International Journal of

Management Research & Innovations

Mediation Effect Of Behavioral Marketing Cues On Investment Choices Of Retail Investors In Chennai

Dr.A.Prabu [a,*], Paul Arun Kumar J [b], Dr. Sindu Bharathi S K [c].

[a] Assistant Professor, Department of Management Studies, J.J. College of Engineering and Technology (Autonomous), Ammapettai, Tiruchirappalli –620 009, Tamil Nadu.

[b] Assistant Professor, School of Management , CMR University, City Campus, Bangalore.

[c] Assistant Professor, Department of Management Studies, M.O.P. Vaishnav College for Women (Autonomous), Chennai – 600034.

Abstract

The study discusses the mediating position of the behavioural marketing cues in determining the investment decisions of retail investors in India, and more specifically the city of Chennai, Tamil Nadu. The survey was structured and took place between January and March 2025 and was carried out on 384 retail investors who actively invest in equities, mutual funds, and systematic investment plans (SIPs). Purposive sampling was employed in selecting the respondents to make sure that they were exposed to marketing of investment and financial decision-making. The relationships between behavioural cues of the Framing Effect, Anchoring Bias, Social Proof, Scarcity and Urgency Cues, Endorsement Cues, Emotional Response, and Retail Investor Decision-Making are analysed using Structural Equation Modelling (SEM) and the IBM SPSS and AMOS. The empirical findings suggest that Framing Effect (= 0.732, $p < 0.001$) and Emotional Response (= 0.184, $p < 0.001$) has the most significant impact on the investment decision-making. The statute effect of anchoring bias and endorsement cues are statistically significant but of weaker strength, whereas the social proof and scarcity cues have no direct effect. Mediation analysis shows that scarcity and urgency cues mediate relationship between endorsement cues and investment decision fully, and partially between social proof. The implications of the findings on behavioural finance literature are based on the evidence of the role of cognitive biases, emotional responses, and marketing cues on the retail investor behaviour in emerging markets like India. The research also has practical implications to financial marketers, policymakers and the fintech platforms about how to design ethically communicated strategies and enhance investor awareness.

Keywords: *Behavioural Marketing Cues, Retail Investors, Structural Equation Modelling, Investment Decision-Making, Chennai, India.*

Correspondence to: Dr.A.Prabu, J.J. College of Engineering and Technology.

Email: aprabutnj@gmail.com

https://doi.org/10.66210/83yggg58

Received 28 February 2026; Accepted 24 March 2026. ©2026 by ARIRDC

Introduction

The financial environment of retail investors has shifted radically across the rapid financial innovation and digital disruption. Behavioral finance development has revealed the limitations of the traditional financial theory based on principles of rational thinking and limited effects of psychological and emotional influence. The digitization of retail investing is altering the way all individuals have financial markets by demonstrating that the digital platform, behavioral marketing indications (anchoring, nudging, framing, and social proof) on the investor decision making process are significant influencing variables (Dhingra and Garg, 2024). The studies of international markets tend to demonstrate that retail investors do not necessarily make rational decisions, and that they are affected by the biases, marketing signals as well as fellow investors. Recently, Jadeja and Nalwayas (2025) study indicates that behavioral marketing cues play a dominant role in the decisions of the investors and are intermediaries between the financial knowledge and the final decision. The cues influence the retail investor risk return perception that is also witnessed in the portfolio diversification, investment frequency, and response to market volatility.

At the national level, the involvement of retail investors in the Indian financial ecosystem has risen significantly in large proportion because of the increased accessibility through regulatory reforms, mobile trading and rising middle-income. Although this increase can be observed, it is equally true that there are still signs of behavioural biases like overconfidence, herd behaviour and loss aversion that are still defining the behaviour that shapes the decisions made by people in their investment decisions. Sowmya and Muralidhar (2024) argue that other factors that can mediate the effect of individuals on marketing cues and financial guidance to shape investor behaviours include gender and demographics. Financial literacy and social cues have been identified to have some research with psychological bias regarding the retail investor in India (Nag & Shah, 2022). To illustrate, in the background of Chennai, a large and highly diverse metropolitan region, current trends seem to be characterized by more retail investor involvement, namely, the younger professional or tech-savvy residential that is becoming more reliant on applications and online advisors. All this is encouraging, yet the educational barrier exists as the number of new entrants with little or no financial literacy is so high, and thus they are subject to becoming more prone to behavioural manipulation strategies used by financial service providers. As a matter of fact, several of the earlier studies such as Sahu et al. (2021) are aligned to an on-going use of psychological biases and heuristics in decision-making to cope with urban Indian investors.

The research has an aim of investigating how behavioural marketing prompts (social proof, authority, scarcity, and framing) mediate the relationship between investment behaviour of retail

investors in Chennai. The piece can add to the knowledge about how marketing will influence and enlighten the financial journey of the individual, as well as the pertinent problems of regulatory organizations, financial education, and platforms of fintech in India. The behavioral finance theories (Prospect Theory and Nudge Theory) applied in this study explore how investment behavior can fail to be rational, when faced with behavioral cues, which are Prospect Theory (Kahneman and Tversky) and Nudge Theory (Thaler and Sunstein). The work implications are that it is possible to differentiate on how to better protect investors, ethical marketing campaigns, and the general access to financial services.

Review of Literature

1. Framing Effect

The framing effect as one of the cognitive biases depicting how the options of peoples are determined by the manner of information framing have received a significant amount of research attention in recent years. Bodenberger and Thommas (2025) demonstrated in a lab experiment that people assign a much lower value to every choice when there is a level of uncertainty (with a medium to high probability of happening) when uncertainty is written using words instead of numbers. This illustrates the way in which framing can affect how a particular person judges' risk and decides. Rachev et al. (2021) recreated the disease framing issue in the context of COVID-19. As expected, the authors discovered that framing had a greater effect in the pandemic than it would have done in normal times. This implies that in case of a crisis, people are more prone to the way the options are packaged to them in the process of deciding. An article published by the publication Very well Mind by Cherry (2024) brought up further discussion on the various types of framing that are apparent in real-life scenarios, like news stories, which framed an event in a different way or how different advertisements in existence frame the same product in a different way, which involves how framing can suggest perceptions or even mental health. The Wikipedia article concerning the framing effect (read in 2025) also discusses some of the psychological foundations of framing and discusses some of the practical implications of framing effect in various fields such as health, politics, legal decision-making, etc. and how even minor variations in wording can result in enormous changes in judgment and preferences.

2. Anchoring Bias

The cognitive bias of anchoring, i.e., the human tendency to base new beliefs and choices on the initial available bit of information, remains one of the primary fields of research in the cognitive psychology and studies on decision-making. A set of experiments that Haag et al. (2024) performed proved that, regarding the decision to buy, Artificial Intelligence (AI) and Explainable Artificial Intelligence (XAI) systems can step in and affect, and, perhaps, even mitigate, the problem of

anchoring, promising to the prospect of technological solutions to intervention. Wang (2023) explained the anchoring bias as pertaining to financial decision-making and stated that the effect of anchoring bias on nature of influences when making investment decisions, pricing, and valuation processes, in addition to assessing risk and managing risk, was outlined. Judijanto (2025) explained the anchoring bias in the framework of corporate financial forecasting, and budgeting in Indonesia. The research concluded that the anchoring bias was medium and even high regarding its prevalence corporate financial forecasting and that it was moderately predictive correlation to forecasting predicting accuracy. Wengrzyn et al. (2024) studied the anchoring bias in the framework of real estate estimating biases, to be more precise, the author investigated how the effect of uninformative random values can be exerted on the price estimation of real estate. According to Wengrzyn et al. (2024), randomly assigned numbers can be used as cues and influence price estimates. Shaki and Fischer (2025) explored the nature of anchoring bias in the context of mental subtraction or addition, and discovered that the initial numbers that were given to the participants as anchors had major effects and bias on the subsequent calculations. Ungvarski (2024) cited anchoring as a cognitive bias that plays a considerable role in our decision-making as individuals as they will overvalue the initial anchor that greatly influences the next beliefs and decisions. The anchoring bias was studied by Qi (2023) in the context of economic decision-making, and the results were that first information might have significant effects on the thinking of a particular individual and can even make them decide in a maladaptive or irrational way. The report released by Cerulli Associates in 2024 spoke about the impact of the anchoring bias on the decision-making by wealthy investors, who indicated that the anchoring bias affected them around 46 percent. It has been urging the financial advisors to solve the behavioural biases when dealing with investors. Bodenberger and Thommas (2025), too, refer to the anchoring bias when explaining the situations when the uncertainty concerning the meaning of a verbal phrase interferes with decision-making, even though it is not just beyond miscommunication. Finally, the Wikipedia article on the anchoring bias (2025) also examines the bias and ends with a summary of how the bias of anchoring is evident in many spheres, such as negotiations and purchases.

3. Social Proof (Herd Behavior Cues)

The social proof, also known as herd behavior, refers to the propensity of certain individuals to act as a member of a social group of persons, especially at the time of uncertainty. The empirical studies conducted by Wang on the shopping holiday, the Double 11 (2024), revealed that some peer effects of the social proof had a significant impact on consumer decision making. As Wang (2024) noted, roommates tend to attend and spend more when they believe that other individuals will attend the event with them. According to a report by Cerulli Associates (2024), 48% of affluent

investors indicated that they have been herded by some social factor they believed is social proof, implying that social proof could be an influential factor in either decision to invest or not. The wikipedia article on social proof (2025) is full of real-world examples and real-world stimuli that imply the existence of social proof proved to have an effect in terms of influences on behavior in marketing, political science, and public health situations. In the article by Very well Mind (2024), social proof was involved regarding the mental health recovery of a person and relevant implications related to the social proof of who matters toward mental health recovery. Others have emphasized social proof and the power of the choices of people as regards to presentation because the latter is highly prejudiced by the actions and behaviours of others (Odets and Thommes 2025). The article on the framing effect (2025) described the social proof as one of the determinants of various decisions in most fields/topics and circumstances. Rachev et al. (2021) addresses that social proof is an element when considering the following decisions during COVID-19 and qualitatively observed that information given to make decisions during COVID-19 affects those decisions made at the time, in that it now meant individuals were less influenced by the content of the recommended decision than how the recommended options were framed. Ungvarsky (2024) talked about social proof at an individual level (e.g. a person who is overcoming a breakup but can hardly enumerate all the joy in the future due to their emotion at that moment). Qi (2023) also discussed the social proof as a variable in terms of economics as preliminary contextual data could derail and confuse the decision-making process, and evidence indicates that this reasoning could result in irrational actions in any decision-making process. Bodenberger and Thommas (2025) also highlight the possible importance of considering social proof to reduce bias and have a better decision-making process across the board.

4. Scarcity and Urgency Cues

Marketing techniques such as scarcity and urgency cues can give an impression of scarcity or time to arouse a faster action in the consumer. A meta-analysis study on product scarcity by Ladeira et al. (2023) that was a dual meta-analysis was also affirmed that product scarcity affects the consumer behaviors and actions. In an experimental research, Zhang et al. (2022) applied and demonstrated that scarcity stimulus encourages impulse buying behaviors and applied the Stimulus Organism Response (SOR) theory. The Wikipedia site on scarcity marketing (2025) had real life examples, of how scarcity and time affected the consumer behavior of the marketer. The article by Very well Mind (2024) explains additional ways how scarcity and urgency cues may impact mental health; thus, one should be able to perceive these cues in all situations. The article by Oberon and Thommas (2025) also incorporates the scarcity and urgency cues and gave an example on how information presentation can influence the decision made by people which might be a consequence

of scarcity or urgency. Also, the article referring to the framing effect (2025) demonstrated the ability of scarcity and urgency-related cues to influence the decision-making process in various situations and contexts. The study carried out by Rachev et al. (2021) revealed that scarcity and urgency cues influenced the way in which individuals made normal decisions during the COVID-19 pandemic; and the way in which the individuals responded differently to the situation, depending on the framing of alternatives by the time. The article by Ungvarsky (2024) expands on it and addresses the concept of both poverty and urgency cues with reference to the personal context. To give an example, an individual that has just undergone a break up cannot imagine ever being happy again due to the emotional condition he is in. A study by Qi (2023) explores the kind of scarcity and urgency signals, and their connection to economics. Their study results showed how pre-information can alter the way an individual will think about such or any other information in the future, and make a lasting decision. Lastly, at the end of their article, Bodenberger and Thommas (2025) made the conclusion that when people learn the difference between the effects of scarcity and urgency, it could enable them to make more informal and less bias decisions.

5. Endorsement Cues

The endorsement cues are based on credibility of another person or a company to influence and inspire consumer behavior. Ali et al. (2021) state that influencer marketing is important to marketers due to the influence that influencers may have on their beliefs about the credibility of a brand. Ahn and Lee (2022) have discovered that the support of relatable people can be better in influencing younger target audiences; that is why numerous endorsements are oriented to younger generations. The product becomes more attractive and trustworthy because of using user-generated content as a peer recommendation of the product (Otterbring, 2020). Davlembayeva et al. (2020) argued that, in the case where a community promotes a product, it possesses greater power over a consumer than in the case where a stranger/endorser and community do not share similar beliefs in society and, as a result, establish credibility and brand confidence to expand sales in Favor of the sponsor. The Wikipedia article on the topic of 'Endorsement marketing' (2025) has some real-life examples of the same and reveals the influence that the use of endorsements has on the spending of marketing consumer behavior. The offer of the article on Very well Mind (2024) has elaborated on how some of these endorsement cues can influence the mental health of people, which indicates that there is a necessity to deal with the endorsement cues and how these endorsement cues should be applied in various situations. Bodenberger and Thommas (2025) identified the endorsement cues as well as the role played by endorsement cues, particularly those that are made by credible sources on influencing the decision people make in the assessment of important content issues or decisions. The summary on framing effects (2025) revealed the

influence of endorsement cues and how they can also affect and inform decision-making in various fields and contexts. Rachev et al. (2021) study revealed that the endorsement cue affected the decision-making process of people at the time periods of the COVID-19, and indicated that people are more affected by how options were presented, particularly in uncertain situations. An example of how endorsement cues may be important was found in the entry by Ungvarsky (2024), which determined when one has recently parted with an individual to be the case when determining future happiness, occasional delays are a big delay just because it is being given emotion. Lastly, Qi (2023) evaluates the effects of the endorsement cues on members of the economy and admits the influence of the first impressions of information on our thinking and forming less rational decisions.

6. Emotional Response

Emotions are a significant field of research as they mediate the decision of the retail investors when making their investments. Chen et al. (2022) also carried out some significant research in form of a serial mediation model questioning the effects of emotional intelligence on decision making by means of optimism bias and risk perception. Their results indicated that retail investors of high level of emotional intelligence were more optimistic and believed that they had less risk among the decisions that resulted in a higher degree of confidence towards their investment choices. In line with this, the study by Khan et al. (2023) focused on financial self-efficacy that illustrates the mediating impacts of emotional biases on the personality trait and investment decision-making process. Their results found salient emotional reactions of regret aversion and status quo bias that transformed the way investors made decisions. The same was researched by Haider Khan professor (2020), who has found discrete emotions such as, anger and fear, with an argument that, emotions influence financial decisions by risk perceptions effects, that emotions had impacts and even increased risk-taking propensity among investors. As part of the attempt to further develop research in this field, Khan (2021) examined socio-psychological variables like stress and anxiety, and subsequently proceeded to mediate these variables by behavioural biases like overconfidence and loss aversion to affect investment behaviour. The somatic marker hypothesis supports the presence of affective influences, such as physiological change related to emotions as a cue of an internal reference to economic decisions, which are usually made prior to the use of a rational analysis as suggested by Investopedia (2023). In the literature, the activation of affective signals is known as the affect heuristic, in brief, when emotion is based on more rapid cognitive transformation in making of a judgment, particularly in a risk inducing context, like when making investment choices. The effect heuristic argues that an investor uses uncalibrated

risk and returns assessment based on how they feel at that time, as opposed to a tangible financial value estimate of risk and returns.

7. Retail Investor Decision-Making

Retail investors have a significant mediating role of influence on their investment decisions by emotions. Chen et al. (2022) created a serial mediation model, which demonstrates the influence of emotional intelligence on decision-making via the mediators of optimism bias and risk perception. In their model, high levels of emotional intelligence yielded more optimism, and reduced perceived risk, which reduced hesitance and increased confidence in making decisions. The other authors in the field who reviewed emotions as a mediating variable were Khan et al. (2023), who paid particular attention to emotional tendency and financial self-efficacy as a mediating measure, but also personality factors, in investment choices. The authors determined regret aversion and status quo bias emotional variables that transformed the decision-making behaviours of investors. Then closely related, Haider Khan (2020) directly researched discrete emotional states, anger, and fear, where studies of financial decision-making and emotional influence specifically correlated emotions with evolving results of risk perception which did find that the higher the anger the greater the change in behaviours to riskier alternatives of investing. Next, Khan (2021) expanded the spectrum of the considered constructs to socio-psychological ones, including trust and anxiety. Moreover, the author viewed a positive mindset as the biases of overconfidence and loss aversion of contrivance that were used in shaping the investment behaviours. The somatic marker hypothesis provided by Investopedia (2023) shows the significance of affective effects. It says that physical reactions to emotions can act as inner notifications that facilitate economic decisions - in most cases, without reflecting on it rather intensively. The fact that such affective signals are important is proved by the effect heuristic proposed by Wikipedia (2025) that states that judgment is a shortcut that is more probable to choose in case of one of the decisions in a risky situation such as making an investment. The effect heuristic postulates that investors can make erroneous computations of risk, and return not, necessarily, by some objective measure of risk and return, but by moods at the time. Mood tests tend to be the means through which the feelings shape up investment choices. Overall, the literature of the past indicates that there is a close connection between emotions and investment decisions since emotions are mediators that influence the way an individual will think, perceive risk, and invest or not. Behavioural finance research, and any financial adviser who intends to help the investor make better decisions should be aware of the processes of emotion and be able to explain them.

8. Research Problem

Research Problem The fast proliferation of online financial systems and financial technology has revolutionized the investment landscape of retail investors. Financial institutions have been employing marketing techniques based on behavioural concepts like framing, anchoring, social proof, scarcity messages, and endorsements to shape investor perceptions and decisions. Despite the acknowledgement on the existence of cognitive biases and emotional factors in investment behaviour by behavioural finance research, there is still scanty empirical research on the collective impact of behavioural marketing cues on the decision-making process of retail investors, especially in new financial markets. In fast emerging city financial hubs like Chennai, India, there are very many new investors entering capital markets in mobile trading systems and using online investment tools. A significant number of these investors are financially illiterate and thus can be very easily influenced by the behavioural persuasion tactics that are employed in financial marketing. As a result, the study of the behavioural processes by which marketing cues influence investment decisions has become a major research issue among scholars and policy makers.

9. Research Gap

Though, individual behavioural bias like framing effect, anchoring bias and effects of emotions have been studied individually in previous studies, the available literature has to a large extent studied the various factors individually. There have been little studies examining the interaction of multiple behavioural marketing cues in a single behavioural finance model. Moreover, the majority of empirical research in behavioural finance has been done in the developed markets, and there is little empirical research on emerging markets, specifically in India, especially when it comes to the retail investors who have been exposed to digital financial marketing. Also, research studies that explore the mediating effect of behavioural cues like scarcity and urgency signs in determining the effect of marketing influences on investor behaviour are absent. Thus, it is evident that there is a gap in research in the comprehension of the collective action of behavioural marketing cues on investment choices made by retail investors in emerging urban financial ecosystems, like Chennai.

10. Research Objectives

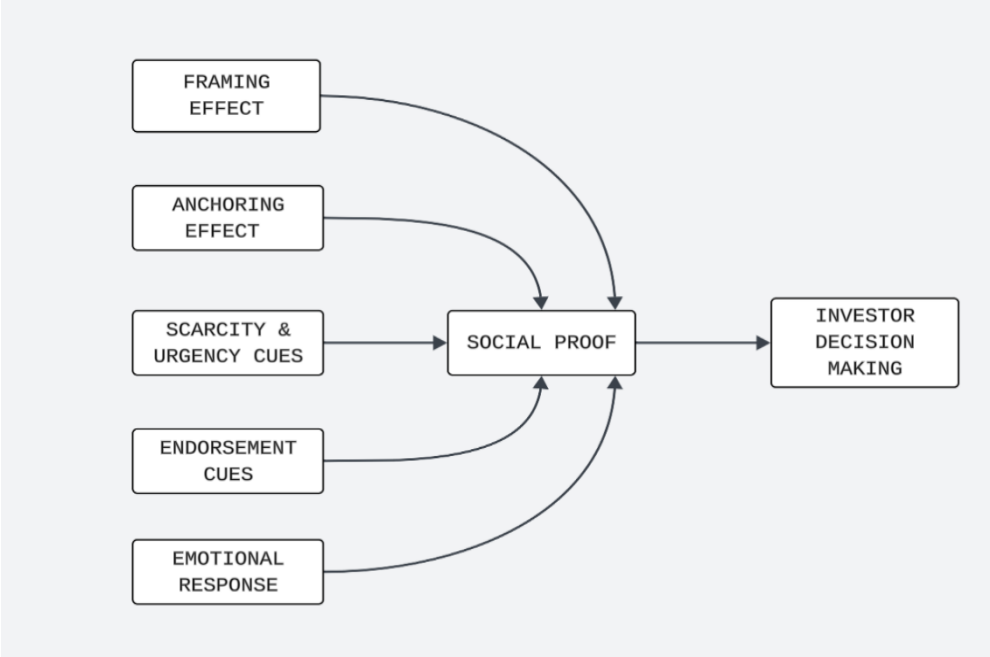
Based on the identified research gap, the study aims to achieve the following objectives:

1. To examine the demographic profile of retail investors in Chennai.
2. To analyse the relationship between behavioural marketing cues (Framing Effect, Anchoring Bias, Social Proof, Scarcity and Urgency Cues, Endorsement Cues, and Emotional Response) and Retail Investor Decision-Making.
3. To evaluate the relative influence of different behavioural cues on investment decision-making.

4. To analyse the mediation effects of scarcity and urgency cues in the relationship between behavioural marketing cues and retail investor decisions.

11. Research Model

Figure 1: Research Model of Behavioural Marketing Cues and Retail Investor Decision-Making



Source: Author

Research Methodology

This research used a quantitative research design, and descriptive and causal research, to examine the role that appears to mediate the relationship between behavioural marketing cues (i.e. framing effect, anchoring bias, scarcity and urgency cues, endorsement cues, and emotional responses) and investment decision-making of retail investors. A structured survey method was used to collect primary data. This method is appropriate for testing hypotheses, assessing theoretical frameworks, and analysing the relationship between variables (Creswell, 2014). Chennai, the capital city of Tamil Nadu and among the most liveable and economically productive metropolitan areas in India, was a strategic selection as a context of retail investor behaviour. Chennai, as a Tier-1 city, has increasing levels of financial literacy, increased use of digital platforms and retail investor participation in stock markets and mutual funds (SEBI, 2022). As an urban context, Chennai provides a multi-faceted context to investigate retail investors where behavioural marketing cues (i.e. framing, anchoring, emotional, endorsements) and the social proof may act as influences to shape and inform investment decisions. The intended group for study was retail individual investors who make active investments via an equities (Stock) or systematic investment distribution channels, aka SIP's, and/or through online platforms. This study employed a purposive

sample framework to recruit survey participants known to be financially active participants who were significantly exposed to marketing stimuli (Saunders et al., 2019). A purposive sampling framework is useful in behavioural finance studies, as behavioural finance research typically emphasizes specific forms of psychological exposure (Hair et al., 2010). In addition, Chennai as a city has a broad range of demographics that includes entrepreneurs, working professionals and wage employees, which will facilitate constructing a heterogeneous sample that enrols different demographics for the purpose of heightened external validity and generalizability of findings amongst urban financial ecosystems that are similar in India.

1. Population and Sampling

The sample population consisted of retail investors located in Chennai who invest in any financial investment vehicle such as equities, mutual funds, SIPs, and digital trading platforms. Chennai was the preferred choice of study location because of the high rates of financial literacy, a more advanced digital infrastructure, and increased number of retail investors brackets during a time where the retail urban investment behaviour exploded in India (SEBI, 2022). The study used purposive sampling techniques to select the individuals, therefore the criteria for a purposive sample was that the individuals selected had prior experience in investment alongside exposure to advertisements or marketing tending towards investment. This type of sampling method was appropriate to the knowledge/base characteristics of the individuals who I as a researcher was interested in studying their behaviour characteristics and knowledge. (Saunders et al. diary, 2019). A sample size of 384 responses was calculated using Cochran's formula for infinite populations (at a 95% confidence level and 5% margin for error).

2. Statistical Analysis For This Study

The analysis of data to be conducted in the current research was conducted through a mixture of the statistical methods to be robust and valid in the findings. First, the IBM SPSS was used to screen, code, and pre-analyse data. To gain the demographic picture of who the respondents were and the distribution of the responses overall, descriptive statistics were adopted including mean, standard deviation, frequency, and percentage. Cronbach alpha was used in the reliability analysis to determine the internal consistency of the measurement scales. Confirmatory Factor Analysis (CFA) using AMOS was conducted to test construct validity, and it aided in assessing factor loadings, composite reliability (CR) and average variance extracted (AVE). Structural Equation Modeling (SEM) was subsequently used by application of AMOS to test the hypothesized relationship between the behavioural constructs and Retail Investment Motivation (RIM). Fit indices (which included Chi-square implied 2(1), CFI, TLI, RMSEA and GFI) were used to fit the model. Moreover, mediation analysis was performed in the framework of SEM to study indirect

impacts of behavioural cues with the help of Emotional Mediation Response (EMR) and Scarcity and Urgency Cues (SUCU). The significance of the indirect effects was built by boot strapping methods to ensure there is full or partial mediation. In general, the SPSS and AMOS allowed a thorough study of measurement and structural models in the work.

Data Analysis And Interpretation

1. Demographic Profile of Respondents

Table 1 Demographic Profile of Respondents

Variables	Frequency	Percent
Gender		
Male	190	49.5
Female	194	50.5
Total	384	100
Age		
26-30	70	18.2
31-35	87	22.7
36-40	72	18.8
41-45	70	18.2
46-50	85	22.1
Total	384	100
Qualification		
ITI/Diploma	101	26.3
Graduate	76	19.8
Post Graduate	106	27.6
Professionals	101	26.3
Total	384	100.0
Marital Status		
Single	100	26.0
Married	104	27.1
Divorcee	93	24.2
Separated	87	22.7
Total	384	100.0
Employment		
Self-employed	69	18.0
Work for a company	74	19.3
Pensioner	60	15.6
Student	57	14.8
Housewife	65	16.9
Freelancer	59	15.4
Total	384	100.0
Experience		

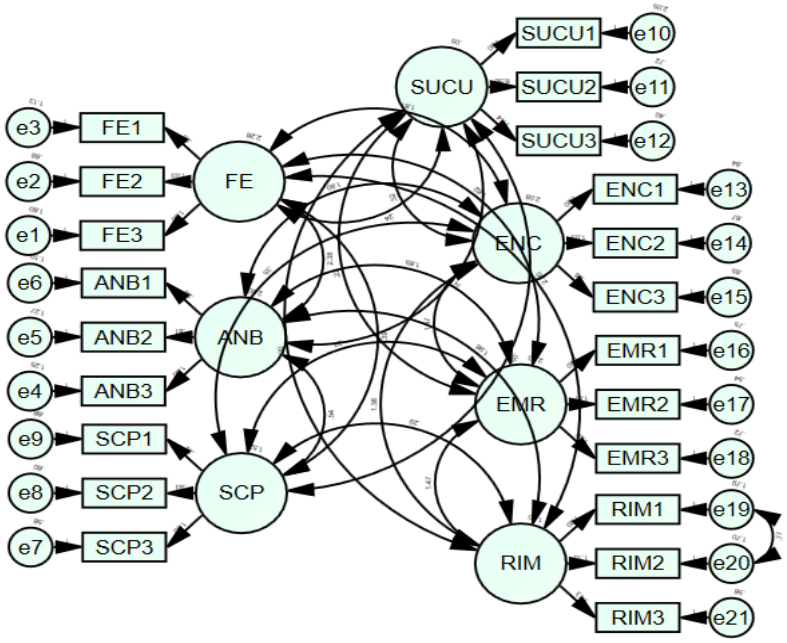
Up to 2 years	76	19.8
3 to 5 years	75	19.5
6 to 10 years	64	16.7
11 to 15 years	96	25.0
16 years and above	73	19.0
Total	384	100.0

Source: Primary and Computed

The research design was a quantitative research design and descriptive and causal research to investigate the role which seems to mediate the relationship between behavioral marketing cues (i.e. framing effect, anchoring bias, scarcity and urgency cues, endorsement cues, and emotional responses) and investment decision-making of retail investors. Primary data was collected through a structured survey approach. The technique will be suitable to test hypotheses, evaluate theoretical frameworks, and examine the correlation between variables (Creswell, 2014). The capital city of Tamil Nadu, Chennai, and one of the most liveable and economically productive urban regions in India was a good choice of context of retail investor behaviour. Chennai is a Tier-1 city, and the levels of their financial literacy, digital use, and involvement of retail investors into stock markets and mutual funds are increasing (SEBI, 2022). Chennai as an urban scenario offers a complex setting to explore the target of retail investors in which behavioural marketing cues (i.e. framing, anchoring, emotional, endorsements) and the social evidence could serve as a force towards influencing and driving decision making concerning investment choices. The target area to be studied was the retail individual investors who actively invest through an equities (Stock) or systematic investment distribution channels, that is, through SIPs, and/or via online platforms. This research used purposive sample to select respondents who took part in the surveys and were identified as individuals who are financially active respondents and have had a substantial exposure to marketing stimuli (Saunders et al., 2019). A purposive sampling model would be effective in the behavioural finance research, since behavioural finance research generally focuses on types of psychological exposure (Hair et al., 2010). Moreover, this city of Chennai has a very wide diversity of demographics that incorporates not only the entrepreneurs, but also working professionals and wage employees that will enable the construction of a heterogeneous sample that recruits the different demographics to ensure heightened external validity and generalizability of results amongst the similar urban financial ecosystems within India.

2. Confirmatory Factor Analysis

Figure 2: Confirmatory Factor Analysis Model



Source: Primary and Computed

In the current research, 384 respondents (who were asked to give demographic data with regards to behavioral dimensions of retail investment decision-making) were used. The sample was nearly equal based on gender. Male respondents (n= 190) and female respondents (n= 194) constituted 49.5 and 50.5 percent respectively. The fact that it was almost a 50-50 gender split enabled the same perspective between male and female investors. The respondents were split into five categories based on age distributions. The highest age category was 31-35 years at 22.7% (n = 87); then came the age category of 46-50 years at 22.1% (n = 85), then there was the age group of 36-40 years at 18.8% (n = 72) and the two similar age groups of 26-30 years and 41-45 years at 18.2% (n = 70) with a total of 90 respondents in age This demonstrates the relative maturity of the respondents; comparatively, all the respondents are at least in their late 20s to early 50s which is usually the life stage of an investor. In terms of general education qualification, this sample is in the postgraduate qualification category at 27.6 percent (n = 106), ITI/diploma and professional category at 26.3 percent (n = 101), graduate category was least at 19.8 percent (n = 76). The general education rates indicate the diversity of the level of education and diversification of educated and technically qualified people. The marital status of the participants was equally distributed as follows; married 27.1% (n=104); single 26.0% (n=100); divorcee 24.2% (n=93); and separated 22.7% (n=87). This distribution is an effective attribute of the sample as it suggests life situations

that may associate with unequal attitudes and behavior on investing. The employment status has also been represented well by the respondents as follows: Employee of a Company 19.3% (n=74); Self-employed 18.0% (n=69); Housewife 16.9% (n=65); Pensioner 15.6% (n=60); Freelancer 15.4% (n=59); Student 14.8% (n=57). Such combination of careers is also interesting since the respondents probably have very dissimilar experiences and settings to make financial decisions. Lastly, when asked work experience, 25.0% (n=96) responded that they had an 11 years to 15 years work experience, then 19.8% (n=76) responded that they had up to 2 years, then 19.5% (n=75) responded that they had 3 to 5 years, 19.0% (n=73) responded that they had 16 years and above, and 16.7% (n=64) responded that they had 6 to This also shows that the majority of the respondents had moderate to significant work experience, which will most likely have an implication on their financial literacy and investment choices.

Table 2 Composite Reliability and Discriminant Validity

Con.	CR	AVE	MSV	MaxR (H)	FE	ANB	SCP	SUC	ENC	EMR	RIM
FE	0.86	0.66	0.23	0.867	**0.746**						
ANB	0.91	0.68	0.41	0.922	0.406***	**0.823**					
SCP	0.83	0.61	0.25	0.904	0.282***	0.348***	**0.711**				
SUC	0.94	0.76	0.39	0.946	0.366***	0.447***	0.360***	**0.873**			
ENC	0.83	0.69	0.71	0.83	0.484***	0.640***	0.496***	0.626***	**0.701**		
EMR	0.89	0.62	0.71	0.893	0.378***	0.470***	0.399***	0.547***	0.843***	**0.789**	
RIM	0.83	0.65	0.03	0.849	0.031	-0.013	0.015	0.120*	0.121*	0.168**	**0.67**

Source: Primary and Computed

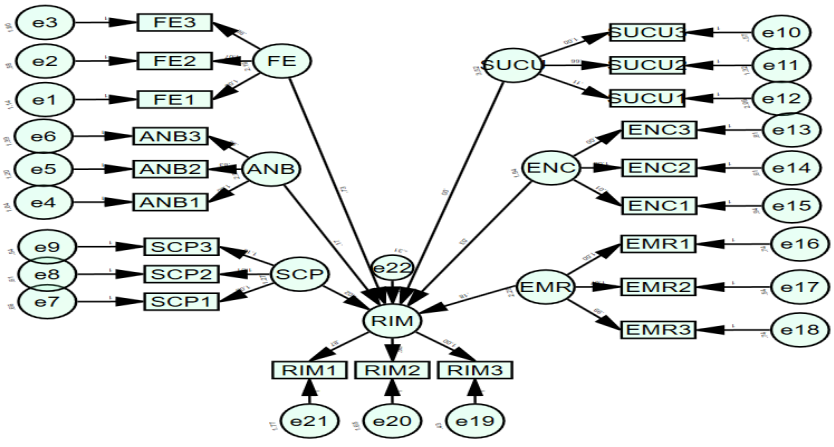
The table 2 summarizes the results of the CFA and measures discriminant validity, which were necessary to test the constructs validity of the measures in the structural model to the level of behavioural biases, and decision-making of retail investors. Constructs that were evaluated included Framing Effect (FE), Anchoring Bias (ANB), Social Proof (SCP), Scarcity and Urgency Cues (SUC), Endorsement Cues (ENC), Emotional Response (EMR), and Retail Investor Decision-Making (RIM). It has a good internal consistency with all constructs scoring Composite Reliability (CR) scores between 0.826 and 0.941, which is above the recommended level of 0.70 (Fornell and Larcker, 1981; Hair et al., 2010). Subsequently, the Average Variance Extracted (AVE) estimates of all the constructs were greater than 0.50 which is adequate evidence of convergent validity and is an indication that the items which measure their constructs are functioning well. To test the discriminant validity, the possibility is that most constructs can be evaluated to be acceptable to the Fornell-Larcker criterion in which the AVE of an individual construct is larger

than its Maximum Shared Variance (MSV). The confounding variable was Endorsement Cues (ENC) and Emotional Response (EMR) because the MSV of both constructs is 0.711 that is greater than their AVEs (0.692 and 0.623). This observation implies that ENC and EMR, were not distinctly different, as compared to others that might have represented an overlapping of concepts or measures. Besides the above, there is a high correlation among the constructs of 0.843, which is more than the square that the constructs have representing the discriminative validity with poor discrimination validity. Although the measurement model can be further analysed or elaborated, this can also include refinement measures that are founded on the more advanced analysis techniques including the Heterotrait-Monotrait Ratio (HTMT) as suggested by Henseler et al. (2015).

Moreover, these constructs were correlated to yield valuable information on the meaningful relationships of the different variables namely the interactions of Scarcity and Urgency Cues (SUC), strongly positively correlated to Anchoring Bias (ANB), Social Proof (SCP), Endorsement Cues (ENC) and Emotional Response (EMR); hence we conclude that inferences of SUC refer not only to cognitive biases, but also to the possibility of emotional response. Again, EMR was able to capture a greater proportion than cognitive components of the cues as well as those components that the cues suggest with EMR significant positive correlation of .168** of the Serial -Retail investment Behaviour (RIM). Instead, FE, ANB and SCP would be weak (or non-existent) correlates to RIM and would tend to be working based on the behavioural impulses not experienced. This was in line with our expectations of retail investor decision making as it was found that emotional response might be behind the decision and this is what behavioural finance and psychological theories suggested.

3. Structural Equation Modelling

Figure 3: Structural Equation Model



Source: Primary and Computed

The figure gives a Structural Equation model (SEM) illustrating the direct effects of six behavioural constructs as well as the choices of the retail investor between Framing Effect (FE), Anchoring Bias (ANB), Social Proof (SCP), Scarcity and Urgency Cues (SUCU), Endorsement Cues (ENC) and Emotional Response (EMR) with respect to Retail Investor Decision Making (RIM). Observation Model states three indicators per construct and all the paths are leading to RIM indicating this is a model of direct effects and does not have testing of mediation. The model shows how various psychological and social cues that are applied by retail investors are utilized in their making of investment decisions and gives visualization a means of making an easy analysis of the conceptual or empirical research in behavioural finance and/or investor psychology in form of a model.

Table 3 Regression Weights for Investor Decision Making

DV	PATH	IDV	Estimate	S.E.	C.R.	P
RIM	<---	FE	.732	.024	30.606	***
RIM	<---	SCP	-.021	.014	-1.464	.143
RIM	<---	ANB	.173	.011	15.088	***
RIM	<---	ENC	.031	.011	2.707	.007
RIM	<---	EMR	.184	.011	16.066	***
RIM	<---	SCU	-.005	.007	-.623	.533

Source: Primary and Computed

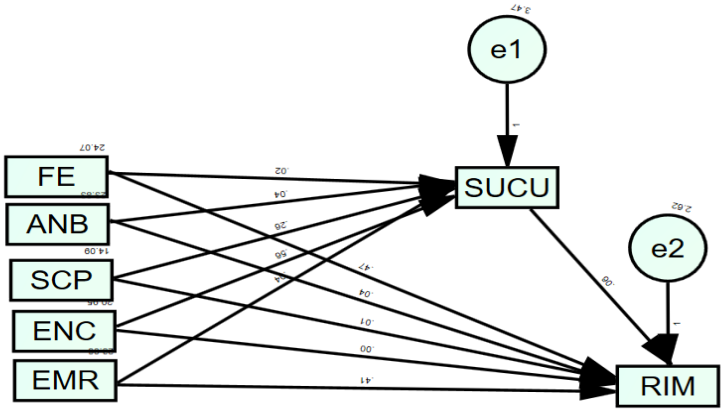
Table 3 shows the structural path coefficients of the SEM analysis that examined how several independent variables (IVs) would influence the dependent variable (DV) Retail Investor Decision-Making (RIM). The estimates of the path coefficient used in the SEM analysis explain the strength, direction, and statistical significance of the hypothesized relationships to be modelled. The estimates made using the path coefficient are standardized so that Framing Effect (FE) proved to be the strongest positive predictor of Retail Investor Decision-Making. The coefficient was significant with C.R 30.606 and p =.001. The findings indicate that framing and bias in most cases play a relevant role in determining the decisions made by retail investors. This finding confirms the behavioral financial theory whereby framing of information, is a powerful attribute in financial behavior and the implementation of the best strategies (Tversky and Kahneman, 1981).

Also, there is a positively significant impact of both the Anchoring Bias (ANB = 0.173) and Emotional Response (EMR = 0.184) on RIM (p <.001). These findings are also in line with the earlier investigations that show that investors are more likely to anchor their financial choices

(Furnham and Boo, 2011) and their risk discrimination and investment choice are more likely to be affected by emotion (Loewenstein et al., 2001). Despite its low statistical significance, the positive influence of Endorsement Cues (ENC) on RIM is present (0.031, p.007). Recommendation (celebrity or expert recommendation) affects investment decision making, though it is not as much as the other types of RI. Findings herein following other researches are congruent with certain marketing literature that recommend endorsements may serve as cognitive shortcuts in cognitive settings which are subject to uncertainty (Till & Busler, 2000). On the other hand, the effects of Social Proof (SCP) or Scarcity and Urgency Cues (SCU) on RIM are not statistically significant at 143 and 533 p-values respectively. The consideration of the SCP direction (−0.0210) is slightly negative whereas the influence of SCU (−0.005) signifies that the investors did not make independent decisions in this research owing to herd behaviour and urgency indications. This is opposite to certain studies that we have cited (e.g., Banerjee, 1992; Cialdini, 2001) and it can be an indication that investment decision making in our sample is due to the overwhelming use of internal biases and emotional responses, as opposed to external social or marketing forces. All in all, these results indicate that the Framing Effect, Anchoring Bias and Emotional Response and to a smaller extent Endorsement Cues were statistically significant predictors of the decision making of the retail investor. There was no direct impact of Social Proof and Scarcity/Urgency Cues. This implies that instead of using social influences, the decision-making of retail investors in this case might be more affected by psychological factors.

4. Mediation Effect

Figure 3: Mediation Effect



Source: Primary and Computed

Table 4 Mediation Effect Table for Study

Predictor (IV)	Direct Effect on RIM	Indirect Effect on RIM	Total Effect on RIM	Mediating Path (via SUCU)	Mediation Type
FE	0.466	0.001	0.467	FE → SUCU → RIM	Partial Mediation (very weak)
ANB	0.042	0.002	0.044	ANB → SUCU → RIM	Partial Mediation (very weak)
SCP	0.012	0.016	0.028	SCP → SUCU → RIM	Partial Mediation
ENC	0	0.035	0.035	ENC → SUCU → RIM	Full Mediation
SUCU	0.061	0	0.061	EMR → SUCU → RIM	No Mediation
EMR	0.409	—	0.409	—	Direct Effect Only

Source: Primary and Computed

The mediation test was used to analyse the indirect predictive effect of behavioural predictors on Retail Investor Decision-Making (RIM) using Scarcity and Urgency Cues (SUCU). The results show that Framing Effect (FE) has a significant direct effect on RIM (= 0.466) but the indirect effect through SUCU (= 0.001) is not statistically significant and the overall effect is almost the same (= 0.467). It implies that framing has a much stronger impact on investor choices due to mental computations and less due to barriers-to-action signals, which are in line with the heuristics and biases approach that was developed by Daniel Kahneman and Amos Tversky. On the same note, Anchoring Bias (ANB) shows a small direct effect (= 0.042) and a small indirect effect (= 0.002), which means that there is a very weak partial mediation and proves that mostly scarcity mechanisms do not affect anchoring. Conversely, Social Proof (SCP) exhibits a greater indirect effect (= 0.016) than the direct effect (= 0.012) implying partial mediation. This means that herd behaviour affects the retail investors directly and indirectly by creating the sense of urgency or scarcity. The Endorsement Cues (ENC) are fully mediated, this means that its direct influence on RIM (0.000) is zero, but has a significant indirect influence through SUCU (0.035). This observation supports the scarcity principle as suggested by Robert Cialdini which suggests that the endorsements are only persuasive when they cause a sense of urgency or exclusivity. Moreover, there is a small but significant direct impact of SUCU on RIM (= 0.061), which proves that the urgency cues do independently affect the investment decision, but the degree to which they mediate their relationship among predictors varies. Lastly, the EMR has a direct influence on RIM (= 0.409) and is not mediated by any other variable revealing that emotional processes directly influence investment decisions. In general, the findings indicate that SUCU is a selective mediator,

which mainly enhances the social influence determinants, but not cognitive biases and emotional motivation in the retail investor behaviour.

Discussion

This study was aimed at investigating the impact of behavioural marketing cues on the decision-making process of retail investor in Chennai. The empirical findings give several valuable implications on the behavioural aspects of investment choices. First, Framing Effect has become the most predictive of decision-making among retail investor, which is in line with previous studies in the field of behavioural finance as shown by Kahneman and Tversky (1981) that show how the way information is presented has a tremendous impact on outcome of decision making. This result shows that investors are very much sensitive to the framing of financial opportunities by financial intermediaries making it obvious that marketing communication strategies can have a significant impact on the perceptions of the investors. Second, the findings also reveal that the effects of emotions on investment choices are significant in accordance to the Risk-as-Feelings hypothesis made by Loewenstein et al. (2001). Under uncertain conditions, emotional responses to financial opportunities are likely to be the rule among retail investors in the form of excitement, fear, or regrets, when assessing the opportunity. Thirdly, the anchoring bias is also found to affect the investment decisions other than the earlier studies which showed that investors use starting point positions to judge financial options. This implies that price levels, past performance of the market or recommendations of an analyst can be anchors that affect the judgement of investors. Surprisingly, the findings indicate that social evidence and scarcity information do not directly affect the decision-making of investors, unlike other prior studies that focused on herd behaviour effects on financial markets. The potential reason is that investors in urban setting as in the case of Chennai might be more dependent on own cognitive and emotional assessment than on inertial behaviour.

It is also possible to note via the mediation analysis that scarcity and urgency cues are an engaging behavioural process through which endorsement cues are applied to investment decisions. It is possible to discuss this finding in connection with the Scarcity Principle offered by Cialdini (2009): according to this researcher, people are inclined to place more importance on the opportunities that can be perceived as scarce or time-related.

Overall, the results demonstrate that the behaviour of retail investors is influenced mainly by cognition bias and emotional reactions and not socially only. These lessons have powerful implications on financial institutions, policymakers, and fintech platforms to create responsible marketing communication techniques that do not promote manipulative behavioural persuasion. This analysis can be expanded through future research by investigating behavioural cues in various

cities in India and comparing behaviour of retail investors under various demographic and cultural backgrounds.

Conclusion

This study aimed at investigating how the behavioural marketing cues affect the decision making of the retail investors at Chennai, India and to determine how the scarcity and urgency cues mediates this relationship. The empirical results provide that cognitive biases and emotional reactions are important influencing factors in determining the investment behaviour of retail investors. Specifically, it was found that the most significant predictors of an investment decision were the framing effect and the emotional reaction of an investor, which means that the representation of financial information and the emotional reaction of an investor is a strong determinant of the investment decision-making process. The effects of anchoring bias and the endorsement cues were also significant but relatively less. Conversely, there were no high direct effects of social proof and scarcity cues on investment choices. The mediation analysis also showed that the effects of some behavioural cues especially endorsement signals are also partially mediated by scarcity and urgency cues. This implies that marketing messages that build a sense of urgency or exclusivity can have an indirect influence on the investor behaviour. All in all, the results indicate that behavioural aspects are relevant in the decisions about money and that people should be made more aware of the role of psychological effects in the financial markets. The findings also indicate that policymakers and financial institutions ought to encourage responsible marketing practices and reinforce financial literacy interventions to enable investors make better investment decisions.

Limitations and Directions for Future Research

Although the works and findings of this study are significant, they have certain drawbacks. One, the data provided in this research was cross-sectional and hence no causal inferences could be made based on structural paths. Longitudinal techniques can be considered in the future to explain behaviors over time, especially at the time of a market turmoil, which might be beneficial. Secondly, the ENC and EMR measures had a high degree of correlation, with less than negligible degree of discriminant validity, which means that there were problems with measurement and/or the overlap of constructs. It would be beneficial to have another study using either re-specification of measurement items or a different measure (e.g., HTMT ratio; Henseler, et al., 2015). Third, the research was restricted to retail investors in a particular geographic/cultural setting and it was unclear whether the results can be extrapolated to institutional investors or other groups. Lastly, although moderation effect can be used sufficiently to apply to SEM models that investigate linear

relationships, future researches may incorporate non-linear modelling or interaction effects to their measurement models on their measurement models. In addition, multifaceted models can even give rise to more sophisticated approaches to analysis including latent moderated structural equations (LMS) incorporating more dynamic aspects of investor behaviours.

References

1. Leggett, K. L., & Davies, W. E. (2025). Examining a hyper-human virtual brand ambassador as a brand personification strategy. *Journal of Product & Brand Management*.
2. Chen, Y., Qin, Z., Yan, Y., & Huang, Y. (2024). The power of influencers: how does influencer marketing shape consumers' purchase intentions?. *Sustainability*, *16*(13), 5471.
3. Ariely, D. (2009). *Predictably irrational: The hidden forces that shape our decisions*. HarperCollins.
4. Bajaj, S., & Saxena, A. (2023). An Empirical Investigation of Retail Investors' Sentiments: Role of Demographics. *International Journal of Professional Business Review: Int. J. Prof. Bus. Rev.*, *8*(11), 17.
5. Baker, H. K., & Ricciardi, V. (2014). *Investor behavior: The psychology of financial planning and investing*. John Wiley & Sons.
6. Banerjee, A. V. (1992). A simple model of herd behavior. *The quarterly journal of economics*, *107*(3), 797-817.
7. Bikhchandani, S., Hirshleifer, D., & Welch, I. (1998). Learning from the behavior of others: Conformity, fads, and informational cascades. *Journal of economic perspectives*, *12*(3), 151-170.
8. Bodenberger, R., & Thommes, K. (2025). Words or numbers? How framing uncertainties affects risk assessment and decision-making. *arXiv preprint arXiv:2502.06241*.
9. Cerulli Associates. (2024). *To combat investor biases, financial advisors should consider behavioral financial advice solutions*. Cerulli Research.
10. Chen, C., Ishfaq, M., Ashraf, F., Sarfaraz, A., & Wang, K. (2022). Mediating role of optimism bias and risk perception between emotional intelligence and decision-making: a serial mediation model. *Frontiers in Psychology*, *13*, 914649.

11. Cherry, K. (2024). What is the framing effect? *Verywell Mind*. https://www.verywellmind.com/what-is-the-framing-effect-2796044
12. Cialdini, R. B. (2009). Influence: Science and Practice, ePub.
13. Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
14. Dhingra, P., & Garg, R. (2024). The role of behavioral finance in investment decision-making: A conceptual study of Indian investors. *International Journal of Research in Finance and Management,* *7*(1), 585–590. https://doi.org/10.33545/26175754.2024.v7.i1f.461
15. Evans, J. S. B. (2008). Dual-processing accounts of reasoning, judgment, and social cognition. *Annu. Rev. Psychol.*, *59*(1), 255-278.
16. Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, *18*(1), 39-50.
17. Furnham, A., & Boo, H. C. (2011). A literature review of the anchoring effect. *The journal of socio-economics*, *40*(1), 35-42.
18. Hair Jr, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). Multivariate data analysis. In *Multivariate data analysis* (pp. 785-785).
19. Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2019). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). Sage.
20. 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*(1), 115-135.
21. 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.
22. Moueed, A., & Hunjra, A. I. (2020). Use anger to guide your stock market decision-making: results from Pakistan. *Cogent Economics & Finance*, *8*(1), 1733279.
23. Thaichon, P., Cheah, J. H., & Ting, H. (2022). The dark and bright side of online consumer behavior. *Journal of Consumer Behaviour*.
24. Loewenstein, G. F., Weber, E. U., Hsee, C. K., & Welch, N. (2001). Risk as feelings. *Psychological bulletin*, *127*(2), 267.

25. Sahu, T. N., Sarkar, A. K., & Pandey, K. D. (2021). Investment Behaviour of Retail Investors Based on Individual Heterogeneity and Psychological Biases. *Artha Vijnana*, *63*(3), 310-325.
26. Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). Pearson.
27. SEBI. (2022). *Investor survey report*. Securities and Exchange Board of India. https://www.sebi.gov.in
28. Singru, A., & Chopra, Z. (2021). Investigating Indian retail investor behavior through the lens of prospect theory. *Journal of Student Research, 10*(4). https://doi.org/10.47611/jsrhs.v10i4.2476
29. Sowmya, T. S., & Muralidhar, S. (2024). *BEHAVIORAL BIASES AND INVESTMENT DECISIONS AMONG MALE AND FEMALE RETAIL INVESTORS IN INDIA. ShodhKosh: Journal of Visual and Performing Arts, 5 (3)*.
30. Tversky, A., & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *science*, *211*(4481), 453-458.
31. Zhang, J., Jiang, N., Turner, J. J., & Pahlevan-Sharif, S. (2022). The impact of scarcity on consumers' impulse buying based on the SOR theory. *Frontiers in Psychology*, *13*, 792419.