

Behavioral Biases in Financial Markets: A Review with Future Research Directions

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ABSTRACT

Traditional financial management assumes rational investors and efficient markets, but increasing empirical evidence shows that investor decisions are often influenced by psychological and emotional factors, leading to the emergence of behavioral finance. This study systematically reviews 40 scholarly sources to examine key behavioral biases and their impact on investment decision-making across developed and emerging markets. Using major academic databases and a structured literature review matrix, the study analyzes research chronologically, geographically, methodologically, and thematically. The findings identify overconfidence, herding, disposition effect, heuristics, and mental accounting as the most prominent biases, shaped by demographic, contextual, and cultural factors. Behavioral biases are found to be more pronounced in developing economies and significantly affect trading behavior, portfolio performance, and market efficiency. Despite extensive research, gaps remain in longitudinal, experimental, and cross-country studies. This review consolidates existing evidence, highlights research gaps, and offers insights for researchers, practitioners, and policymakers to improve investment decision-making.

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1. Introduction

Financial management is a discipline that explores how investors make investment decisions related to the allocation of scarce financial resources under conditions of risk and uncertainty. It focuses on how individuals and institutions evaluate investment opportunities, manage risk, and balance expected returns against potential losses in order to achieve their financial objectives. Over time, scholars have sought to explain the underlying principles guiding these decisions, leading to the development of different theoretical perspectives on investor behavior. Within this field, two major schools of thought have emerged: the rational paradigm and the irrational paradigm (Grover, 2015; Rwan & Sharada, 2021). These paradigms differ fundamentally in their assumptions about human behavior, information processing, and market efficiency

The rational paradigm assumes that investors aim to maximize their investment returns through logical, mathematical decision-making. It is built upon foundational theories such as Expected Utility Theory (Von Neumann & Morgenstern, 1954), Portfolio Theory (Markowitz, 1952), Permanent Income Hypothesis (Friedman, 1957), and the Life Cycle Hypothesis (Modigliani & Brumberg, 1954). These theories posit that individuals make rational choices based on available information and the optimal use of resources (Chandra, 2008).

In contrast, the irrational paradigm (also known as behavioral finance) argues that investors are not always rational. Psychological and emotional factors can heavily influence decision-

making, leading to behavior that deviates from classical economic theory (Chandra, 2008; Birău, 2012). Behavioral biases, such as overconfidence, loss aversion, and herd behavior, often affect investment decisions (Camellia & Cristina, 2014). The development of behavioral finance is supported by key theories like Prospect Theory (Kahneman & Tversky, 1979), Cognitive Dissonance Theory (Festinger, 1957), and Heuristics Theory (Kahneman & Tversky, 1974).

The evolution of financial theory can be broadly categorized into three major phases: Traditional Finance, Modern (Neoclassical) Finance, and Behavioral Finance. Traditional Finance, which represents the earliest stage, is grounded in utility theory and the assumption of rational decision-making. It views investors as fully informed, logical individuals who consistently seek to maximize their expected utility when making financial choices. Under this framework, markets are assumed to be efficient, meaning that asset prices fully and instantaneously reflect all available information. As a result, securities are fairly valued, arbitrage opportunities are quickly eliminated, and financial resources are allocated in an optimal manner across the economy. Risk and return are treated as objective and measurable, and investor behavior is assumed to be stable, predictable, and free from emotional or psychological influences. While Traditional Finance provided a foundational framework for understanding financial markets, its simplifying assumptions later gave rise to more advanced theories that sought to better explain real-world market behavior.

Modern (Neoclassical) Finance is built upon traditional finance by incorporating models like the Capital Asset Pricing Model (CAPM) and Portfolio Theory, further emphasizing rational behavior in perfect markets. Behavioral Finance emerged as a response to the limitations of traditional models in explaining market anomalies. It integrates insights from psychology,

sociology, and economics to understand irrational investor behavior (Ricciardi & Simon, 2000).

Although the rational paradigm is grounded in strong theoretical foundations, it struggles to explain various market anomalies such as overreaction, underreaction, and market bubbles (Johnsson, Lindblom & Platan, 2002). Behavioral finance emerged as a response to these gaps, offering explanations for such irregularities by highlighting the role of investor psychology (Kooper & Prasad, 2017).

Behavioral finance contends that investors often deviate from rationality due to cognitive and emotional biases. It asserts that these biases influence financial decision-making and contribute to inefficiencies in the capital markets (Zahera & Bansal, 2018; Birău, 2012). The field is supported by theories such as Prospect Theory (Kahneman & Tversky, 1979), which challenges the expected utility theory by demonstrating that individuals weigh losses more heavily than gains and are influenced by the certainty effect, leading to risk-averse behavior. Cognitive Dissonance Theory (Festinger, 1957) suggests that investors seek consistency between beliefs and actions, often ignoring contradictory information. Heuristics Theory (Kahneman & Tversky, 1974) explain how mental shortcuts can lead to systematic biases in decision-making.

Despite extensive literature on behavioral finance, a key question remains unanswered: Do behavioral biases impact all investors equally, or do these biases vary among individuals? (Baker, Kumar, & Goyal, 2019). There is a clear knowledge gap regarding the specific determinants that shape behavioral biases of investors who actively engage in share market transactions (Alrabadi, Al-Abdallah & Aljarayesh, 2018). Furthermore, it remains challenging to quantify the exact effect of human decision-making errors on capital market performance (Camellia & Cristina, 2014).

The primary aim of this study is to assess the current state of behavioral finance research, and systematically review and organize existing literature, including both historical and contemporary studies. A secondary objective is to categorize and analyze past research, providing a comprehensive reference for both scholars and practitioners, and to identify future research opportunities in the field.

2. Methodology

This study is based on a review of 40 research papers and academic sources on behavioral finance. These include: Peer-reviewed journal articles, Books, Conference papers, Master's and doctoral theses, Unpublished working papers.

The literature was selected through a comprehensive search using the keyword "behavioral finance biases", covering titles, abstracts, keywords, and full texts across various databases. To maintain focus and relevance, only studies that met quality and topic criteria were included. A Literature Review Matrix was used to organize and analyze the data. The matrix enables: Chronological categorization, tracking the development of behavioral finance over time. Geographical classification, highlighting country-specific research, study type classification, separating theoretical, empirical, experimental, and case study research. Methodological analysis, covering qualitative, quantitative, and hybrid methods. Summary of findings, identifying recurring themes, major conclusions, and knowledge gaps. This structured approach facilitates the identification of patterns, contradictions, and underexplored areas in the behavioral finance literature.

This literature review contributes to the ongoing development of behavioral finance by mapping existing research, identifying gaps, and suggesting directions for future inquiry.

Through this systematic analysis, the study aims to enrich the understanding of investor behavior in both developed and emerging markets.

3. A Summary of Literature Review

No	Author(s), Year and Countries of Study	Title of the Study	Journal	Findings and Conclusions
01	Mushinada and Veluri(2019), India	“Elucidating investors rationality and behavioural biases in Indian stock market.”	Review of Behavioral Finance	There is a statistically significant positive covariance between self-attribution and overconfidence, meaning that as self-attribution increases, overconfidence also tends to increase, and vice versa. Additionally, an investor's personal and demographic characteristics— such as gender, age, occupation, annual income, and trading experience affect their behavioral biases.
02	Sharma and Kumar (2019), India	“A review paper on behavioral finance: a study of emerging trends”.	Qualitative Research in Financial Markets	The literature review from both perspectives enhances the understanding of market efficiency and the evolving dynamics of asset pricing. It identifies gaps in market efficiency and proposes that these gaps can

				be addressed through a more advanced approach, such as behavioral finance. Additionally, it explores emerging trends in the field.
03	Mittal (2019), India	“Behavior biases and investment decision: theoretical and research framework”.	Qualitative Research in Financial Markets	Behavioral finance is an emerging field in finance, highlighting the limited research available on behavioral biases and their impact on individual investors' decisions, particularly in developing economies like India. This literature review helps in identifying major research gap in this domain. It helps in identifying the behavior biases which work dominantly in investment decision-making.
04	Sabir, Mohammad and Shahr (2019), Pakistan	“The role of overconfidence and past investment experience in herding behavior with a moderating effect of financial	Asian Economic and Financial Review	The findings of this paper reveal a positive relationship between overconfidence and herding behavior among stock market investors. Herding behavior is positively influenced by investors' past investment experience. Additionally, financial

		literacy: evidence from Pakistan stock exchange.”		knowledge moderates the relationship between overconfidence and herding behavior, while financial literacy plays a moderating role in the relationship between past investment experience and herding behavior.
05	Zahera and Bansal (2019), India	“A study of prominence for disposition effect: a systematic review.”	Qualitative Research in Financial Markets	Individual investors, institutional investors, and mutual funds exhibit different responses to the disposition effect, with mutual funds being less influenced by it compared to other types of investors. Demographic factors such as age, gender, experience, and investor sophistication also play a role in the occurrence of the disposition effect. Most studies in this area have focused on developed markets, particularly in the USA and Europe, with limited attention given to less developed nations.

06	Zahara and Bansal (2018), India	“Do investors exhibit behavioral biases in investment decision making? A systematic review”.	Qualitative Research in Financial Markets	The study mainly examines the behaviors of individual and institutional investors, along with financial advisors. Additionally, it recognizes the role of intermediaries that facilitate investment for some investors. This study has identified 17 different types of biases and it will be helpful for new researches in this field and to identify the areas where possible work can be done.
07	Kansal and Singh (2018), India	“Determinants of overconfidence bias in Indian stock market.”	Qualitative Research in Financial Markets	As trading experience increases, so does age. Investors often tend to exit the market in their late 50s due to a diminished risk appetite.
08	Chaffai and Medhioub (2018), Tunisia	“Herding behavior in Islamic GCC stock market: a daily analysis.”	International Journal of Islamic and Middle Eastern Finance and Management	Evidence of herding behavior is observed only in rising markets for GCC (Gulf Cooperation Council) markets. In contrast, stock returns in the Islamic GCC stock market tend to align more closely during downturns.

09	Shah, Ahmad and Mahmood (2018), Pakistan	“Heuristic biases in investment decision-making and perceived market efficiency: A survey at the Pakistan stock exchange”.	Qualitative Research in Financial Markets	Their findings indicate that heuristic biases—such as overconfidence, representativeness, availability, and anchoring—negatively impact the investment decisions of individual investors actively trading on the PSX.
10	Baker et al. (2018), India	“How financial literacy and demographic variables relate to behavioral biases”	Managerial Finance	The results indicate that financial literacy has a negative correlation with the disposition effect and herding bias, while showing a positive relationship with mental accounting bias. However, there is no significant relationship with overconfidence and emotional biases. Among the demographic variables, age, occupation, and investment experience are the most significant factors influencing the behavioral biases of individual investors in the sample. Additionally, males tend to be more overconfident

				than females regarding their knowledge of the stock market
11	Metawa et al. (2018), Egypt	“Impact of behavioral factors on investors’ financial decisions: case of the Egyptian stock market”.	International Journal of Islamic and Middle Eastern Finance and Management	Investment decisions are greatly influenced by factors such as investor sentiment, overreaction, underreaction, overconfidence, and herd behavior. Additionally, demographics like age, gender, and education level play important roles in shaping these decisions. While experience may not directly dictate investment choices, it allows investors to better manage emotional influences, leading to more rational decision-making over time.

12	Rasheed et al (2018), Pakistan	“Factors influencing investor’s decision making in Pakistan: moderating the role of locus of Control	Review of Behavioral Finance	Investors tend to favor stocks for which they have more accessible information, rather than conducting a thorough analysis of all available and relevant data.
13	Raut, Das, and Kumar (2018), India	“Extending the Theory of Planned behavior: Impact of Past behavioral Biases on the Investment Decision of Indian Investors”.	Asian Journal of Business and Accounting	The study shows that attitudes toward behavior, subjective norms, and perceived behavioral control are significantly linked to behavioral intentions
14	Baker, Kumar and Goyal (2018), India	“Personality traits and investor sentiment.”	Review of Behavioral Finance	The results indicate that an extroverted personality trait positively correlates with all the behavioral biases examined. Neuroticism, characterized by emotional instability, is associated with higher levels of depression and anxiety, as well as increased risk tolerance. The trait of openness shows a statistically significant connection only with mental accounting.

				Agreeableness does not have a relationship with overconfidence, the disposition effect, or herding bias. Meanwhile, conscientiousness is significantly related to overconfidence bias but not to herding bias
15	Prosad et al (2017), India	“Overconfidence and Disposition Effect in Indian Equity Market: An Empirical Evidence”.	Global business review	The study presents three key findings: First, both overconfidence bias and the disposition effect are evident in the Indian equity market during the sample period. Second, the effects of these biases can be distinctly analyzed across 20 companies within the index. Third, overconfidence bias is found to be the most prominent of the two.
16	Feldman and Lepori (2016), USA	“Asset price formation and behavioral biases.”	Review of Behavioral Finance	The results indicate that the type of irrationality influences return properties in distinct ways. Irrational investors who reflect on their performance and shortcomings have little systematic impact on

				stock returns when interacting with rational investors. In contrast, irrational investors who aggregate information irrationally do have a systematic effect when combined with rational investors
17	Kumar and Goyal (2016), India	“Evidence on Rationality and Behavioral Biases in Investment Decision Making”.	Qualitative Research in Financial Markets	At the time of investment, investors typically engage in a rational decision-making process. The study further reveals significant differences in this process based on gender and income. Additionally, the information search is positively related to overconfidence bias. Overconfidence is also significantly associated with the disposition effect, and there is a notable difference in overconfidence bias among individual investors based on income. The study concludes that age does not significantly influence the rational decision-making process

18	Kumar and Goyal (2015), India	“Behavioral Biases in Investment decision making-A Systematic Literature Review.”	Qualitative Research in Financial Markets	The prevalence of secondary data-based empirical research, the limited studies on individuals displaying herd behavior, the emphasis on equity in home bias, and the inconclusive empirical findings on herding bias are notable issues
19	Prosad, Kapoor and Sengupta (2015), India	“Behavioral biases of Indian investors: A survey of Delhi-NCR region.”	Qualitative Research in Financial Market	Behavioral biases are influenced by investors' demographics and trading sophistication, with age, profession, and trading frequency being the most significant factors. Notably, respondents with the most trading experience (over seven years) and those who trade frequently (intraday traders) tend to exhibit all these biases.
20	kourtidis, sevic and chatzoglou (2015), Grees	“Overconfidence and stock returns: A behavioral perspective.”	International Journal of Behavioral Accounting and Finance	An investor with a high level of overconfidence tends to perform better than one with low confidence. Overconfidence bias is positively correlated with

				stock performance, trading frequency, and trading volume.
21	Duxbury (2015), UK	“Behavioral finance: insights from experiments II: biases, moods	Review of Behavioral Finance	This paper explores the contribution of experimental studies to the understanding of heuristics and biases that lie at the core of behavioral finance. The author synthesizes the valuable contribution made by experimental studies in extending the knowledge of how biases, moods and emotions influence the financial behavior of individuals, highlighting the role of experimental studies in policy design and intervention
22	Prosad, Kapoor, and Sengupta (2015), India	“Exploring optimism and pessimism in the Indian equity market.”	Review of Behavioral Finance	The study concludes that the Indian equity market exhibited predominant pessimism from 2006 to 2011. The interaction of this bias with market indicators reveals intriguing insights. Pessimism bias is

				significantly linked to high past volatility, and vice versa, in the Indian equity market. While the relationship between high risk and high return benefits rational investors, it can be detrimental to irrational investors. Additionally, Brown and Cliff (2005) have addressed the influence of investors' irrationalities on asset valuation.
23	Mishra and Metilda (2015), India	“A study on the impact of investment experience, gender, and level of education on overconfidence and self-attribution bias.”	IIMB management review	The study's findings reveal that: (1) overconfidence increases with both investor experience and education level; (2) self-attribution bias also rises with education; (3) men display higher levels of overconfidence than women; and (4) there is a correlation between overconfidence bias and self-attribution bias, with self-attribution serving as a significant predictor of overconfidence. This study confirms that investor experience, education, and

				gender significantly influence investor biases. It contributes to the existing literature on biases, particularly regarding the impact of demographic variables on overconfidence and self-attribution bias..
24	Daniel and Hirshleifer (2015), USA	“Overconfident Investors, Predictable Returns, and Excessive Trading.”	Journal of Economic Perspectives	Mistakes in valuation and a strong belief in those mistakes indicate overconfidence, which involves holding incorrect valuations with undue certainty. This overconfidence is prevalent among experts and professionals, including those in the finance sector. It serves to integrate various aspects of behavioral finance theory, illustrating that investors often trade even in the absence of critical information.
25	Rzeszutek, Szyszka and	“Investors’ Expertise, Personality Traits, and Susceptibility to	Contemporary economics	Age and other demographics (gender, education) were not statistically significant variables in this model; There was, however, a significant relationship

	Czerwotka (2015), Poland	Behavioral Biases in the Decision-Making Process.”		between venture sameness and susceptibility to the certainty effect ($p < .05$). There was a significant relationship between venture sameness ($p < .05$) and susceptibility to the sunk cost fallacy interaction between the group, and venture sameness was not significant.
26	Statman (2014), USA	“Behavioral finance: finance with normal people.”	Borsa Istanbul Review	Standard finance is primarily focused on portfolio theory, asset pricing models, and the efficient market hypothesis. In contrast, behavioral finance broadens the scope of finance by incorporating psychological factors and human behavior.
27	Lodhi (2014), Pakistan	“Factors Influencing Individual Investor Behavior: An Empirical Study of City Karachi.”	Journal of business and management	The article's findings indicate that financial literacy and accounting information help investors reduce information asymmetry, enabling them to invest in riskier assets. However, as investors age and gain experience, their preferences shift towards less risky

				investments. This doesn't imply a complete aversion to shares; rather, they tend to favor dividend returns over capital gains
28	Sahi (2013), India	“Demographic and socio-economic determinants of financial satisfaction A study of SEC- A segment of Individual investors in India.”	International Journal of Social Economics	Empirical evidence suggests that investors exhibit risk-seeking behavior, that the optimal portfolio is unaffected by individual preferences, and that preferences do not have a positive effect on wealth or returns
29	Bashir et al. (2013), Pakistan	“Impact of Behavioral Biases on Investors Decision Making: Male Vs. Female”.	Journal of business and management	This study finds a weak negative correlation between overconfidence bias and other behavioral biases. Additionally, it concludes that there is no significant difference between males and females in decision-making related to overconfidence bias.
30	Spyrou (2013), Greece	“Herding in financial markets: a review of the literature.”	Review of Behavioural Finance	Over two decades of empirical and theoretical research have yielded significant insights into investor herding behavior. The paper reviews recent

				empirical evidence and identifies open issues for future research.
31	Sahi and Arora (2012), India	“Individual investor biases: A segmentation analysis”	Qualitative research in financial markets	There are four main segments of individual investor biases: the Novice Learner, the Competent Confirmer, the Cautious Anticipator, and the Efficient Planner. This typology has predictive validity regarding financial satisfaction and perceived knowledge of the financial markets.
32	Alghalith, Floros, and Dukharan (2012), USA	“Testing dominant theories and assumptions in Behavioral Finance	The Journal of risk finance	Empirical findings indicate that investors tend to be risk-seeking, that optimal portfolios are independent of individual preferences, and that preferences do not significantly influence wealth or returns.
33	Sewell (2010), England	“Behavioural Finance.”	University of Cambridge	Behavioral finance not only examines investor behavior but also explores the reasons and mechanisms behind market inefficiencies.

34	Hoppe and Kusterer(2010) Germany	“Behavioral biases and cognitive reflection”.	Economics letters	Their findings indicate that the Cognitive Reflection Test (CRT) demonstrates strong predictive power primarily for biases that occur in scenarios with a correct solution, where analytical skills are essential for reaching that solution
35	DeBondt et al. (2010), UK	“What can behavioral finance teach us about finance?”.	Qualitative Research in Financial Markets	The paper highlights numerous benefits that behavioral finance research can contribute to the financial industry, but at the same time, there is an evident discrepancy between the academic and the professional world when it comes to utilizing behavioral finance research.
36	Bhandari and Deaves (2010), Canada	“The Demographics of Overconfidence”	Journal of Behavioral Finance	Highly educated males do not possess greater knowledge and are more prone to overconfidence.

37	Dhar and Zhu (2006), USA	“Up close and personal: investor sophistication and the disposition effect”.	Management Science	The variation in the disposition effect can be attributed to differences in trading frequency and demographic factors that indicate levels of knowledge about investment products.
38	Shiller (2003), USA	“From efficient markets theory to behavioral finance.”	The journal of economic perspectives	Eugene Fama's 1998 paper, which reviewed the behavioral finance literature, identified two main criticisms. First, it noted that the anomalies discovered often seemed to result from both investor underreactions and overreactions. Second, it observed that these anomalies tended to diminish either over time or with improvements in research methodology.
39	Barber and Odean (2001), USA	“Boys Will be Boys: Gender, Overconfidence, and Common Stock Investment.”	The Quarterly Journal of Economics	The document indicates that men trade 45 percent more frequently than women. This increased trading leads to a reduction in men's net returns by 2.65 percentage points annually, compared to a 1.72 percentage point reduction for women.

40	Gervais and Odean (2001), USA	“Learning to be overconfident.”	The Review of Financial Studies	Their anticipated overconfidence rises during the initial trading periods before eventually decreasing. While overconfidence itself does not lead to wealth, the journey of accumulating wealth can foster greater overconfidence among traders.
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4. Discussion

Behavioral biases such as overconfidence, herding, disposition effect, heuristics, and mental accounting are consistently observed across different studies and geographical locations. Overconfidence is a dominant bias affecting investment decisions (Mushinada & Veluri, 2019; Prosad et al., 2017; Daniel & Hirshleifer, 2015). Herding behavior is prominent, especially in rising markets or among inexperienced investors (Sabir et al., 2019; Chaffai & Medhioub, 2018). The disposition effect (holding losers too long, selling winners too soon) is widespread but varies among investor types (Zahera & Bansal, 2019). Heuristic biases like anchoring, representativeness, and availability impair rational decision-making (Shah et al., 2018).

Demographic and Psychographic influences are also discussed in the papers. Demographic factors significantly influence susceptibility to behavioral biases. When considering Gender, males are generally more overconfident (Mishra & Metilda, 2015; Barber & Odean, 2001). According to the age and experience in considering the older and more experienced investors shows reduced risk tolerance and improved rationality, though not always less biased (Bhandari & Deaves, 2010; Lodhi, 2014). Higher education correlates with increased overconfidence and self-attribution bias (Mishra & Metilda, 2015), but financial literacy reduces certain biases (Baker et al., 2018). Traits like extroversion and neuroticism are linked to higher behavioral bias susceptibility (Baker, Kumar & Goyal, 2018).

Several studies highlight that behavioral biases in financial decision-making are interrelated rather than independent. Self-attribution bias and overconfidence are positively correlated, as investors who attribute successes to their own abilities tend to develop inflated confidence in their judgment (Mushinada & Veluri, 2019). Financial literacy has been shown to moderate the impact of overconfidence and prior experience on herding behavior (Sabir et al., 2019). Investors with higher

financial literacy are better able to critically assess market signals and rely less on collective behavior. In contrast, less financially literate investors are more prone to follow the crowd, even when driven by overconfidence. Overconfidence also significantly influences the disposition effect, leading investors to hold losing assets for too long while selling winning assets too quickly (Kumar & Goyal, 2016).

In developing economies, behavioral biases among investors tend to be more pronounced due to limited financial literacy, restricted access to reliable information, and lower levels of market sophistication (Mittal, 2019; Kumar & Goyal, 2015). The lack of investor education often results in overreliance on heuristics rather than systematic analysis. As a result, biases such as overconfidence, herding, and loss aversion are more frequently observed. Market conditions also play a crucial role in shaping investor behavior. For instance, herding behavior intensifies during bullish market phases, as rising prices create optimism and fear of missing out among investors (Chaffai & Medhioub, 2018). In such conditions, investors are more likely to follow prevailing trends rather than evaluate fundamentals. Conversely, periods of high volatility tend to foster pessimism and risk aversion. Prosad et al. (2015) find that investor pessimism is strongly correlated with past market volatility. These findings suggest that both structural limitations and changing market dynamics jointly influence behavioral biases in developing economies.

Behavioral biases affect not only investment choices but also trading frequency and overall portfolio performance. Overconfident investors tend to trade more frequently, believing strongly in their ability to time the market or select winning stocks (Barber & Odean, 2001). This excessive trading often results in higher transaction costs and lower net returns. Overconfidence can also

lead investors to underestimate risks and overexpose themselves to volatile assets. Investors exhibiting strong behavioral biases are less likely to construct portfolios based on sound risk–return trade-offs (Sahi, 2013; Alghalith et al., 2012). Instead, their portfolios may reflect personal beliefs, emotions, or recent experiences rather than fundamental analysis. Such biased decision-making can reduce diversification and increase portfolio risk. Wealth accumulation itself may further intensify these biases. Gervais and Odean (2001) suggest that past investment success can increase investor overconfidence over time. This dynamic creates a feedback loop in which success reinforces bias, potentially leading to poorer long-term portfolio outcomes.

5. Conclusion

The reviewed literature demonstrates that behavioral finance provides essential insights into the irrational aspects of investor behavior, challenging the assumptions of classical financial theories. Overconfidence, herding, disposition effect, and heuristic biases are prevalent and influenced by demographic, psychological, and contextual factors. However, gaps remain in empirical research, particularly in less-developed markets. As behavioral finance matures, integrating its findings into investment advisory, education, and policy-making could enhance market efficiency and investor outcomes.

In the above empirical research, the different types of biases already discussed and the research on the disposition effect across investor types and regions reveal a diverse range of methodological approaches and analytical techniques were used. Zahara & Bansal (2018) and Kumar & Goyal (2015) conducted systematic literature reviews, employing thematic synthesis to map behavioral biases and research gaps. Several studies, such as Kansal & Singh (2018), Baker et al. (2018), and Raut, Das & Kumar (2018), utilized surveys analyzed through regression or Structural Equation

Modeling to examine links between investor demographics, overconfidence, and psychological constructs. Empirical trading data, as seen in Prosad et al. (2017) and Dhar & Zhu (2006), allowed for statistical tests directly observing the disposition effect.

In the Pakistani context, Sabir et al. (2019) and Shah et al. (2018) used regression and correlational analyses to explore the moderating roles of financial literacy and heuristic biases. Cross-regional studies, such as Chaffai & Medhioub (2018) and Gervais & Odean (2001), applied co-movement metrics and longitudinal tracking to understand behavioral biases in Islamic and developed markets. Meta-analytical and theoretical works by Feldman & Lepori (2016), Statman (2014), and Shiller (2003) provided conceptual frameworks for interpreting investor irrationality. Overall, the disposition effect has been studied through empirical surveys, statistical modeling, and theoretical syntheses, with results varying by region, investor traits, and market development.

Survey-based empirical studies (using regression, correlation, SEM, CRT scores) are the most common method, especially in emerging markets like India and Pakistan. Systematic and narrative literature reviews track trends, biases, and theoretical debates across time and geographies. Secondary data analysis (e.g., trading volume, returns, and brokerage records) is used particularly in developed markets to detect biases like disposition effect, herding, and overconfidence. Theoretical and experimental frameworks (e.g., CRT, behavioral models) are applied, particularly in earlier or foundational behavioral finance research.

Many studies have been conducted on behavioral finance. However, the field of behavioral finance is so rich that it still has various dimensions to be explored in different contexts. Behavioral biases and their impact have been investigated in developed as well as developing countries. Behavioral finance deals with the study of investors' psychology and its role in making financial decisions. This field relaxes the assumption of rationality present in standard finance theories and explains

that real investors are influenced by their psychological biases. These biases get translated into their behavior, due to which they can take suboptimal decisions. Such decisions, on a large scale, can cause disruptions in the market and are known as market anomalies.

An investor has a primary aim to generate maximum returns on his investments, besides also ensuring that the investments are safe and redeemable. A smart investor no doubt does due diligence before investing, but not all investments give the desired results. This may be so because although rightfully due importance is usually given to the investment product, which is visible and quantifiable, but the inherent psychological and emotional bias towards any investment decision is generally overlooked, since even the investor is at times unaware of it.

Most of the research studies are concentrated in the developed economies like the United States, the United Kingdom and Europe. The developing economies like India are still not fully tapped, where the research is still growing. Most of the studies in India are also survey-based. Although there is a need to understand investors' psyche through surveys, it is also essential to understand the influence of behavioral biases on markets as a whole. The present study seeks to contribute to the body of knowledge in behavioral finance by analyzing and interpreting the existing literature. This study will be specifically beneficial for portfolio managers, investment advisors, and investors. By understanding investors' decision-making process and behavioral biases, Portfolio managers and investment advisors will be able to serve their clientele better.

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