

DECODING INVESTMENT PREFERENCES OF WOMEN INVESTORS: A Conjoint Analysis Integrating Behavioural Finance Perspectives in the Indian Context

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Abstract

How do women investors in India actually make financial decisions — and what do they genuinely value when product features compete for their attention? This study takes a rigorous look at those questions through conjoint analysis, a preference-elicitation methodology capable of capturing the simultaneous trade-offs that any real investment choice requires. Drawing on 853 Indian working women investors who completed structured choice tasks, we decompose aggregate preferences into measurable part-worth utilities across three attribute clusters: Financial Security Objectives (53.32% of total decision weight), Life Goal Objectives (34.11%), and Performance Objectives (12.57%). Six hypotheses grounded in behavioural finance theory — spanning prospect theory, loss aversion, overconfidence, herding, and financial literacy — are developed and tested.

Several findings deserve immediate attention. Transferability is the single most powerful preference driver (utility = 0.377), followed by income generation (0.068) and stability (0.059). Retirement planning (−0.191) and medical contingency (−0.326) generate notably negative utilities, signalling a pattern of present-biased underinvestment in precisely the long-horizon protections women are statistically most likely to need. Overconfidence emerges as the dominant predictor of return expectations ($\beta = .906$, $p < .001$), while financial literacy — rather than expanding risk appetite directly — functions as a cognitive moderator that tempers overconfidence-driven return-chasing. Three investor segments emerge: Holistic High-Priority investors (5.3%), Prestige-Driven investors (51.5%), and a Low-Engagement majority (43.3%). The study offers a replicable methodological framework for conjoint-based preference research in emerging markets, with practical implications for product designers, financial advisors, and policymakers.

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JEL Classification: G11, G40, G41, J16

1. Introduction

Women's growing

This study directly addresses four research gaps that the literature has left open. First, descriptive methods cannot measure attribute-level trade-offs with any precision. Second, the integration of conjoint methodology with behavioural finance theory in studies focused on women investors is thin at best. Third, gender-sensitive, methodologically rigorous work grounded in the Indian context remains scarce. Fourth, preference-based segmentation of the women investor population — a precondition for meaningful product customisation — is virtually absent from the literature. Through conjoint analysis of 853 Indian women investors, this study decomposes aggregate preferences into part-worth utilities, tests six behaviourally grounded hypotheses, and identifies investor segments with distinct utility profiles.

The paper is structured as follows: Section 2 develops the theoretical framework; Section 3 reviews relevant literature and formulates hypotheses; Section 4 establishes research questions and objectives; Section 5 describes the methodology; Section 6 presents results; Sections 7 and 8 offer discussion and implications; and Section 9 charts directions for future research.

2. Theoretical Framework

Three theoretical pillars support this study, each addressing a different dimension of how investment preferences form and express themselves.

The primary pillar is prospect theory (Kahneman & Tversky, 1979). Unlike classical expected utility theory, which evaluates outcomes in terms of final wealth positions, prospect theory demonstrates that people assess gains and losses relative to a psychologically salient reference point — and that losses carry roughly twice the psychological weight of equivalent gains. For investors, the practical consequence is clear: loss aversion creates a systematic pull toward capital-protected, liquid instruments, not because investors fail to understand the return trade-off, but because the asymmetric structure of their utility function makes downside risk feel disproportionately consequential. This theoretical prediction has direct, testable implications for the preference structures this study examines.

The second pillar encompasses the cognitive bias framework that behavioural finance has developed as a counterweight to rational-agent models. Three biases are particularly relevant here. Overconfidence — specifically the tendency to overestimate one's investment ability and the precision of one's return forecasts — consistently inflates performance expectations and amplifies the weight investors assign to return-oriented attributes. Herding describes the tendency to anchor preference formation on the observed choices of social reference groups, a mechanism especially potent in collectivist cultural contexts where peer and family norms carry strong normative authority. Present bias captures the well-documented inclination to steeply discount future contingencies in favour of present-period flexibility — producing underinvestment in retirement security and health protection even among investors who recognise their importance in the abstract.

The third pillar is the financial literacy framework developed by Lusardi and Mitchell (2008), which positions cognitive financial capacity as a variable that moderates — rather than simply bypasses — behavioural biases. The interesting theoretical question is not merely whether financial literacy influences preferences, but how it interacts with constructs like overconfidence when both are simultaneously present. As the results will demonstrate, this interaction is more surprising and more theoretically consequential than a simple main-effects story would suggest.

subgroups with different utility functions, rather than forcing all respondents into a single aggregate preference structure.

Despite this methodological maturity, conjoint analysis has been almost entirely absent from the Indian women investor literature. The studies that do exist in this domain have largely relied on the simpler descriptive techniques that conjoint was developed to supersede — leaving a fundamental empirical question unanswered about what Indian women investors actually trade off when facing real product choices.

3.2 Gender Variations in Risk-Taking and the Safety-Return Trade-Off

A substantial body of evidence positions gender as a reliable predictor of financial risk tolerance, portfolio composition, and trading behaviour. The landmark Barber and Odean (2001) analysis — drawing on transaction records from more than 35,000 brokerage accounts — established that men trade far more actively than women, a pattern the authors attributed to overconfidence, and that this excess trading came at a meaningful cost to net returns. Women, trading less frequently, achieved better risk-adjusted outcomes. This finding has since been replicated across different market environments and data sources.

On portfolio structure, Jianakoplos and Bernasek (1998) found that single women hold substantially smaller allocations to risky assets than comparable men, even controlling for income and wealth. Sunden and Surette (1998) observed a parallel pattern in retirement savings contexts, with women consistently preferring capital-protected, interest-bearing instruments over equity exposure when constructing pension portfolios. These preferences appear to be cross-culturally robust: Charness and Gneezy (2012), synthesising fifteen experimental studies, confirmed that the gender risk gap holds across different cultural settings and experimental designs. Roszkowski and Grable (2005) pushed the analysis further, showing that financial risk tolerance functions as a gender-differentiated trait even after controlling for wealth levels — the gap is not simply a wealth proxy.

In the Indian context specifically, Sultana and Pardhasaradhi (2012) documented consistent preferences among women for dividend income, safety features, and collective investment vehicles. Srivastava (2010) reported that capital preservation occupies the dominant position in the preference hierarchy of Indian women investors. The body of evidence points coherently in one direction — but is almost entirely generated through methods that cannot handle the simultaneous trade-offs that real investment choices entail. Translating these preference tendencies into measurable attribute-level utilities is exactly what this study undertakes.

H1: Among women investors, safety and liquidity characteristics have a much greater part-worth utility than return and growth characteristics.

3.3 Capital-

investors know, but for the cognitive tools they have available when evaluating complex product choices and resisting the pull of behavioural biases.

The moderation angle was developed by Dhar and Zhu (2006), who showed that investor sophistication is associated with a meaningfully reduced disposition effect — the tendency to sell winning investments prematurely and hold losers too long. More knowledgeable investors make systematically different decisions, with financial literacy apparently functioning as one mechanism through which this sophistication operates. The conventional hypothesis, then, is that higher financial literacy reduces risk aversion by expanding investors' sense of competence across a broader range of product types, shifting preferences toward growth-oriented assets.

This study tests that hypothesis in the Indian women investor context. But as the results will reveal, the relationship between financial literacy and risk preference is considerably more nuanced once overconfidence enters the picture — a finding that requires a fundamental rethinking of what financial literacy actually does.

H3: There is a significant positive relation between the level of financial literacy and the willingness to take risk and the desire to invest in attributes characteristic of growth orientation.

3.5 Herding Behaviour and Preference Alignment

Herding describes the tendency to anchor financial decisions on the observed choices of peers, family members, or social reference groups rather than on independent product evaluation. In collectivist cultural environments — and India presents an unusually strong case of collectivism in financial decision-making — this mechanism is theoretically expected to be a powerful shaper of preference formation.

Chandra (2008), examining Indian retail investors, documented overconfidence, anchoring, representativeness bias, and herding behaviour, with women generally displaying more conservative profiles. The hypothesis for this study is that social influence, operating as a herding proxy, should be positively associated with conformity to peer and family investment patterns — particularly in dimensions like safety preference and goal-oriented orientation, where social proof legitimises conservative choices. The influence of herding on multi-attribute utility functions, however, remains largely unexplored: whether social influence produces convergence in preferences across multiple product dimensions simultaneously, or whether its effects are more selective, is an empirical question the data can address.

H4: Herding behaviour is an important moderator of preferences in investment attributes among women investors, resulting in conformity to peer or family investment decisions.

3.6 Heterogeneity of Investor Preferences and Segmentation

Preference heterogeneity is not a nuisance to be

overconfidence is a distinguishing feature of Indian women investors on average — but this finding itself may be method-dependent if the instruments used to measure overconfidence are inadequate. A composite, multi-item operationalisation that maps onto the distinct sub-dimensions of overconfidence is essential for generating valid estimates.

H6: Overconfidence bias has a strong impact on the performance expectations of women investors and their preference for return-related investment attributes.

4. Research Questions and Objectives

4.1 Research Questions

The following research questions guide the study:

RQ1: Which investment characteristics — risk, return, liquidity, tenure, tax benefits — carry the greatest weight when women investors evaluate competing investment avenues?

RQ2: How do behavioural biases (overconfidence, loss aversion, herding, reference point bias) shape women investors' financial decision-making?

RQ3: How do working women investors rank competing investment objectives — safety, growth, income, liquidity — relative to one another?

RQ4: Can meaningful investor segments be identified among women investors based on attribute preferences and utility functions?

RQ5: How does financial literacy influence the quality of investment decisions and attribute prioritisation among women investors?

RQ6: How do women investors trade off competing investment attributes when aligning financial goals with appropriate investment avenues?

4.2 Research Objectives

R01: To determine the most preferred investment attributes among women investors using conjoint analysis.

R02: To measure the relative preference weights women investors assign to competing investment objectives — safety, growth, income, and liquidity.

R03: To investigate how key behavioural biases — loss aversion, overconfidence, herding, and reference point effects — influence women investors' decisions.

6.1 Part-Worth Utility Estimates

Table 1 presents the conjoint part-worth utility estimates across all attribute levels. Positive values indicate preferred levels; negative values indicate less preferred levels relative to the attribute cluster mean.

Attribute Cluster	Attribute Level	Utility	Interpretation
Life Goal Objectives	Income	0.068	Most preferred within cluster
Life Goal Objectives	Tax Benefits	0.043	Moderately preferred
Life Goal Objectives	Wealth Creation	−0.021	Slightly below neutral
Life Goal Objectives	Safety	−0.089	Least preferred in cluster
Financial Security Objectives	Transferability	0.377	Strongest preference overall
Financial Security Objectives	Prestige	0.169	Moderately preferred
Financial Security Objectives	Children's Education	0.061	Slight positive preference
Financial Security Objectives	Purchase of Home	−0.089	Less preferred
Financial Security Objectives	Retirement Planning	−0.191	Lower preference
Financial Security Objectives	Medical Contingency	−0.326	Least preferred overall
Performance Objectives	Stability	0.059	Preferred
Performance Objectives	Returns	−0.059	Slightly less preferred

Table 1: Conjoint Analysis Part-Worth Utility Estimates

6.2 Attribute Importance Values

The relative importance of each attribute cluster — computed as a share of total decision weight — is presented in Table 2.

Attribute Cluster	Importance (%)	Rank	Interpretation
Financial Security Objectives	53.32%	1	Primary decision driver
Life Goal Objectives	34.11%	2	Secondary decision driver
Performance Objectives	12.57%	3	Tertiary factor

Table 3: Conjoint Model Fit Statistics

6.4 Hypothesis Testing

H1: Safety/Liquidity vs. Return/Growth Utility

Paired t-test: $M(\text{safety}) = 2.851$, $M(\text{return}) = 3.955$, $t(852) = -21.44$, $p < .001$, Cohen's $d = -0.734$. Return/growth attributes carry greater aggregate weight, but transferability (liquidity proxy) dominates within the Financial Security cluster. The life-goal safety attribute generates negative utility – not because safety is discounted, but because it is already captured by the Financial Security cluster. H1 is partially supported at the attribute cluster level.

H2: Loss Aversion → Capital-Protected Preference

Multiple regression: $b(\text{Protection}) = 0.623$, $b(\text{Risk}) = -0.009$, $R^2 = 0.355$, $F(2,850) = 233.42$, $p < .001$. Protection orientation is a strong and significant predictor of safety preference, accounting for 35.5% of explained variance. H2 is supported.

H3 & H6: Predictors of Return Preference – Overconfidence, Financial Literacy, and Income

Model	R	R ²	Adj. R ²	Std. Error
Model 1 (FL + Income only)	0.618	0.382	0.381	1.892
Model 2 (OC + FL + Income)	0.752	0.566	0.565	1.587
ΔR^2	+0.184			$F(3,849)=369.21, p<.001$

Table 4: Hierarchical Regression – Predictors of Return Preference

volatile, growth-oriented alternatives. But what makes this finding genuinely interesting is not its direction so much as its specific texture.

Transferability, with a part-worth utility of 0.377, drives Financial Security preferences far more powerfully than any other attribute in the full solution. This is not safety in a static sense — it is financial flexibility. Indian women investors, the data suggest, are not simply seeking protection against loss; they are prioritising the practical ability to reassign or liquidate holdings in response to the unpredictable demands of real household financial management. Precautionary savings motives, well-documented in the literature by Sahi and colleagues (2013) and Rajarajan (2003), are expressed here not as a desire for guaranteed returns but as a demand for optionality. The positive utility of Prestige (0.169) adds a dimension that purely financial frameworks consistently miss. Investment choices carry social meaning, especially in status-conscious cultural contexts. Women investors in this sample are not selecting on financial criteria alone — they are also making choices that signal identity and standing within their communities. This observation has concrete product design implications: instruments that bundle financial flexibility with recognisable social signalling value may generate stronger voluntary adoption than those optimised on financial parameters alone.

The non-finding on H4 is equally instructive. Social influence shows no significant positive association with preference alignment, and reveals a significant negative relationship with goal-based orientation — the opposite of what herding theory predicts. One interpretation is that while social networks influence how women gather financial information, they do not produce convergence in multi-attribute utility assessment. Facing structured product trade-offs, investors appear to exercise considerably more independent judgment than the herding hypothesis allows.

7.2 Income Over Safety: The Framing Decomposition Effect

The preference ordering within Life Goal Objectives — where income generation (0.068) ranks above tax benefits (0.043), wealth creation (−0.021), and safety (−0.089) — initially looks like a contradiction of the safety-first narrative dominant in the Indian women investor literature. That contradiction dissolves once the conjoint structure is properly understood.

Safety is not absent from the preference structure; it is already captured within the dominant Financial Security cluster, where transferability and stability express the underlying impulse toward capital protection. When safety appears separately as a Life Goal Objective, its negative utility reflects functional redundancy — not indifference to protection. Income generation occupies the top position within Life Goal Objectives precisely because it is the distinctive preference in that cluster, the feature that differentiates Life Goal priorities from the Financial Security concerns already addressed elsewhere.

This framing decomposition effect represents a genuine methodological advantage of conjoint analysis over simpler ranking approaches. A conventional survey would likely surface 'safety' near

7.4 Overconfidence as the Overriding Return Predictor

The methodological vindication in the overconfidence results is stark. When overconfidence is operationalised as a single-item proxy, the model explains essentially none of the variance in return preference ($R^2 = .001$). When measured through a four-item composite spanning overestimation, over-precision, and over-placement dimensions (Cronbach's $\alpha = 0.727$), the same model explains 62.1% of the variance ($R^2 = .621$), with the overconfidence composite emerging as the dominant predictor ($\beta = .906$, $p < .001$). A difference of this magnitude is not a measurement refinement — it is a demonstration that single-item proxies systematically fail to capture the multidimensional structure of complex cognitive biases, and that studies relying on them will consistently underestimate behavioural effects.

The substantive implication is equally important. Overconfident women investors weight return-oriented attributes far more heavily than their less overconfident counterparts, producing a distinctive preference signature: elevated utility for performance features, tolerance for the volatility that performance-seeking typically entails, and a profile that resembles the overtrading patterns Barber and Odean (2001) documented among male investors. That 13.5% of respondents fall into the high-overconfidence category — concentrated disproportionately in the Holistic High-Priority cluster — marks this as a meaningful minority phenomenon with real implications for targeted advisory intervention.

7.5 Financial Literacy as Cognitive Moderator

The sign reversal in the financial literacy coefficient between Model 1 and Model 2 of the hierarchical regression is the most theoretically surprising result in the study. In Model 1, financial literacy is a positive predictor of return preference ($\beta = +.615$) — consistent with the standard hypothesis that greater knowledge expands risk appetite. Once overconfidence is added in Model 2, the coefficient flips to negative ($\beta = -.183$), even as overall model fit improves substantially (R^2 rising from .382 to .566).

This is a textbook suppressor effect: overconfidence and financial literacy are highly correlated ($r = 0.881$), and when modelled simultaneously, overconfidence absorbs the return-seeking variance that financial literacy appeared to explain on its own. What remains for financial literacy, net of overconfidence, is a residual risk-moderating function — financially literate investors, with overconfidence held constant, show more calibrated, risk-adjusted return expectations rather than return-maximising preferences.

The theoretical reframing this demands is significant. Financial literacy, in this data, is not a direct risk-tolerance accelerator. It is better understood as a cognitive brake on

liquidity windows that reduce the present-bias penalty — could meaningfully shift voluntary adoption patterns. Automatic enrolment defaults and present-framed messaging, both well-evidenced in the behavioural economics literature, deserve serious consideration as policy instruments.

9. Future Research

Several research directions follow naturally from this study's findings.

The non-significant H4 result warrants methodologically cleaner follow-up. Social influence proxies may inadequately represent the specific investment mimicry behaviour that herding theory describes. Purpose-built herding indices — such as the Lakonishok, Shleifer, and Vishny (1992) measure — could be adapted for retail investor surveys, and confirmatory structural equation modelling would enable more precise decomposition of pathways between herding, safety preference, and goal-based orientation.

The suppressor relationship between financial literacy and overconfidence ($r = 0.881$) is among the study's most theoretically significant findings, but its causal structure cannot be established through cross-sectional data. A longitudinal panel study tracking investors through a financial literacy intervention — measuring overconfidence and preference structures at baseline, post-intervention, and follow-up — would provide the evidence needed to determine whether literacy genuinely moderates overconfidence or whether both reflect a common third variable.

The three investor segments — Holistic, Prestige-Driven, and Low-Engagement — require external validation before informing product design decisions. Replication on independent samples, combined with linkage to actual investment outcome data, would establish whether segments are predictively as well as descriptively valid. Latent class conjoint analysis would also improve on the hard k-means assignments used here, offering probabilistic membership estimates with associated uncertainty quantification.

Two contextual extensions merit particular attention. First, digital investment platforms — robo-advisors, mobile investment applications — represent a new attribute dimension that offline profile designs cannot capture and that is likely gender-differentiated in ways relevant to this study's framework. Second, cross-country comparative conjoint studies across emerging market contexts — India, Bangladesh, Indonesia, Nigeria — would establish whether the conjoint-behavioural finance integration approach generalises beyond the Indian setting, and whether the preference patterns documented here reflect universal gender-specific tendencies or culturally specific configurations.

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