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Risk Perception and Investment Preferences of Retail Investors in Mutual Fund

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Abstract

This study investigates the relationship between risk perception and investment preferences among retail investors in mutual funds within the Indian financial context. As mutual funds gain prominence as a preferred investment avenue, understanding the behavioral determinants of investor decision- making becomes increasingly important. The study examines the extent to which risk perception, alongside demographic factors and financial literacy, influences the selection of mutual fund schemes. A descriptive and analytical research design was employed using primary data collected through a structured questionnaire administered to 100 retail investors. Statistical techniques including descriptive statistics, Pearson correlation, multiple regression analysis, factor analysis, chi-square tests, and one-way ANOVA were applied via SPSS. Results indicate a statistically significant relationship between risk perception and investment preferences. Higher levels of financial literacy and income are positively associated with a greater inclination toward high-risk, high-return investment options, particularly equity-oriented mutual funds. Investors exhibiting lower risk tolerance demonstrate a preference for conservative alternatives such as debt and hybrid funds. Demographic variables, including gender, significantly influence investment decisions. The study concludes that enhancing financial literacy is critical to improving investment decision quality among retail investors. Findings offer practical implications for asset management companies, financial advisors, and policymakers in designing targeted investment products and investor education initiatives.

Keywords: risk perception, investment preferences, mutual funds, retail investors, financial literacy, behavioral finance, India

INTRODUCTION

The Indian mutual fund industry has witnessed remarkable expansion over the past decade, with Assets Under Management (AUM) crossing significant milestones driven by regulatory support, technological advancement, and campaigns such as "Mutual Funds Sahi Hai" by AMFI (2024). The widespread adoption of Systematic Investment Plans (SIPs) has democratized investment by enabling participation across income strata. Fintech platforms and mobile-based applications have further reduced entry barriers, drawing an increasingly young and digitally savvy investor base into the fold.

Despite this growth, a critical gap persists between objective investment risk and investors' subjective perception of that risk. Traditional finance theories, notably the Efficient Market Hypothesis, assume rational investor behavior aimed at return maximization. However, behavioral finance demonstrates that real-world decisions are frequently influenced by psychological biases, emotional responses, and information asymmetries (Kahneman & Tversky, 1979). Retail investors, lacking professional guidance and comprehensive market information, remain particularly vulnerable to such deviations from rationality.

In this context, understanding how retail investors perceive risk and how such perceptions translate into fund selection constitutes an area of both

theoretical and practical significance. Risk perception, defined as an individual's subjective judgment of uncertainty and potential loss, may differ substantially from objectively measured volatility or standard deviation (Slovic, 1987). Misalignment between perceived and actual risk can lead to suboptimal portfolio allocation, premature redemptions, and failure to achieve long-term financial goals.

The present study addresses this gap by examining the relationship between risk perception and mutual fund investment preferences among retail investors in Karnataka, India. It further explores the moderating roles of financial literacy and demographic variables in shaping this relationship, thereby contributing to the behavioral finance literature with region-specific empirical evidence.

RESEARCH OBJECTIVES

The primary objective of this study is to analyze the relationship between risk perception and investment preferences of retail investors in mutual funds. In pursuit of this overarching aim, the following specific objectives were formulated:

1. To identify the key factors influencing risk perception among retail investors.
2. To examine the influence of demographic variables on investment behavior and risk tolerance.
3. To evaluate investor preferences across equity, debt, and hybrid mutual fund categories.
4. To assess the role of financial literacy as a moderating factor in investment decision-making.
5. To analyze the behavioral biases that affect investors' decision-making processes.3.

THEORETICAL FRAMEWORK

This study is grounded in three interrelated theoretical perspectives that together explain the complexity of retail investor behavior in mutual fund markets.

Modern Portfolio Theory (Markowitz, 1952). MPT posits that rational investors seek to maximize returns for a given level of risk by constructing optimally diversified portfolios. The risk- return tradeoff is central to this theory: higher potential returns are associated with greater risk exposure. MPT provides the normative benchmark against which actual investor behavior is assessed in this study.

Prospect Theory (Kahneman & Tversky, 1979). Prospect Theory challenges the rationality assumption of MPT by demonstrating that individuals evaluate outcomes relative to a reference point and are more sensitive to losses than equivalent gains—a phenomenon termed loss aversion. Investors behave differently in gain and loss domains; they tend to be risk-averse when facing gains but risk-seeking when confronting losses. This asymmetry explains why many retail investors prematurely exit profitable funds while retaining underperforming ones.

Behavioral Finance Theory. Behavioral finance integrates psychological insights into financial decision-making, recognizing that heuristics, cognitive biases (overconfidence, anchoring, herding), and emotional responses systematically deviate from rational behavior (Barberis & Thaler, 2003). Applied to mutual funds, this theory explains why investors select funds based on recent performance, brand familiarity, or peer recommendations

rather than fundamental risk-return analysis.

Risk Tolerance Theory. This theory distinguishes between risk capacity (objective financial ability to bear losses) and risk willingness (psychological comfort with uncertainty). A mismatch between these dimensions—common among retail investors—leads to misaligned investment choices that fail to serve long-term financial goals.

LITERATURE REVIEW

A growing body of empirical literature has examined the intersection of risk perception, behavioral biases, and mutual fund investment decisions. Kahneman and Tversky (1979) established the foundational behavioral argument that investors do not treat risk symmetrically, giving disproportionate weight to potential losses. Slovic (1987) further demonstrated that risk perception is subjective and shaped by personal experience, cultural context, and access to information—factors that systematically diverge from statistical risk measures.

Demographic determinants of investment behavior have received extensive scholarly attention. Grable and Lytton (1999) established that age, income, and education significantly predict risk tolerance, with younger, higher-income, and more educated investors exhibiting greater willingness to accept financial risk. These findings have been replicated in Indian contexts, where socio-economic heterogeneity adds additional complexity (Sharma & Verma, 2025; Reddy, 2025).

The role of financial literacy as a moderating factor is well-documented. Lusardi and Mitchell (2014) demonstrated that financially literate individuals make more informed investment decisions, better diversify their portfolios, and exhibit greater resilience during market downturns. In the mutual fund context, investors with higher knowledge levels rely more on analytical sources and exhibit greater satisfaction with their investment outcomes (Kaur, 2018; Prasad & Moghe, 2025). However, Purnomo (2025) cautions that financial literacy may not uniformly neutralize behavioral biases, particularly loss aversion and overconfidence.

Regarding mutual fund selection patterns, Capon et al. (1996) found that investors favor funds based on past performance, reputation, and peer recommendations rather than systematic risk analysis. More recently, Kumar et al. (2025) confirmed that perceived risk and financial literacy jointly influence investment intention, while Zhang et al. (2023) demonstrated that prior investment experience dynamically reshapes risk perception over time. Huber and Huber (2018) contributed an important methodological insight: even the visual presentation of financial data (such as chart scaling) can alter investor risk perception and investment propensity, underscoring the malleability of perceived risk.

Behavioral biases in investment decision-making have been documented extensively. Bagchi (2022) and Bailey et al. (2010) confirmed that overconfidence, herding, and loss aversion lead to suboptimal mutual fund allocation and poor timing decisions. Studies by Jadeja (2025) and Reddy (2026) further establish that emotional and cognitive biases collectively impair long-term portfolio performance. The present study builds upon this literature by providing region-specific empirical analysis of how these factors converge to determine mutual fund

preferences in the Indian context.

RESEARCH METHODOLOGY

Research Design. The study adopts a combined descriptive and analytical research design. The descriptive component characterizes investor demographics, behavioral patterns, and investment preferences, while the analytical component examines the statistical relationships between key variables through hypothesis testing.

Data Collection. Primary data were collected using a structured questionnaire administered to 100 retail mutual fund investors in Karnataka, India, via online platforms. The questionnaire comprised five sections covering: (a) demographic details, (b) investment behavior, (c) risk perception (Likert scale, 1–5), (d) financial literacy assessment, and (e) behavioral bias indicators.

Sampling. A non-probability convenience sampling technique was employed, supplemented by implicit stratification across age, income, education, and occupation categories to enhance representativeness. A sample size of 100 is appropriate for the inferential techniques employed.

Variables. Risk perception (independent variable) was measured using Likert-scale items capturing willingness to take risk, comfort with equity investments, loss tolerance, and market anxiety. Investment preference (dependent variable) captured fund type choices (equity, debt, hybrid). Financial literacy served as a moderating variable, while demographic characteristics (age, gender, income, education, occupation) functioned as control variables.

Analytical Tools. Data were analyzed using IBM SPSS Statistics. Techniques employed included: (a) descriptive statistics (frequencies, percentages, means); (b) Pearson correlation analysis; (c) multiple regression analysis (OLS); (d) one-way ANOVA; (e) chi-square tests; and (f) factor analysis (Principal Component Analysis with Varimax rotation). Kaiser-Meyer-Olkin (KMO) and Bartlett's tests were conducted to validate factor analysis suitability.

DATA ANALYSIS AND RESULTS

Demographic Profile of Respondents

Table 1 presents key demographic characteristics of the 100 respondents. The sample is skewed toward younger investors, with 72% below 35 years of age, consistent with the national trend of increased youth participation in mutual funds. Male respondents constitute 60% of the sample. A majority (45%) hold postgraduate qualifications, and 46% are students, reflecting the survey's outreach through academic and digital channels. Income distribution reveals that 44% earn below ₹20,000 per month, suggesting that SIP-based investments enable participation across low-income segments.

Investment Preference Analysis

Hybrid funds emerged as the most preferred category (35%), followed by equity funds (25%), debt funds (18%), and 22% expressing uncertainty. SIP was the dominant investment mode (46%), indicating a preference for systematic, disciplined investing. Capital appreciation was the primary investment objective for 44% of respondents, while 30% sought regular income. These patterns suggest a moderate risk appetite, with investors gravitating toward balanced instruments that offer growth potential while limiting downside risk.

Financial Literacy Analysis

Approximately 71% of respondents rated their financial knowledge as moderate to high. However, only 52.5% confirmed understanding of the risk-return trade-off, with 30.3% indicating no understanding and 17.2% uncertain. The Internet/YouTube was the primary source of investment knowledge (29.3%), followed by friends/family (27.3%), news/articles (24.2%), and financial advisors (19.2%). This reliance on informal and digital sources suggests vulnerability to misinformation and herd-driven information cascades.

Correlation Analysis

The Pearson correlation matrix (Table 2) reveals several statistically significant associations. Financial knowledge demonstrates the strongest positive relationship with risk-taking ability ($r = 0.452$, $p < 0.001$), indicating that financially literate investors exhibit greater willingness to engage with higher- risk funds. Investment duration is positively correlated with investment method ($r = 0.411$, $p < 0.001$), suggesting that longer-term investors tend to utilize more systematic approaches. A moderate positive relationship exists between risk-taking willingness and preference for safe investments ($r = 0.374$, $p < 0.001$), which may reflect compensation behavior—investors balancing risky and safe allocations. Market anxiety exhibits a significant negative correlation with investment method ($r = –0.250$, $p =0.012$), suggesting that anxious investors avoid systematic commitments such as SIPs.

Regression Analysis

Multiple regression analysis was conducted with monthly income as the dependent variable and investment-related behavioral variables as predictors (Table 3). The model explains 46.8% of the variance in income ($R^2 = 0.468$), with the overall model being statistically significant ($F = 16.521$, $p < 0.001$). Investment duration ($\beta = 0.543$, $p < 0.001$) and investment method ($\beta = 0.199$, $p = 0.020$) are the only significant predictors, indicating that longer-term, methodical investors are associated with higher income profiles. Fund type preference, investment objectives, and current participation status did not achieve statistical significance, suggesting that behavioral and experiential factors outweigh cognitive preferences in explaining income-linked investment patterns.

ANOVA and Chi-Square Results

One-way ANOVA results indicate that age group ($F = 2.130$, $p = 0.083$) and income level ($p = 0.930$) do not significantly differentiate mutual fund investment behavior, leading to acceptance of the respective null hypotheses. However, gender significantly differentiates investment behavior (F-value corresponding to $p = 0.006 < 0.05$), resulting in rejection of the null hypothesis. The chi-square test corroborates this finding, showing a statistically significant association between gender and mutual fund performance perception ($\chi^2 = 7.361$, $df = 1$, $p = 0.007$), reinforced by Fisher's Exact Test ($p = 0.009$).

Factor Analysis

Factor analysis (PCA with Varimax rotation) identified six underlying dimensions of mutual fund investment behavior. The KMO value of 0.645 and Bartlett's Test of Sphericity ($\chi^2 = 438.08$, $df = 136$, $p < 0.001$) confirmed the suitability of the data for factor analysis. The six components extracted and their primary constituent variables are summarized in Table 4.

DISCUSSION

The findings of this study offer several important insights into the behavioral dynamics governing retail mutual fund investment in an emerging market context. First, the strong positive correlation between financial literacy and risk-taking ability (r = 0.452) provides robust empirical support for the theoretical proposition that knowledge mediates risk perception. Financially literate investors are better equipped to distinguish short-term volatility from long-term investment risk, enabling more calibrated, growth-oriented fund selection. This corroborates Lusardi and Mitchell (2014) and Kaur (2018), who similarly found that knowledge-based investors make superior allocation decisions.

Second, the predominance of hybrid fund preferences (35%) and SIP as the dominant investment mode (46%) suggests that a substantial segment of the retail investor base seeks moderate risk exposure with systematic discipline—consistent with the theoretical predictions of Risk Tolerance Theory regarding the divergence between risk capacity and risk willingness. Many investors possess the capacity for

higher-risk equity investments but opt for moderate-risk alternatives due to psychological discomfort, a manifestation of loss aversion as articulated by Prospect Theory.

Third, the significant gender-based differences in investment behavior (p = 0.006) are consistent with broader literature suggesting that male investors tend toward higher risk tolerance while female investors exhibit greater caution (Grable & Lytton, 1999). The non-significance of age and income as determinants of investment participation—contrary to some prior studies—may reflect the democratizing influence of SIPs and digital platforms, which reduce income-based barriers to market entry.

Fourth, the regression model's finding that investment duration and method significantly predict income profiles suggests a virtuous cycle: higher-income investors maintain longer investment horizons and utilize systematic approaches, which in turn generate superior wealth outcomes. This relationship underscores the behavioral finance insight that patient, process-driven investing overcomes emotional biases that undermine returns.

The factor analysis reveals that investor behavior is genuinely multidimensional, decomposing into risk cognition, behavioral tendencies, experiential knowledge, objectives, and conservative versus growth orientations. This complexity challenges simplistic investor categorization schemes and argues for more nuanced risk profiling by financial institutions.

HYPOTHESIS TESTING

H1 is supported: multiple statistically significant correlations between risk perception variables and investment behavior confirm the centrality of risk perception in fund selection. H2 is partially supported: while gender significantly differentiates investment behavior, age and income do not, suggesting that psychological rather than purely demographic factors are more decisive determinants in this sample. H3 is strongly supported, with financial literacy demonstrating the highest bivariate correlation with risk-taking behavior. H4 is supported through regression and correlation analysis, confirming that investment experience fosters comfort with systematic and higher-risk investment approaches.

CONCLUSION

This study provides empirical evidence that risk perception is a significant and multifaceted determinant of mutual fund investment preferences among retail investors in India. Investors with higher perceived risk gravitate toward debt and hybrid funds, while those with greater risk tolerance— often associated with higher financial literacy—prefer equity-oriented instruments. Financial literacy emerges as the most powerful moderating variable, suggesting that knowledge-based interventions can meaningfully shift investor behavior toward more growth-oriented and optimal portfolio configurations.

The study confirms gender as a significant demographic differentiator of investment behavior, while age and income appear less decisive in the current sample—possibly reflecting the equalizing effects of digital investment platforms. The factor-analytic structure of investor behavior underscores its multidimensionality, encompassing risk cognition, behavioral tendencies, experiential learning, and goal orientation.

Theoretical Implications. The study enriches the behavioral finance literature by providing region- specific evidence from an emerging market, validating the applicability of Prospect Theory and Behavioral Finance Theory to the Indian mutual fund context. The demonstrated divergence between risk capacity and risk willingness reinforces the salience of Risk Tolerance Theory in explaining investor heterogeneity.

Managerial Implications. Asset management companies should develop robust investor risk profiling mechanisms that extend beyond simplistic questionnaires to capture financial literacy levels and psychological risk willingness. Financial advisors should prioritize educating clients about behavioral biases and long-term risk-return dynamics. Policymakers and regulatory bodies such as SEBI should strengthen and expand financial literacy programs, particularly targeting young, first- generation investors who rely predominantly on informal digital sources. Fund houses should design and communicate product features—particularly hybrid funds—in ways that make moderate risk profiles more explicit and accessible.

Limitations and Future Research. This study is cross-sectional and geographically limited to Karnataka, restricting longitudinal inference and broader generalizability. Future research should employ longitudinal designs to track the evolution of risk perception over market cycles, extend geographic coverage to comparative urban-rural or cross-country analyses, and incorporate additional asset classes such as equities, real estate, and digital assets to capture the full spectrum of retail investment behavior. The integration of advanced psychological constructs—personality traits,emotional intelligence, and cognitive flexibility—into behavioral investor models represents a particularly fruitful avenue for future inquiry.

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Table 1: Demographic Profile of Respondents

Demographic Variable	Category	Frequency (%)
Age	Below 25	42%
	25–35	30%
	36–45	17%
	Above 45	11%
Gender	Male	60%
	Female	40%
Education	Undergraduate	21%
	Graduate	25%
	Postgraduate	45%
	Professional	9%
Occupation	Student	46%
	Salaried Employee	28%
	Self-employed/Professional	26%
Monthly Income	Below ₹20,000	44%
	₹20,000–₹50,000	22%
	₹50,001–₹1,00,000	22%
	Above ₹1,00,000	12%

*Table 2: Key Pearson Correlation Results (n = 100). *** p < 0.001; ** p < 0.01; * p < 0.05*

Variable Pair	Pearson r	Sig. (2-tailed)
Financial Knowledge ↔ Risk-Taking Ability	0.452	0.000***
Investment Duration ↔ Investment Method	0.411	0.000***
Risk-Taking ↔ Safe Investment Preference	0.374	0.000***
Confidence ↔ Risk-Taking Ability	0.353	0.000***
Investment Objective ↔ Risk-Taking Ability	0.229	0.022*
Fund Type ↔ Investment Objective	0.212	0.034*
Market Anxiety ↔ Investment Method	−0.250	0.012*
Investment Objective ↔ Loss Avoidance	0.267	0.007**

*Table 3: Multiple Regression Results (Dependent Variable: Monthly Income). *** p < 0.001; * p < 0.05; ns = not significant*

Predictor Variable	β (Standardized)	Sig.
Investment Duration	0.543	0.000***
Investment Method (SIP/Lump)	0.199	0.020*
Fund Type Preference	0.039	0.626 (ns)
Investment Objective	0.143	0.072 (ns)
Current MF Participation	0.022	0.780 (ns)
R^2 = 0.468; F = 16.521; p < 0.001		

Table 4: Factor Analysis – Rotated Component Matrix Summary

Component	Label	Key Variables (Loading ≥ 0.60)
1	Risk Tolerance & Financial Awareness	Equity comfort (0.794), Financial knowledge (0.743), Guaranteed return preference (0.677), Investment confidence (0.673), Risk-taking willingness (0.654), Short-term loss tolerance (0.603)
2	Behavioral Biases	Herd behavior (0.741), Loss avoidance (0.602), Market anxiety (0.487)
3	Investment Experience & Method	Investment method (0.803), Investment duration (0.766)
4	Investment Objectives & Conceptual Understanding	Primary objective (0.813), Risk-return understanding (0.633)
5	Conservative Preference	Safe investment preference (0.666), MF participation (0.709)
6	Fund Preference & Information Sources	Fund type preference (0.734)

Table 5: Summary of Hypothesis Testing Results

Hypothesis	Test Applied	Result	Decision
H1: Risk perception significantly influences investment preference	Pearson Correlation	$r = 0.374$ to 0.452 ($p < 0.05$)	Accepted
H2: Demographic factors significantly affect risk perception	Chi-Square & ANOVA	Gender: $p = 0.006$; Age: $p = 0.083$; Income: $p = 0.930$	Partially Accepted (Gender)
H3: Financial literacy positively influences risk tolerance	Pearson Correlation	$r = 0.452$ ($p < 0.001$)	Accepted
H4: Experienced investors prefer higher-risk funds	Correlation & Regression	Duration $\beta = 0.543$ ($p < 0.001$); experience → method significance	Accepted