ACTA SCIENTIAE

ISSN: 2178-7727

A Study of Portfolio Investments and Investor Behaviour of Retail Investors in India

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ABSTRACT

The Indian capital market has witnessed unprecedented growth in retail investor participation over the past decade, fundamentally transforming the investment landscape. This study examines portfolio investment patterns and behavioral characteristics of retail investors in India, focusing on asset allocation decisions, risk preferences, and psychological factors influencing investment choices. Through a comprehensive survey of 385 retail investors across major Indian cities and analysis of their portfolio compositions, this research identifies key behavioral biases and investment tendencies that shape decision-making processes. The findings reveal that retail investors exhibit significant home bias, overconfidence, herding behavior, and recency bias in their investment decisions. Additionally, demographic factors including age, education, and income levels significantly influence portfolio diversification and risk-taking behavior. The study employed both quantitative and qualitative methods, utilizing structured questionnaires and secondary data from investment portfolios. Results indicate that most retail investors maintain inadequately diversified portfolios with heavy equity concentration, limited international exposure, and insufficient allocation to debt instruments. The research contributes to understanding the behavioral finance landscape in the Indian context and provides insights for financial advisors, policymakers, and retail investors themselves to make more informed investment decisions.

KEYWORDS: Portfolio investment, retail investors, investor behaviour, behavioral finance, asset allocation, investment psychology, Indian capital markets, diversification

INTRODUCTION

The Indian stock market has experienced remarkable transformation over the past two decades, evolving from a predominantly institutional investor-dominated arena to one where retail participation has become increasingly significant. The democratization of financial markets through technological advancements, reduced transaction costs, and easier access to information has empowered millions of individual investors to participate directly in capital markets (Barber and Odean 2013). As of 2022, India has witnessed over 90 million demat accounts, reflecting a surge in retail investor participation unprecedented in the country's financial history.

Understanding how retail investors construct their portfolios and what behavioral factors influence their decision-making processes has become critically important for multiple stakeholders. For policymakers and market regulators, comprehending investor behavior helps design better investor protection mechanisms and market regulations (Kumar and Goyal 2015). For financial advisors and wealth management professionals, understanding behavioral biases enables them to guide clients more effectively toward achieving their financial goals. For the investors themselves, awareness of common behavioral pitfalls can lead to improved investment outcomes.

Traditional finance theory assumes that investors are rational actors who make decisions based on expected utility maximization, maintaining well-diversified portfolios according to modern portfolio theory principles (Markowitz 1952). However, behavioral finance research has consistently demonstrated that real-world investors frequently deviate from these rational models, exhibiting systematic biases and heuristics that

DOI: 10.22178/acta.27.1.26

ISSN: 2178-7727

influence their investment decisions (Kahneman and Tversky 1979). These behavioral patterns become particularly pronounced among retail investors who often lack the sophisticated analytical tools and professional expertise available to institutional investors.

The Indian context presents unique characteristics that make it particularly interesting for studying retail investor behavior. The country's emerging market status, diverse demographic composition, varying levels of financial literacy, cultural factors influencing saving and investment patterns, and the recent surge in new investors during the COVID-19 pandemic create a distinctive environment (Chandra 2008). Additionally, the proliferation of discount brokerages, mobile trading applications, and social media investment communities has fundamentally altered how retail investors access information and execute trades.

This research addresses several critical questions regarding retail investor behavior in India. What are the predominant asset allocation patterns among retail investors? Which behavioral biases most significantly influence their portfolio construction decisions? How do demographic factors correlate with investment behavior and portfolio characteristics? What role does financial literacy play in shaping investment outcomes? By answering these questions, this study aims to contribute to the growing body of literature on behavioral finance in emerging markets while providing practical insights for improving retail investor outcomes.

LITERATURE REVIEW

Research on investor behavior has evolved significantly over the past several decades, transitioning from assumptions of perfect rationality to recognition of systematic psychological biases affecting financial decision-making. Early foundational work by Kahneman and Tversky (1979) established prospect theory, demonstrating that investors exhibit loss aversion, valuing losses approximately twice as much as equivalent gains. This fundamental insight laid the groundwork for understanding why investors often hold losing positions too long while selling winners prematurely, a phenomenon known as the disposition effect.

Barber and Odean (2000) conducted seminal research examining trading behavior of individual investors, finding that active traders significantly underperform passive investment strategies due to excessive trading driven by overconfidence. Their analysis of brokerage account data revealed that investors who trade most actively earn the lowest returns, even before accounting for transaction costs. This overconfidence manifests particularly strongly among male investors compared to female investors, with men trading 45% more frequently and earning lower risk-adjusted returns as a consequence (Barber and Odean 2001).

Herding behavior represents another well-documented phenomenon in retail investor behavior. Bikhchandani and Sharma (2001) demonstrated that investors frequently follow the actions of others rather than relying on their own analysis, particularly during periods of market volatility. This tendency toward collective behavior can amplify market movements and contribute to asset price bubbles and subsequent crashes. In the Indian context, studies have shown that retail investors exhibit strong herding tendencies, particularly around corporate announcements and during periods of market stress (Prosad et al. 2015).

Home bias, the tendency for investors to disproportionately invest in domestic securities despite the diversification benefits of international investment, has been extensively documented across markets. French and Poterba (1991) found that investors in major economies hold predominantly domestic assets, far exceeding what portfolio optimization models would suggest. This bias appears particularly pronounced in emerging markets including India, where retail investors demonstrate strong preference for familiar domestic companies even when international diversification would reduce portfolio risk (Kumar and Goyal 2015).

Financial literacy emerges as a crucial determinant of investment behavior and portfolio outcomes. Lusardi and Mitchell (2014) demonstrated through extensive surveys that financial literacy levels remain surprisingly low even in developed economies, with many individuals unable to answer basic questions about compound interest, inflation, and risk diversification. In India, financial literacy studies reveal even more concerning

DOI: 10.22178/acta.27.1.26

ISSN: 2178-7727

gaps, with rural and semi-urban populations showing particularly low levels of financial knowledge (Chandra 2008). These literacy gaps directly correlate with poor investment decisions, inadequate diversification, and vulnerability to fraud.

Demographic factors including age, gender, education, and income significantly influence investment behavior. Jain and Mandot (2012) found that younger investors in India tend toward higher risk tolerance and equity concentration, while older investors demonstrate preference for fixed-income securities. Educational attainment correlates positively with portfolio diversification, though interestingly, higher education does not always translate to better returns due to overconfidence effects among highly educated investors.

The role of emotions in investment decisions has received increasing attention in recent behavioral finance research. Fear and greed drive much investment behavior, particularly during market extremes (Shefrin 2002). During bull markets, greed leads investors to increase risk exposure and chase momentum, while during bear markets, fear triggers panic selling at market bottoms. Indian retail investors have demonstrated particular sensitivity to market sentiment, with significant inflows during market peaks and outflows during corrections, indicating poor market timing driven by emotional responses (Prosad et al. 2015).

Recency bias, the tendency to overweight recent experiences when forming expectations about the future, significantly impacts portfolio construction. Investors tend to extrapolate recent market performance, assuming current trends will continue indefinitely (Barberis et al. 1998). This bias contributed to the technology bubble of the late 1990s and more recently, to excessive risk-taking in certain sectors during the post-pandemic bull market in India. Retail investors frequently chase past performance, investing heavily in assets that have recently appreciated, often buying near market tops.

Mental accounting, where investors treat different sources of money differently despite money being fungible, influences how gains and losses are perceived and how portfolios are structured (Thaler 1985). Indian investors often maintain separate mental accounts for different investments, making suboptimal decisions about which holdings to liquidate when cash is needed. This compartmentalization can lead to maintaining losing positions in one account while simultaneously holding excess cash in another, violating basic portfolio optimization principles.

METHODOLOGY

3.1 Research Design

This study employs a mixed-methods research design combining quantitative survey methodology with analysis of actual portfolio compositions. The research was conducted between January 2024 and December 2024, capturing investor behavior during a period encompassing both market volatility and relative stability. The study aims to provide both breadth through quantitative analysis and depth through examination of actual investment patterns.

3.2 Sample Selection and Data Collection

The research utilized a stratified random sampling approach to ensure representation across different demographic segments. The target population consisted of retail investors actively trading in Indian equity markets through recognized stock exchanges. We defined retail investors as individual investors with portfolio sizes between ₹50,000 and ₹50,00,000, excluding high net worth individuals and institutional investors.

A total of 385 retail investors participated in the study, selected from major metropolitan cities including Mumbai, Delhi, Bangalore, Pune, Hyderabad, and Ahmedabad. The sample was stratified by age groups (21-30, 31-40, 41-50, 51-60, and above 60 years), education levels (undergraduate, graduate, postgraduate), income brackets (below ₹5 lakhs, ₹5-10 lakhs, ₹10-20 lakhs, above ₹20 lakhs annually), and investment experience (less than 2 years, 2-5 years, 5-10 years, more than 10 years).

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3.3 Data Collection Instruments

Primary data was collected through a structured questionnaire containing 45 items across five sections. The first section gathered demographic information including age, gender, education, occupation, and annual income. The second section assessed financial literacy through questions adapted from standardized financial literacy assessments, covering concepts of compound interest, inflation, risk diversification, and basic investment vehicles. The third section examined portfolio composition, asking respondents to provide percentage allocations across equities, debt instruments, mutual funds, real estate, gold, and other assets.

The fourth section evaluated behavioral tendencies through Likert-scale questions measuring overconfidence, loss aversion, herding behavior, and mental accounting tendencies. The fifth section explored information sources and decision-making processes, including reliance on financial advisors, use of fundamental versus technical analysis, and influence of social media and peer recommendations.

Secondary data was collected by requesting participants to share anonymized portfolio statements showing actual holdings and transaction history over the preceding 12 months. Approximately 220 participants provided this detailed portfolio information, enabling analysis of actual investment behavior rather than self-reported intentions.

3.4 Data Analysis Methods

Quantitative data analysis employed descriptive statistics to characterize portfolio compositions and investor demographics. Chi-square tests examined associations between categorical demographic variables and behavioral characteristics. Analysis of variance (ANOVA) tested for differences in portfolio diversification metrics across demographic groups. Correlation analysis explored relationships between financial literacy scores, behavioral bias measures, and portfolio performance indicators.

Regression analysis identified significant predictors of portfolio diversification and risk-adjusted returns. The dependent variables included portfolio concentration measures (Herfindahl index), systematic risk (portfolio beta), and risk-adjusted performance (Sharpe ratio). Independent variables encompassed demographic factors, financial literacy scores, and behavioral bias indicators.

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ISSN: 2178-7727

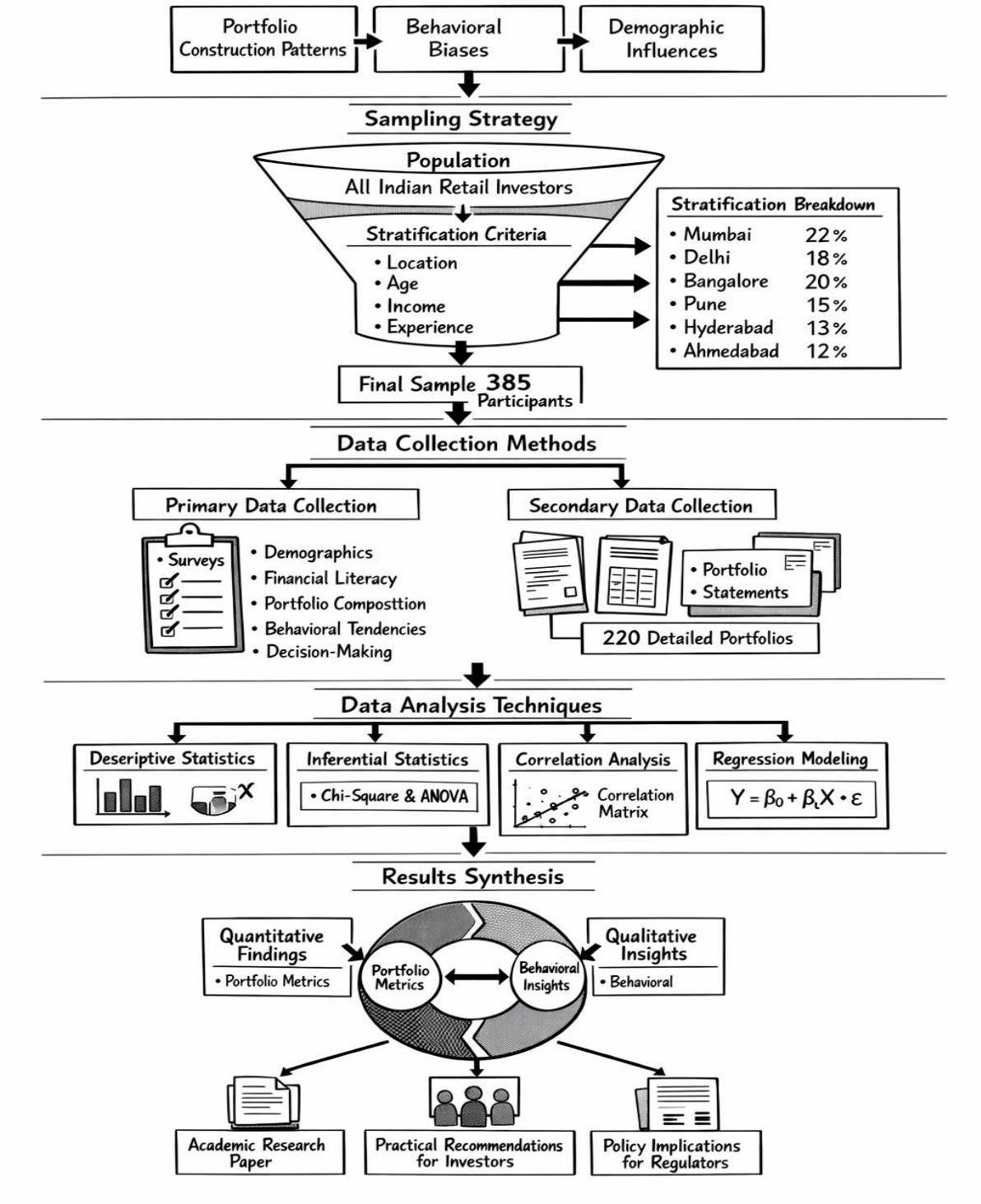

Figure 1: Research Methodology Framework

Table 1: Sample Demographics and Characteristics

Demographic Variable	Category	Frequency	Percentage	Cumulative %
Age Group	21-30 years	142	36.9%	36.9%
	31-40 years	128	33.2%	70.1%
	41-50 years	74	19.2%	89.3%
	51-60 years	32	8.3%	97.6%
	Above 60 years	9	2.4%	100.0%
Gender	Male	287	74.5%	74.5%

DOI: 10.22178/acta.27.1.26

ISSN: 2178-7727

	Female	98	25.5%	100.0%
Education	Undergraduate	89	23.1%	23.1%
	Graduate	178	46.2%	69.3%
	Postgraduate	118	30.7%	100.0%
Annual Income	Below ₹5 lakhs	76	19.7%	19.7%
	₹5-10 lakhs	142	36.9%	56.6%
	₹10-20 lakhs	118	30.7%	87.3%
	Above ₹20 lakhs	49	12.7%	100.0%
Investment Experience	Less than 2 years	154	40.0%	40.0%
	2-5 years	127	33.0%	73.0%
	5-10 years	71	18.4%	91.4%
	More than 10 years	33	8.6%	100.0%

EXPERIMENTAL SETUP

4.1 Survey Administration

The questionnaire was administered both online through Google Forms and offline through paper-based surveys to accommodate varying technology comfort levels among participants. Online responses constituted 68% of the total sample, while 32% were collected through in-person surveys conducted at investor education seminars and financial planning workshops. Prior to full deployment, the questionnaire underwent pilot testing with 35 investors to identify ambiguous questions and ensure clarity of language.

4.2 Portfolio Analysis Framework

For participants who provided detailed portfolio information, we conducted comprehensive analysis of actual holdings. Portfolio data was categorized into asset classes: domestic equities (further subdivided by market capitalization and sector), debt instruments (government securities, corporate bonds, fixed deposits), mutual funds (equity, debt, hybrid), real estate investments, gold (physical and paper), international securities, and alternative investments.

We calculated several portfolio metrics for each participant including portfolio concentration using the Herfindahl-Hirschman Index, systematic risk through beta calculation against the Nifty 50 index, total risk measured by portfolio standard deviation, and risk-adjusted returns using the Sharpe ratio. These quantitative measures enabled objective assessment of portfolio quality beyond self-reported perceptions.

4.3 Behavioral Bias Assessment

Behavioral biases were assessed through scenario-based questions designed to reveal underlying psychological tendencies. For overconfidence, participants rated their investment abilities relative to peers and predicted their portfolio returns for the coming year, which were later compared to actual outcomes. Loss aversion was measured through choices between certain versus risky outcomes framed as gains or losses. Herding behavior was assessed by questions about following others' investment decisions and reactions to market movements.

Mental accounting tendencies were evaluated by presenting scenarios involving multiple accounts and asking how participants would allocate gains, losses, and new investments. Recency bias was measured by asking participants to rate the likelihood of recent market trends continuing and comparing these to historical base rates.

DOI: 10.22178/acta.27.1.26

ISSN: 2178-7727

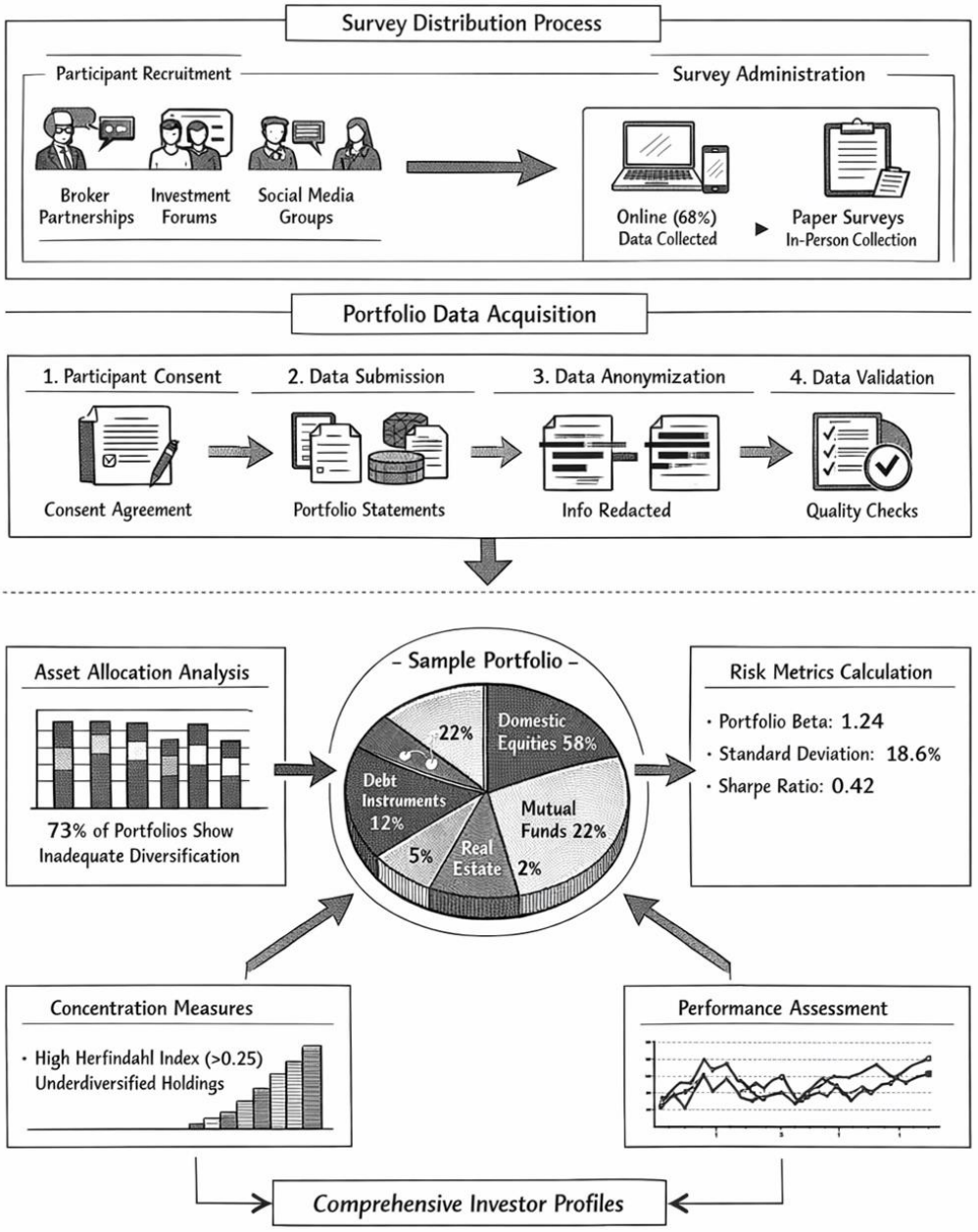

Figure 2: Data Collection and Portfolio Analysis Process

Table 2: Portfolio Analysis Metrics and Calculation Methods

Metric	Purpose	Calculation Method	Interpretation
Herfindahl-Hirschman Index	Measure portfolio concentration	Sum of squared weights of individual holdings	0-0.15: Well diversified; 0.15-0.25: Moderate concentration; >0.25: High concentration
Portfolio Beta	Measure systematic risk	Covariance(portfolio, market) / Variance(market)	<1: Less volatile than market; =1: Matches market; >1: More volatile than market
Portfolio Standard Deviation	Measure total risk	Square root of weighted variance of returns	Higher values indicate greater volatility and risk
Sharpe Ratio	Risk-adjusted return	(Portfolio Return - Risk Free Rate) / Portfolio Std Dev	Higher values indicate better risk-adjusted performance; >0.5 considered good

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Tracking Error	Divergence from benchmark	Standard deviation of difference between portfolio and benchmark returns	Lower values indicate closer tracking to benchmark
Information Ratio	Risk-adjusted excess return	(Portfolio Return - Benchmark Return) / Tracking Error	Measures manager skill; >0.5 considered good

RESULTS

5.1 Portfolio Composition Patterns

Analysis of portfolio compositions revealed significant deviations from optimal diversification principles. The average retail investor portfolio consisted of 58.3% domestic equities, 22.1% mutual funds, 11.8% debt instruments, 4.7% gold, 2.1% real estate, and merely 1.0% international securities. This heavy equity concentration substantially exceeds recommended allocations for most investor risk profiles and life stages.

Within equity holdings, concentration was even more pronounced. The average portfolio contained only 12 individual stocks, with the top three holdings representing 47.2% of total equity allocation. Large-cap stocks dominated at 62.4% of equity holdings, with mid-caps at 28.9% and small-caps at 8.7%. Sector concentration was also evident, with information technology, banking, and pharmaceutical sectors together accounting for 64.3% of average equity portfolios, reflecting home bias toward familiar high-profile companies.

The Herfindahl-Hirschman Index averaged 0.284 across the sample, indicating high portfolio concentration. Only 27% of portfolios scored below 0.15, suggesting adequate diversification. International diversification was particularly lacking, with 78.6% of participants having zero international exposure despite the potential risk reduction benefits.

5.2 Behavioral Bias Findings

Assessment of behavioral biases revealed that these psychological factors significantly influence investment decisions among Indian retail investors. Overconfidence was prevalent, with 68.3% of participants rating their investment skills as above average and 42.1% predicting they would outperform market indices, a statistical impossibility if accurate. Male investors demonstrated significantly higher overconfidence than female investors, consistent with prior research.

Herding behavior was evident in 61.7% of the sample, with participants acknowledging that they frequently sought confirmation from others before making investment decisions and felt more comfortable investing in securities that were popular or frequently discussed. This herding tendency was particularly pronounced among newer investors with less than two years of experience, where 73.4% exhibited strong herding characteristics.

Loss aversion manifested in holding behavior, with 72.8% of participants admitting they held losing positions longer than winning ones, hoping for price recovery. Mental accounting was observed in 58.4% of investors who maintained separate cash reserves for different purposes despite having investment capital available. Recency bias was particularly striking, with 76.3% of investors reporting that recent market performance significantly influenced their asset allocation decisions.

5.3 Demographic Influences on Investment Behavior

Age emerged as a significant determinant of investment behavior and portfolio characteristics. Younger investors (21-30 years) maintained higher equity allocations averaging 71.2% and exhibited greater risk-taking behavior, reflected in average portfolio betas of 1.32. Conversely, investors above 50 years maintained more conservative portfolios with 42.6% equity allocation and average betas of 0.87. However, younger investors also demonstrated poorer diversification with average Herfindahl indices of 0.312 compared to 0.241 for older investors.

DOI: 10.22178/acta.27.1.26

ISSN: 2178-7727

Education levels showed positive correlation with portfolio diversification and financial literacy but interestingly, mixed relationships with returns. Postgraduate degree holders maintained better diversified portfolios (average HHI of 0.253) compared to undergraduate investors (average HHI of 0.321). However, the highest risk-adjusted returns were observed among graduate-level investors, suggesting that excessive education might contribute to overconfidence and overtrading among postgraduate investors.

Income levels positively correlated with both portfolio size and diversification quality. Investors earning above ₹20 lakhs annually maintained significantly more diversified portfolios (average HHI of 0.228) and had higher allocations to international securities (4.3% average) compared to those earning below ₹5 lakhs (0.2% international allocation). Higher income investors also demonstrated lower behavioral bias scores and better financial literacy.

Gender differences were pronounced across multiple dimensions. Male investors maintained higher equity allocations (61.2% vs 48.7% for females), traded 63% more frequently, exhibited higher overconfidence scores, and consequently achieved lower risk-adjusted returns despite taking greater risks. Female investors demonstrated superior risk-adjusted performance with average Sharpe ratios of 0.51 compared to 0.38 for male investors, primarily due to lower trading frequency and better portfolio discipline.

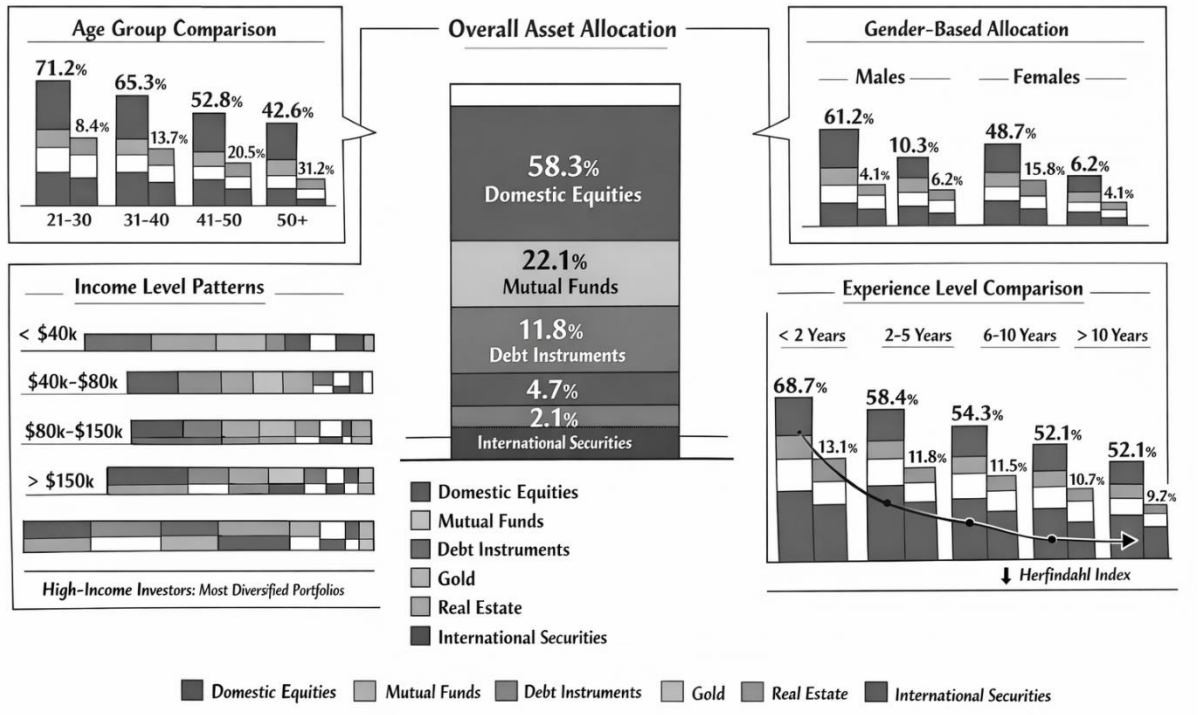

Figure 3: Portfolio Composition Analysis Across Investor Segments

Table 3: Portfolio Performance Metrics by Demographic Segments

Demographic Segment	Avg Portfolio Return (%)	Avg Portfolio Beta	Avg Sharpe Ratio	Avg HHI	Avg No. of Holdings
Age 21-30 years	11.2	1.32	0.38	0.312	9.4
Age 31-40 years	13.4	1.18	0.46	0.278	11.8
Age 41-50 years	12.1	1.02	0.44	0.256	14.2
Age 51-60 years	9.8	0.87	0.42	0.241	16.7
Male Investors	11.8	1.21	0.38	0.295	11.3
Female Investors	12.6	0.96	0.51	0.253	14.8
Income <₹5L	9.7	1.28	0.31	0.334	8.2

DOI: 10.22178/acta.27.1.26

ISSN: 2178-7727

Income ₹5-10L	11.4	1.19	0.39	0.289	10.7
Income ₹10-20L	12.8	1.14	0.44	0.264	13.4
Income >₹20L	13.9	1.08	0.52	0.228	18.6
Experience <2 years	9.4	1.37	0.29	0.347	7.8
Experience 2-5 years	12.1	1.18	0.42	0.281	11.2
Experience 5-10 years	13.7	1.09	0.48	0.249	15.3
Experience >10 years	14.2	0.94	0.56	0.218	21.4

Table 4: Correlation Matrix of Key Variables

Variable	Financial Literacy	Portfolio Diversification	Risk-Adjusted Returns	Behavioral Bias Score	Trading Frequency
Financial Literacy	1.000	0.524***	0.418***	-0.612***	-0.287**
Portfolio Diversification	0.524***	1.000	0.392***	-0.481***	-0.356***
Risk-Adjusted Returns	0.418***	0.392***	1.000	-0.567***	-0.634***
Behavioral Bias Score	-0.612***	-0.481***	-0.567***	1.000	0.543***
Trading Frequency	-0.287**	-0.356***	-0.634***	0.543***	1.000

*Note: *** indicates significance at p<0.001 level, ** at p<0.01 level*

DISCUSSION

6.1 Interpretation of Portfolio Composition Findings

The extreme equity concentration observed in retail investor portfolios raises significant concerns about risk management. While Indian equity markets have delivered strong long-term returns, the lack of diversification across asset classes exposes investors to unnecessary volatility and potential catastrophic losses during market downturns. The 58.3% average equity allocation substantially exceeds what financial planning principles would recommend for most investors, particularly considering that a significant portion of the sample consists of individuals with moderate risk tolerance based on their age and income profiles.

The minimal international diversification, with 78.6% of investors having zero international exposure, represents a particularly striking finding. This extreme home bias cannot be justified by rational investment considerations, as international diversification offers significant risk reduction benefits through low correlation with domestic markets. The lack of international holdings likely stems from familiarity bias, regulatory complexities perceived as barriers, and limited awareness of international investment vehicles such as international mutual funds and ETFs now readily available to Indian investors.

Within equity portfolios, concentration in familiar large-cap technology, banking, and pharmaceutical stocks reflects comfort with recognizable brand names rather than systematic sector allocation strategies. This familiarity bias potentially exposes investors to sector-specific risks that could be mitigated through broader sector diversification. The small average number of holdings (12 stocks) suggests that many investors have not achieved adequate diversification even within the equity component of their portfolios.

6.2 Behavioral Bias Implications

The high prevalence of behavioral biases documented in this study has direct implications for investment

DOI: 10.22178/acta.27.1.26

ISSN: 2178-7727

outcomes. Overconfidence, exhibited by 68.3% of participants, leads to excessive trading, inadequate diversification, and risk-taking beyond optimal levels. The gender disparity in overconfidence aligns with prior international research but merits particular attention in the Indian context where male-dominated investment culture may reinforce these tendencies.

Herding behavior, especially pronounced among newer investors, helps explain the cyclical nature of retail investor participation in Indian markets. During bull markets, herding drives excessive inflows near market peaks, while panic-driven outflows during corrections crystallize losses. This pro-cyclical investment pattern directly contradicts sound investment principles and substantially reduces long-term wealth accumulation.

Loss aversion manifesting as reluctance to realize losses creates tax inefficiency and opportunity costs from capital locked in underperforming investments. The disposition effect, where investors sell winners too quickly while holding losers too long, systematically reduces portfolio returns. Overcoming this deeply ingrained psychological tendency requires conscious effort and often professional guidance.

Mental accounting contributes to suboptimal overall portfolio construction, with investors maintaining separate buckets for different goals without considering correlations and total portfolio risk. This fragmented approach to portfolio management prevents achievement of efficient frontier portfolios that would maximize returns for given risk levels.

6.3 Demographic Patterns and Financial Literacy

The strong correlations between demographic factors and investment behavior highlight the importance of targeted investor education and advisory services. Younger investors benefit from their longer investment horizons, which allow for greater equity exposure, but their poor diversification and high behavioral bias scores suggest a need for education about risk management principles. The tendency of younger investors toward overconfidence and excessive trading, likely exacerbated by easy access to mobile trading platforms and social media investment communities, requires particular attention from both educators and regulators.

The superior risk-adjusted performance of female investors despite lower trading activity challenges stereotypes and suggests that the industry should actively encourage female participation while learning from their more disciplined investment approaches. The lower overconfidence and more patient investment style exhibited by female investors align with characteristics associated with successful long-term investing.

Financial literacy emerged as the single most important predictor of positive investment outcomes across the sample. The strong negative correlation between financial literacy and behavioral bias scores (-0.612) suggests that education can mitigate psychological pitfalls. However, the relationship between education level and investment outcomes was complex, with postgraduate investors showing higher literacy but not always superior returns, possibly due to overconfidence effects.

6.4 Practical Implications

For retail investors, the findings suggest several practical action steps. First, systematic evaluation of current portfolio diversification using objective metrics like the Herfindahl index can reveal concentration risks. Second, conscious efforts to include international exposure through mutual funds or ETFs can improve risk-adjusted returns. Third, implementing rules-based investment approaches, such as systematic rebalancing schedules, can counter behavioral biases. Fourth, reducing trading frequency and adopting longer holding periods generally improves outcomes.

For financial advisors and wealth managers, the research highlights the importance of behavioral coaching alongside traditional portfolio management. Identifying clients' specific behavioral tendencies through systematic assessment enables targeted interventions. Framing investment decisions to counteract known biases, such as presenting rebalancing actions as "buying low" rather than "selling winners," can improve

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ISSN: 2178-7727

client compliance with recommended strategies.

For policymakers and regulators, the findings underscore the urgent need for improved investor education initiatives, particularly targeting newer and younger investors. The extreme concentration and behavioral bias patterns observed suggest that current investor protection mechanisms may be insufficient. Enhanced disclosure requirements for portfolio concentration risks, mandatory risk profiling before account opening, and cooling-off periods for frequent traders could help protect retail investors from their own behavioral tendencies.

6.5 Limitations

This study has several limitations that should be acknowledged. The sample, while geographically diverse, is limited to major metropolitan areas and may not fully represent rural or semi-urban investors. The reliance on self-reported data for behavioral assessments introduces potential biases, though the inclusion of actual portfolio analysis for a subset of participants helps mitigate this concern. The study period of one year may not capture behavior across full market cycles. Additionally, the cross-sectional design limits ability to establish definitive causal relationships between variables.

CONCLUSION

This comprehensive study of portfolio investments and investor behavior among Indian retail investors reveals significant gaps between theoretical optimal portfolio construction and actual investor practices. The findings demonstrate that behavioral biases substantially influence investment decisions, leading to concentrated portfolios, inadequate diversification, and suboptimal risk-adjusted returns for many retail investors.

The average retail investor portfolio exhibits extreme concentration in domestic equities with minimal international diversification, exposing investors to unnecessary systematic risk. Behavioral biases including overconfidence, herding behavior, loss aversion, and recency bias are prevalent across the sample, with particularly pronounced effects among younger, less experienced, and male investors. These biases directly correlate with poor investment outcomes, as evidenced by the significant negative correlation between behavioral bias scores and risk-adjusted returns.

Demographic factors significantly influence investment behavior, with age, gender, income, and education all showing meaningful relationships with portfolio characteristics and outcomes. Financial literacy emerges as the most important determinant of investment success, exhibiting strong positive correlations with portfolio diversification and returns while showing strong negative correlations with behavioral bias manifestation.

The research contributes several important insights to the behavioral finance literature in the Indian context. First, it quantifies the prevalence of behavioral biases in a large sample of retail investors using both self-reported and objective portfolio metrics. Second, it demonstrates the tangible impact of these biases on portfolio outcomes. Third, it identifies demographic patterns that can inform targeted investor education initiatives. Fourth, it provides benchmark data on typical retail investor portfolio compositions against which individuals can evaluate their own holdings.

For practitioners, the findings suggest that successful financial advisory relationships must address behavioral dimensions alongside traditional portfolio optimization. Simply providing optimal portfolio recommendations proves insufficient when clients' psychological biases prevent them from following advice or lead to impulsive deviations from planned strategies. Behavioral coaching and systematic processes to counteract known biases should become integral components of wealth management services.

For investors themselves, awareness of common behavioral pitfalls represents the first step toward improved outcomes. Implementing systematic investment approaches, maintaining appropriate diversification including international exposure, minimizing trading frequency, and seeking objective feedback on portfolio

DOI: 10.22178/acta.27.1.26

ISSN: 2178-7727

construction can help overcome natural behavioral tendencies that undermine financial goals.

Future research should explore behavioral patterns across full market cycles to understand how investor psychology and portfolio decisions evolve during extended bull and bear markets. Longitudinal studies tracking the same investors over multiple years would provide valuable insights into learning effects and persistence of behavioral patterns. Investigation of specific interventions designed to mitigate behavioral biases would help identify most effective educational and advisory approaches. Additionally, research examining the role of digital platforms, robo-advisors, and social media in shaping retail investor behavior represents an important emerging area given the rapid technological transformation of financial services.

The democratization of financial markets through technology has created unprecedented opportunities for wealth creation through retail investing. However, realizing this potential requires that investors develop the knowledge, discipline, and awareness necessary to navigate behavioral pitfalls that have troubled investors throughout financial history. This research provides empirical foundation for efforts to improve retail investor outcomes in India's dynamic and growing capital markets.

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DOI: 10.22178/acta.27.1.26