IMPACT OF HEURISTIC DRIVEN AVAILABILITY BIAS ON INVESTMENT DECISION MAKING IN INDIAN STOCK MARKET: AN EMPIRICAL STUDY

Umar Sadeeq [1*], Khursheed A Butt[2]

[1]Senior Research Fellow, Department of Commerce, University of Kashmir
[2]Professor, Department of Commerce, University of Kashmir

*Author for Correspondence

ABSTRACT   DOI No: 10.36713/epra16692   Article DOI: https://doi.org/10.36713/epra16692

This study aims to investigate the impact of heuristic driven availability bias as a predictor of investment decision making. For this study, data was collected from investors in Delhi-NCR region in India. The findings offer empirical evidence supporting the hypothesis that availability bias has a positive relation with investment decision making, such that investors suffering from this bias are making irrational investment decision making. The finding is consistent with heuristic and biases theory, suggesting that investors are not rational being as assumed by standard finance, but have limit to their rationality and suffer from many heuristic and biases, which impact their investment decision making. The study contributes to the current body of literature on heuristic driven biases and their impact on investment decision making.
KEYWORDS: *Heuristic, Availability Bias, Investment Decision Making, Stock Market*

INTRODUCTION

Modern Portfolio Theory (MPT), the Capital Asset Pricing Model (CAPM), and the Efficient Market Hypothesis (EMH) form the foundation of Standard Finance, also known as Rational Finance (Fama, 1965). These theories are built on the premise of investor rationality, where decisions are made by impartially processing all available information to maximize utility. However, empirical evidence has revealed various market anomalies that challenge these theories, such as the winner-loser effect, momentum effect, and equity premium puzzle (Debondt and Thaler, 1985; Jegadeesh and Titman, 1993; Mehra and Prescott, 1985). Behavioral finance challenges the assumption of investor rationality and seeks to explain these anomalies by considering psychological and behavioral biases, fundamental heuristics, and bounded rationality that influence decision-making (Tversky and Kahneman, 1974; Simon, 1957). Investors often act irrationally by trading excessively, neglecting fundamental values, and following herd behavior, leading to market inefficiencies (Shah et al., 2018; Shefrin, 2007). Behavioral finance utilizes psychological insights to explain these irrational behaviors, offering an alternative perspective to traditional finance theories. Therefore, it can be characterized as a branch of finance that explains stock market anomalies through documented behavioral biases, rather than dismissing them as chance outcomes compatible with the efficient market theory (Fama, 1998). The bias that we are looking into this study is heuristic driven availability bias and its impact on investment decision making of stock market investors in India.

Heuristic Driven Availability Bias

Heuristics serve as mental shortcuts aiding in problem-solving and decision-making amidst ambiguity and uncertainty. Described by Tversky and Kahneman (1974) as "strategies individuals rely on to simplify the complex process of evaluating probability and forecasting values," heuristics are techniques that overlook certain information to expedite, economize, or improve judgment accuracy compared to more elaborate methods (Gigerenzer and Gaissmaier, 2011). Acting as "rules of thumb," heuristics help streamline decision-making in intricate and uncertain situations. While they often enhance efficiency, they can also lead to significant and systematic errors, as noted by Kahneman and Tversky (1974), prompting individuals to act irrationally.

Availability heuristics refer to the tendency to make judgments based on easily accessible information or the ease of recalling an event (Kahneman and Tversky, 1974). This bias leads individuals to place greater importance on readily available information, as described by Pompian (2011). For example, investors may favor domestic equities over foreign ones because researching domestic firms is more convenient. Availability bias causes people to assess the likelihood of an event based on how easily it comes to mind. Investors using this heuristic may focus only on stocks that have recently garnered attention, such as those in the news or experiencing significant trading volume or price fluctuations (Baber and Odean, 2008).

Investment Decision Making

Investment decision-making encompasses a spectrum of approaches, ranging from rational to irrational behavior. In rational decision-making, investors carefully analyze available information, weigh risks and returns, and make decisions based on logical and objective criteria. They follow established financial theories and models, such as Modern Portfolio Theory and the Capital Asset Pricing Model, to construct diversified portfolios and optimize risk-adjusted returns. Rational investors aim to maximize utility and achieve long-term financial goals through disciplined and systematic investment strategies. However, alongside rational decision-making, there exists a realm of irrational behavior influenced by psychological biases and heuristics. Irrational investors may exhibit behaviors such as herd mentality, emotional decision-making, or overreliance on readily available information, leading to suboptimal investment choices and market inefficiencies. Behavioral biases, such as availability heuristic or loss aversion, can distort perceptions of risk and return, resulting in impulsive or biased decision-making. Ultimately, investment decision-making involves a complex interplay between rational analysis and emotional responses, highlighting the importance of understanding both rational and irrational factors in navigating financial markets.

AVAILABILITY BIAS AND INVESTMENT DECISION MAKING

According to Ravi and Harris (2005), investors' preferences are influenced by the availability of new information, leading them to consider even seemingly unrelated data in their decisions. Grable et al. (2004) found that investors' risk-taking behavior and stock choices are affected by newly accessible information, increasing the likelihood of irrational decision-making. Bowers (2014) showed that investors' desire to beat the market prompts them to react quickly to available information, often relying on mental shortcuts like the availability heuristic, resulting in illogical conclusions and influencing investment decisions. Ganzach (2000) highlighted the impact of heuristics on investor choices, where stocks with strong profits may be perceived as less risky and those with poor earnings as very risky, leading to suboptimal decisions. Barber and Odean (2000) discovered that investors often base their investment decisions on advertisements rather than thorough research, posing increased risk during market downturns, as noted by Goodman and Marcus (1991). Kudryavtsev et al. (2013) observed that the availability heuristic pushes investors towards extremes in decision-making, while Moradian et al. (2013) found that it significantly influences poor investment choices in the Tehran stock exchange. Weber (2010) emphasized the detrimental impact of availability bias on investment decisions, leading investors to rely on irrelevant information. These findings align with the works of Steen (2002), Massa et al. (2005), and Waweru et al. (2008), indicating the pervasive influence of availability bias on risk attitudes and investment choices. Based on the above literature review, it is hypothesized that:

H1: Heuristic driven availability bias is positively related to investment decision making, such that more the bias more the irrationality in decision making.

METHODOLOGY

Sample and Data Collection

In our study, we distributed 300 hundred questionnaires among the retail investors in Delhi-NCR region. The convenience sampling technique was employed to select the respondents, as it gives the highest rate of response Rasheed et al., (2018). It also saves time and resources (Bryman & Bell, 2015), and in the given circumstances and constraints of our study, this sampling technique is best suited due to the unknown population. Out of the 300 questionnairs distributed, 263 were returned, of which 218 were considered for the final analysis; remaining 45 discarded due to incomplete responses.

Measures

The scale employed for availability bias consists of five items, first, second and third items are taken from Baker 2013, forth items is taken from Ha 2011, and last item is taken from Menkhoff 2006. Investment decision making was measured by using five items from Scott and Bruce (1995), from which we only incorporated intuitiveness in our questionnaire as a proxy for the degree of irrational behavior in decision making. Response were collected on 5-point likert scale ranging from 1('strongly agree') to 5('strongly agree')

Results

The partial least squares-structural equation modeling (PLS-SEM) method, as outlined by sarstedt et al. (2020), was employed for analyzing the measurement and structural models. PLS-SEM, chosen for its flexibility with non-normally distributed datasets and suitability for small sample sizes (Hair et al., 2017), involves a two-stage approach: assessment of the measurement model and assessment of the structural model.

Assessment of the Measurement model

In the evaluation of the measurement model in Partial Least Squares Structural Equation Modeling (PLS-SEM), researchers assess the reliability and validity of the measurement indicators. According to Hair et al. (2017), the measurement model is evaluated by examining the outer loadings, which represent the strength of the relationships between the indicators and their respective constructs. Higher loadings indicate better measurement accuracy. Additionally, researchers assess the composite reliability and Cronbach's alpha to ensure the reliability of the constructs. Construct validity is examined through convergent validity, which ensures that the indicators adequately measure their constructs, and discriminant validity, which assesses whether the constructs are distinct from one another. The evaluation of the measurement model in PLS-SEM is crucial for ensuring the accuracy and validity of the research findings.

Reliability and Convergent Validity

The table outlines two constructs, Availability Bias and Investment Decision Making (IDM), along with their indicators, reliability, and convergent validity measures. All factor loadings for both constructs exceed the threshold of 0.70, indicating strong relationships. Reliability measures, including Cronbach's Alpha and Composite Reliability, surpass the recommended threshold of 0.70, ensuring internal consistency. Additionally, convergent validity, assessed through Average Variance Extracted (AVE), meets the minimum requirement of 0.50. Overall, the measurement model demonstrates robust reliability and convergent validity for both constructs.

Constructs	Indicators	Reliability		Convergent validity		
		FL	ALPHA	CR	AVE	VIF
AVAILABILITY BIAS	AH_1	.843	.889	.893	.676	3.246
	AH_2	.798				2.197
	AH_3	.819				2.667
	AH_4	.815				3.689
	AH_5	.766				4.798
IDM	IDM_1	.798	.866	.891	.689	3.656
	IDM_2	.843				2.476
	IDM_3	.775				3.981
	IDM_4	.897				4.779
	IDM_5	.877				1.689

Discriminant Validity

The table presents the Heterotrait-Monotrait (HTMT) ratio, a widely used method to evaluate discriminant validity between constructs. In this case, the ratio between Availability Bias and Investment Decision Making (IDM) is calculated as 0.657. The HTMT ratio serves as a measure to determine whether the constructs are distinct from each other, with a lower ratio indicating greater discriminant validity. A value below 1 is generally considered acceptable, suggesting that the constructs are sufficiently different from each other. In this context, the obtained ratio of 0.657 indicates a satisfactory level of discriminant validity between

Availability Bias and IDM, affirming that they measure distinct aspects of the phenomenon under study.

	Availability bias	IDM
Availability bias		
IDM	.657	

ASSESSMENT OF STRUCTURAL MODEL

Assessment of the structural model involves evaluating the relationships between constructs, ensuring statistical significance of path coefficients, assessing goodness-of-fit measures, considering model modifications, and exploring mediation and moderation effects.

HYPOTHESIS TESTING

The coefficients from the structural model reveal important insights into the relationship between the variables. Specifically, the standardized coefficient (Beta) of 0.703 for the independent variable "AH" (Availability Bias) indicates a strong and positive association with the dependent variable "IDM" (Investment Decision Making). This suggests that higher levels of Availability Bias are associated with more pronounced tendencies towards certain Investment Decision Making behaviors. The statistically significant t-value (14.516) and p-value (<0.001) further confirm the strength and significance of this relationship. Thus our hypothesis H1is accepted.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	AH	.895	.062	.703	14.516	.000
a. Dependent Variable: IDM						
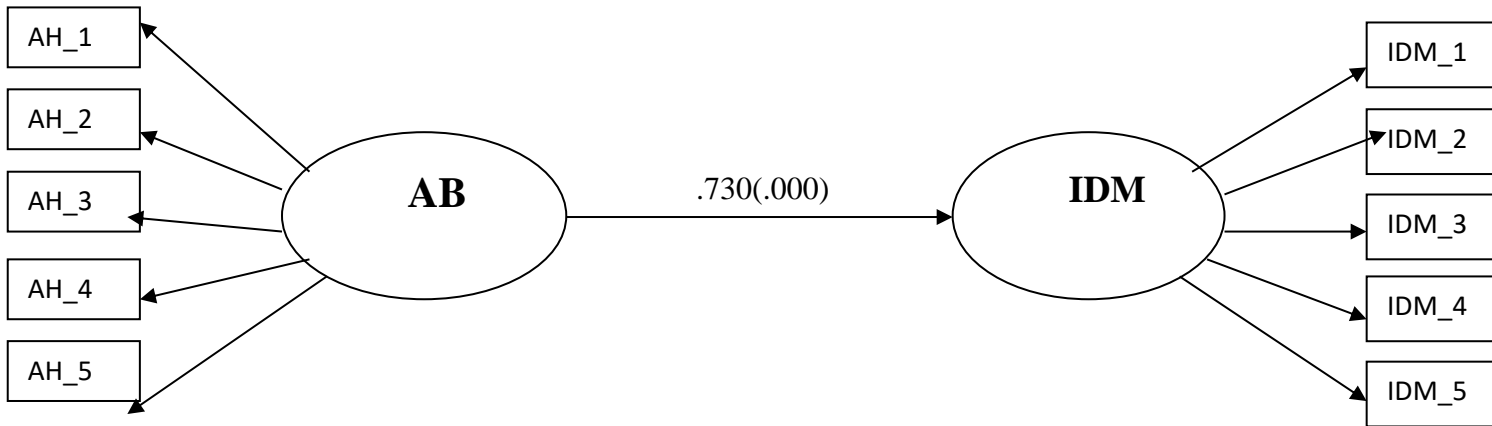
DISCUSSION

The findings of our study reveal a significant impact of heuristic-driven availability bias on investment decision making, indicating that investors with higher levels of this bias tend to make more irrational investment decisions. These results align with established theoretical literature, such as the seminal work of Tversky and Kahneman (1974), as well as empirical studies by Waweru et al. (2008), Shah et al. (2018), Kudryavtsev et al. (2013), Khan et al. (2021), and Nouri et al. (2017). It is evident that heuristic-driven bias is particularly prevalent among individuals with limited knowledge of the stock market and inexperienced investors. This study not only contributes to a deeper understanding of the impact of heuristic-driven availability bias on investment decision making among retail investors but also enriches the existing literature in this field. By shedding light on the factors influencing investors' decision-making processes, our study provides valuable insights for both academics and practitioners in the finance domain.

The study's practical implications suggest that investors, financial advisors, and policymakers can benefit from understanding the significant impact of Availability Bias on Investment Decision Making. Investors can enhance decision-making processes by recognizing biases and adopting strategies to mitigate their influence, while financial advisors can tailor recommendations to align with clients' goals. Financial institutions can develop

educational programs to help investors overcome bias. In terms of literature implications, the study contributes to behavioral finance literature by providing empirical evidence of the relationship between Availability Bias and Investment Decision Making. Future research could explore additional factors influencing investor behavior and longitudinal studies to examine long-term effects. Comparative studies across demographic groups and cultural contexts could further elucidate how biases manifest differently. Continued research in this area can advance understanding of investor behavior and contribute to strategies promoting financial well-being.

LIMITATIONS

The study's findings may be constrained by the sample's characteristics, warranting replication with a more diverse and representative sample for enhanced generalizability. Additionally, the cross-sectional design precludes establishing causality between Availability Bias and Investment Decision Making, highlighting the need for longitudinal or experimental designs. Moreover, reliance on self-reported measures introduces potential measurement biases, suggesting the importance of utilizing objective measures in future research.

FUTURE RESEARCH DIRECTIONS

Exploring moderating factors such as investor experience and personality traits could deepen our understanding of the relationship between Availability Bias and Investment Decision Making. Longitudinal studies tracking biases over time would offer insights into their temporal dynamics, while testing intervention strategies could help identify effective methods for mitigating bias in decision-making processes.

CONCLUSION

In conclusion, this study has provided valuable insights into the relationship between Availability Bias and Investment Decision Making. The findings suggest that Availability Bias significantly influences investors' decision-making processes, highlighting the importance of understanding and mitigating cognitive biases in financial decision-making. Practical implications include empowering investors to adopt strategies to counteract bias and assisting financial advisors in tailoring recommendations to better align with clients' goals. Furthermore, the study contributes to the behavioral finance literature by providing empirical evidence of this relationship, laying the groundwork for future research to explore moderating factors and intervention strategies. However, limitations such as sample characteristics and the cross-sectional design underscore the need for further research to validate and extend these findings. Overall, this study advances our understanding of investor behavior and provides a

foundation for promoting more informed and rational financial decision-making practices.

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