavioural Accounting and Finance, 3(3/4), 244. https://doi.org/10.1504/ijbaf.2012.052189
5. Baker, H. K., Kumar, S., Goyal, N., & Gaur, V. (2018). How financial literacy and demographic variables relate to behavioral biases. Managerial Finance, 45(1), 124–146. https://doi.org/10.1108/mf-01-2018-0003
6. Bikas, E., Jurevičienė, D., Dubinskas, P., & Novickytė, L. (2013). Behavioural Finance: the emergence and development Trends. Procedia - Social and Behavioral Sciences, 82, 870–876. https://doi.org/10.1016/j.sbspro.2013.06.363
7. Chandra A. (2008) Decision-Making in The Stock Market: Incorporating Psychology with Finance. National Conference on Forecasting Financial Markets of India. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1501721
8. Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. Journal of Business Research, 133, 285–296. https://doi.org/10.1016/j.jbusres.2021.04.070
9. Ghmari, O. E., Ghmari, I. E., Trid, S., & M'hamdi, M. (2024). Impact Of Behavioural Finance On Risk Perception, Psychological Behaviour, And Financial Decisions Of Moroccan Investors. Financial and Credit Activity Problems of Theory and Practice, 5(58), 244–263. https://doi.org/10.55643/fcaptp.5.58.2024.4451
10. Hair, J. F., Black, W. C., Babin, B. J. et al. (2010). Multivariate Data Analysis (7th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.
11. Hassan, N. C., Abdul-Rahman, A., Amin, S. I. M., & Hamid, S. N. A. (2023). Investment Intention and Decision Making: A systematic literature review and future research agenda. Sustainability, 15(5), 3949. https://doi.org/10.3390/su15053949
12. https://www.vosviewer.com/
13. Kahneman, D. (2003). Maps of Bounded Rationality: Psychology for Behavioral Economics. American Economic Review, 93(5), 1449–1475. https://doi.org/10.1257/000282803322655392
14. Kashi, A., & Shah, M. E. (2023). Bibliometric Review on Sustainable Finance. Sustainability, 15(9), 7119. https://doi.org/10.3390/su15097119
15. Khan, S. K., Hassan, N. U., & Islam, J. (2023). Unlocking The Investment Puzzle: The Influence of Behavioral Biases & Moderating Role Of Financial Literacy. Journal of Social Research Development, 4(2), 433–444. https://doi.org/10.53664/jsrd/04-02-2023-17-433-444
16. Kiruthika, R., & S. Ramya. (2023). Cognitive bias factors influencing investors investment decision in behavioural finance perception. Journal of Research Administration, 5 ISSN: 1539-1590(2).
17. Kraus, S., Breier, M., Lim, W. M., Dabić, M., Kumar, S., Kanbach, D. K., Mukherjee, D., Corvello, V., Chousa, J. P., Liguori, E. W., Marqués, D. P., Schiavone, F., Ferraris, A., Fernandes, C., & Ferreira, J. (2022). Literature reviews as independent studies: guidelines for academic practice. Review of Managerial Science, 16(8), 2577–2595. https://doi.org/10.1007/s11846-022-00588-8
18. Krishnamurti, C. (2009). Behavioral finance and investment strategy. In Springer eBooks (pp. 627–634). https://doi.org/10.1007/978-3-540-88802-4_28

19. Kumar, S., & Goyal, N. (2015). Behavioural biases in investment decision making – a systematic literature review. Qualitative Research in Financial Markets, 7(1), 88–108. https://doi.org/10.1108/qrfm-07-2014-0022
20. Mahmood, Z., Kouser, R., Shafqat Abbas, S., & Irum Saba. (2016). The effect of hueristics, prospect and herding factors on investment performance. Pakistan Journal of Social Sciences, Vol. 36(No. 1), 475–484.
21. Markowitz, H.M. (1952), "Portfolio selection", Journal of Finance, Vol. 7, pp. 77-91, https://www.math.hkust.edu.hk/~maykwok/courses/ma362/07F/markowitz_JF.pdf.
22. Metawa, N., Hassan, M. K., Metawa, S., & Safa, M. F. (2018). Impact of behavioral factors on investors' financial decisions: case of the Egyptian stock market. International Journal of Islamic and Middle Eastern Finance and Management, 12(1), 30–55. https://doi.org/10.1108/imefm-12-2017-0333
23. Nepal, R., Rajopadhyay, P., Rajopadhyay, U., & Bhattarai, U. (2023). Interplay of investor cognition, financial literacy, and neuroplasticity in investment Decision making: A study of Nepalese Investors. Journal of Business and Social Sciences Research, 8(2), 51–76. https://doi.org/10.3126/jbssr.v8i2.62133
24. Ogunlusi, O. E., & Obademi, O. (2019). The impact of behavioural finance on investment decision-making: a study of selected investment banks in Nigeria. Global Business Review, 22(6), 1345–1361. https://doi.org/10.1177/0972150919851388
25. Okoth Otieno, W., & Ndunge Kioko, E. (2023). Factors Affecting Mutual Funds Investment Decisions Making In Kenya. A Case Study of Cba Capital in Kenya. European Academic Journal, 2(1), 01–12. https://eaj.ebujournals.lu/index.php/JIDS/article/view/20
26. Owusu, S. P., & Laryea, E. (2022). The impact of anchoring bias on investment decision-making: evidence from Ghana. Review of Behavioral Finance, 15(5), 729–749. https://doi.org/10.1108/rbf-09-2020-0223
27. Peng, D. X., & Lai, F. (2012). Using partial least squares in operations management research: A practical guideline and summary of past research. Journal of Operations Management, 30(6), 467–480. https://doi.org/10.1016/j.jom.2012.06.002
28. Sadi, R., Asl, H. G., Rostami, M., Arian, G., & Gholipour, F. (2011). Behavioral Finance: The explanation of investors' personality and perceptual biases effects on financial decisions. International Journal of Economics and Finance, 3(5). https://doi.org/10.5539/ijef.v3n5p234
29. Scott, S. G., & Bruce, R. A. (1995). Decision-Making style: the development and assessment of a new measure. Educational and Psychological Measurement, 55(5), 818–831. https://doi.org/10.1177/0013164495055005017
30. Sharanraj, & Channappa Chatni, S. (2023). Role Of Behavioural Finance On Investment Decision: A Bibliometric Study. The Seybold Report, 18(12), 1483–1498. https://doi.org/10.5281/zenodo.10438724
31. 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. https://doi.org/10.2307/2327802
32. Waweru, N. M., Munyoki, E., & Uliana, E. (2008). The effects of behavioural factors in investment decision-making: a survey of institutional investors operating at the Nairobi Stock Exchange. International Journal of Business and Emerging Markets, 1(1), 24. https://doi.org/10.1504/ijbem.2008.019243.