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Hybrid vs. Standalone Robo-Advisors: Behavioural and Trust Dynamics in India's Wealth Management Sector

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Abstract

This study examines how emerging financial technologies are reshaping investor behaviour in India's wealth management sector, with a focus on robo-advisors. Drawing on behavioural finance theory, it compares hybrid models (human and algorithm) with fully automated platforms. Using a mixed-methods approach, original survey data were analysed alongside thematic analysis to evaluate investor trust, satisfaction, and adoption drivers.

Findings reveal a strong preference for hybrid advisory models, driven by the need for personalisation, emotional reassurance, and accountability. While digital literacy enables adoption, algorithmic opacity and concerns over data misuse remain key barriers. Cross-variable analysis indicates that higher digital proficiency correlates with greater openness toward standalone platforms, while lower literacy and financial inexperience favour hybrid systems. Ethical and regulatory expectations particularly regarding transparency and accountability significantly influence adoption decisions.

The study highlights that automation alone cannot ensure investor confidence; trust is coproduced by both human interaction and system transparency. It concludes that the future of robo-advisory in India lies not in replacing human advisors but in redefining their role within hybrid ecosystems that balance efficiency with empathy.

Keywords: Robo-advisors; Investment Advisors—Technological Innovations; Human-machine Systems; Fintech

Introduction

Financial technology has transformed how individuals invest, save, and manage wealth. Robo-advisors' digital platforms that use algorithms to offer automated investment advice and portfolio management represent one of the most visible shifts in this transformation. They promise accessibility, efficiency, and lower costs compared with traditional human advisors. Globally, such systems have matured from basic allocation calculators into intelligent advisory engines that combine data analytics, automation, and, increasingly, human oversight (Fisch et al., 2019; Gomber et al., 2017; Jung et al., 2018).

However, adoption has not been uniform across regions. In developed markets such as the United States and parts of Europe, high levels of digital literacy, self-directed investing culture, and well-defined regulatory frameworks have supported rapid growth of robo-advisory services (Phoon & Koh, 2018). Emerging economies, including India's, present a more complex landscape. The country's fintech ecosystem is expanding quickly under initiatives such as Digital India and India Stack, and smartphone penetration has widened access to financial tools Yet this digital progress coexists with deep-rooted behavioural patterns: a strong reliance on personal trust, relationship-based financial advice, and cautious attitudes toward technology-driven decision-making (Ashrafi, 2023). Concerns over data privacy, cyber risk, and lack of clear accountability remain deterrents (Zarifis & Cheng, 2022).

This tension makes the distinction between standalone and hybrid robo-advisors particularly relevant in the Indian context. Standalone models operate fully through algorithms; they are efficient and scalable but often viewed as impersonal or opaque (Castelo et al., 2020; D'Acunto et al., 2019). Hybrid models combine algorithmic recommendations with human interaction, offering emotional reassurance, personalisation, and accountability (Fisch et al., 2019; Reher & Sokolinski, 2024). For Indian investors who traditionally value interpersonal trust and contextual advice, these differences are not just technical, they reflect deep behavioural and cultural preferences (Ashrafi, 2023).

Behavioural finance provides a useful lens for understanding these choices. Theories such as algorithm aversion, ambiguity aversion, and loss aversion explain why many investors prefer some degree of human reassurance when outcomes feel uncertain (Castelo et al., 2020; Kahneman & Tversky, 1979). Trust becomes central not only in the technology itself but in the system that supports it (Belanche et al., 2019). Studies on robo-advisor users in India show that adopters are typically younger, professionally employed, and small to medium investors, reflecting the early profile of digital advisory users (Baulkaran & Jain, 2021). At the same time, trust in automated advice is shaped by perceptions of transparency, fairness, and clarity around algorithmic decisions, which remain essential determinants of investor confidence in fintech systems (Zarifis & Cheng, 2022).

Despite global research, empirical understanding of how Indians weigh efficiency vs. reassurance remains limited. Existing studies describe adoption barriers broadly without analysing how literacy, biases, and ethical concerns shape platform choice (Tan et al., 2023; Zarifis & Cheng, 2022). This study addresses that gap by investigating how trust, digital literacy, and investment experience influence the

preference for hybrid versus standalone robo-advisors in India's wealth management sector. The research asks three main questions:

1. How do trust and satisfaction differ between users of hybrid and standalone robo-advisors?
2. To what extent do digital literacy and investment experience predict platform preference?
3. What regulatory and ethical expectations most influence adoption and sustained use?

These questions are relevant for both practice and policy. For fintech firms, understanding behavioural drivers helps design advisory systems that combine automation with empathy. For regulators, insights on investor trust can guide frameworks around transparency, accountability, and grievance redress.

To answer these questions, the study uses a mixed-methods approach that combines quantitative data with qualitative thematic analysis. It examines statistical associations through chi-square testing and interprets open-ended responses to capture underlying trust dynamics. The study is guided by the following hypotheses:

- H1: Higher digital literacy is associated with greater openness to standalone robo-advisors.
- H2: Lower financial experience and lower digital literacy are associated with a stronger preference for hybrid robo-advisors.
- H3: Concerns about algorithmic opacity and data handling are negatively associated with willingness to adopt standalone platforms.

By integrating these dimensions, the research contributes to both theory and practice. It shows that investor trust in India is co-produced by technological transparency and human interaction highlighting why hybrid platforms currently hold greater appeal (Belanche et al., 2019; Zarifis & Cheng, 2022). More broadly, it argues that the future of robo-advisory in India lies in systems that balance automation with empathy, efficiency with accountability, and innovation with investor protection.

Having outlined the research problem and objectives, the next section reviews existing scholarship on robo-advisors and behavioural finance. It examines how global studies have conceptualised investor trust, the evolution of hybrid models, and the specific regulatory and cultural dynamics that frame India's wealth management landscape.

Literature Review

The adoption of robo-advisors has attracted growing attention among academics and within industry, particularly in developed markets where digital literacy and regulatory clarity support automation in investment decisions. However, research remains limited in emerging economies such as India, where behavioural, cultural, and regulatory conditions differ significantly. Understanding these contrasts requires looking beyond adoption rates to the deeper psychological, technological, and institutional factors that

shape investor trust. This literature review brings together evidence from five interconnected domains that collectively frame these issues:

1. The evolution of robo-advisors, tracing their technological and conceptual development.
2. Behavioural finance and investor trust, explaining how human biases influence adoption.
3. Global adoption and hybrid models, highlighting patterns across different markets.
4. The Indian context, focusing on cultural and structural particularities.
5. Regulation and ethics, examining oversight and accountability.

Together, these domains provide a conceptual foundation for analysing how trust, digital literacy, and investor experience shape preferences between hybrid and standalone robo-advisors in India's wealth management sector.

1. Evolution of Robo-Advisors

Robo-advisors have developed quickly from simple portfolio allocation tools into multifaceted advisory systems that combine algorithmic decision rules, automated rebalancing, and increasingly sophisticated data analytics. Early platforms functioned mainly as online calculators that automated basic diversification and passive allocation (Fein, 2015). As computing power and data availability increased, robo-advisors entered a second phase where automated rebalancing, exchange-traded fund (ETF) based allocation, and rule-based tax optimisation became standard features (Jung et al., 2018). The most recent generation integrates machine learning and client profiling to deliver more personalised recommendations and dynamic portfolio strategies (Gomber et al., 2017).

Academic and industry accounts now point to a fourth wave in which human oversight is combined with algorithmic capabilities – known as hybrid models. Proponents argue that these deliver a practical middle ground: they retain the scalability and low cost of algorithms while restoring elements of human judgement and reassurance that many investors value (Fisch et al., 2019; Reher & Sokolinski, 2024). Empirical work in developed markets finds that hybrid solutions often score higher on client satisfaction and retention, even if fully automated solutions sometimes offer slightly better cost savings (Reher & Sokolinski, 2024).

Importantly, the trajectory from Robo-Advisory (RA) 1.0 to RA 4.0 suggests that technological maturity alone does not guarantee user acceptance. As robo-advisors become more capable, user concerns shift from purely functional performance to questions of transparency, accountability, and explainability – issues that cannot be addressed by algorithmic improvements alone (Gomber et al., 2017). This evolutionary perspective helps explain why hybrid models have gained traction: they provide a mechanism for integrating technical efficiency with interpersonal trust.

The reviewed literature therefore establishes hybrid models as an emergent and increasingly significant category within robo-advisory services. However, most empirical assessments of this evolution have been conducted in developed markets, with limited attention to how these patterns manifest in culturally distinct, high-growth economies such as India.

2. Behavioural Finance and Investor Trust

Behavioural finance research challenges the assumption of purely rational decision-making by showing that emotions, heuristics, and cognitive biases strongly influence investor behaviour. Foundational work on prospect theory by Kahneman and Tversky (1979) established that investors systematically deviate from rational utility models because of loss aversion, framing, and anchoring effects. These principles have direct implications for technology-based advisory models, where uncertainty and algorithmic opacity often amplify perceived risk.

One of the most relevant behavioural biases in the context of robo-advisors is algorithm aversion the tendency of individuals to distrust automated decision-making after observing even minor errors (Castelo et al., 2020). Relatedly, ambiguity aversion causes investors to avoid options when they do not fully understand how outcomes are generated (D'Acunto et al., 2019). Studies in developed markets have shown that when investors cannot interpret or explain the logic of an algorithmic recommendation, their willingness to rely on it declines sharply (Dietvorst et al., 2015).

Trust therefore becomes the mediating variable between behavioural biases and technology adoption (Belanche et al., 2019). In the context of financial advice, trust operates on two dimensions: cognitive trust, based on competence and reliability; and affective trust, based on empathy and perceived alignment of interest (Lee & See, 2004). Hybrid robo-advisors appear to strengthen both by combining transparent, rules-based logic with human reassurance. Research by Fisch et al. (2019), and Reher and Sokolinski (2024) found that investors often accept algorithmic recommendations more readily when a human advisor validates or contextualises them, even when the algorithm's performance is objectively strong.

In emerging markets, these behavioural dynamics are amplified by cultural and contextual factors. Studies in Asia and the Middle East suggest that collectivist values, relationship orientation, and varying digital confidence levels increase the premium placed on human interaction in financial decisions (Ashrafi & Kabir, 2023; Phoon & Koh, 2018). In India, investors' trust in advisory systems is shaped not only by functional accuracy but by perceived fairness, data security, and moral accountability (Zarifis & Cheng, 2022). Consequently, algorithm aversion and ambiguity aversion may be more pronounced, particularly among less digitally literate investors.

Prior behavioural studies explain why investors often prefer hybrid robo-advisors that combine automation with human input. However, empirical evidence quantifying these effects in India remains limited, particularly regarding how digital literacy and investment experience influence these preferences. The present study addresses this gap by analysing the relationships between trust, behavioural biases, and platform choice (H1–H3), thereby linking behavioural finance theory with real-world adoption outcomes in the context of the developing market.

3. Global Adoption and Hybrid Models

Global adoption of robo-advisors has followed distinct regional trajectories, shaped by variations in financial literacy, regulation, and investor culture. In North America and Western Europe, where technology use and self-directed investing are more common, adoption has grown steadily since 2015, with major platforms such as Betterment and

Wealthfront capturing a significant market share (Jung et al., 2018; Phoon and Koh, 2018)). These markets are characterised by well-defined regulatory oversight and investor familiarity with digital financial tools, creating conditions that favour fully automated advisory models.

In contrast, adoption patterns in Asia-Pacific and the Middle East show a stronger preference for hybrid systems that blend automation with limited human guidance. Studies in Singapore and Malaysia indicate that investors appreciate digital convenience but still seek human reassurance for major financial decisions (Phoon & Koh, 2018; Ashrafi & Kabir, 2023). . Similar findings have been reported in China and the UAE, where cultural norms of relational trust and hierarchical communication encourage investors to value interpersonal advice alongside algorithmic efficiency (Ashrafi, 2023; Reher & Sokolinski, 2024). These findings collectively suggest that while automation improves access and scalability, trust and perceived control remain decisive in determining adoption rates.

Empirical comparisons further indicate that hybrid robo-advisors achieve higher satisfaction and retention levels in markets with lower digital literacy or greater uncertainty avoidance (Belanche et al., 2019; Fisch et al., 2019). Even in technologically advanced economies, investor surveys show that users are more comfortable when human advisors validate algorithmic outputs, reflecting an enduring need for relational assurance (Castelo et al., 2020). The global pattern, therefore, reveals a convergence toward hybrid models not as transitional solutions but as sustainable structures that balance efficiency with human confidence.

However, this convergence is under-represented in empirical research from developing economies, particularly India. Few studies have compared hybrid and standalone platforms in markets where financial inclusion is expanding rapidly but investor literacy and regulatory frameworks remain uneven. Understanding how global patterns translate into such environments is essential for explaining adoption dynamics and trust formation in India’s emerging wealth management sector.

4. The Indian Context

India’s wealth management landscape is a complex environment for the adoption of robo-advisors. Rapid digitisation, growing middle-class affluence, and policy initiatives such as Digital India and India Stack have accelerated the expansion of financial technology platforms (Sabir et al., 2023). The country’s large, young, and increasingly mobile-first population provides fertile ground for fintech adoption. Yet, structural and behavioural patterns are slowing the transition from traditional, relationship-driven advice to automated models.

One of the defining features of the Indian investment culture is the high value placed on personal trust and interpersonal relationships. Studies have shown that investors frequently rely on informal networks, family recommendations, or long-standing financial advisors when making decisions (Ashrafi, 2023). This reliance is reinforced by historical scepticism toward financial innovation and a preference for tangible, human accountability (Zarifis & Cheng, 2022). While the proliferation of online brokerage platforms and digital payment systems has improved access, the emotional comfort derived from personalised advice remains a central determinant of financial decision-making.

Evidence from the Indian market also highlights a pronounced trust gap between investors and fully automated systems. Zarifis & Cheng (2022) note that limited transparency in algorithmic decision-making, concerns over data protection, and inconsistent regulatory communication reduce investor confidence in purely digital platforms. Evidence from the Indian market also highlights a pronounced gap in trust between investors and fully automated systems. Fama and Chakraborty (2024) note that limited transparency in algorithmic decision-making, concerns over data protection, and inconsistent regulatory communication reduce investor confidence in purely digital platforms. Similar concerns have been echoed by Baulkaran,. (2021), who found that perceptions of fairness and moral accountability heavily influence acceptance of automated financial advice. As a result, even digitally literate investors often choose hybrid platforms that retain a visible human element for reassurance and accountability.

At the same time, India's regulation and infrastructure differs from that of developed economies. The Securities and Exchange Board of India (SEBI) has introduced guidelines for digital advisory services, but clarity around algorithmic auditing, fiduciary responsibility, and client grievance mechanisms remains limited. This ambiguity places greater emphasis on perceived trustworthiness rather than institutional safeguards, further explaining the preference for hybrid models.

Recent studies have begun to explore these patterns. Sabir et al. (2023) found that hybrid robo-advisors in India attract higher satisfaction levels than standalone platforms, largely because human engagement mitigates algorithmic opacity. However, research that integrates behavioural, regulatory, and technological dimensions remains scarce.

In summary, India represents an emerging-market environment where digital readiness coexists with behavioural conservatism. Trust, digital literacy iteracy, and perceived accountability play a greater role in adoption decisions than cost or convenience alone. These dynamics underline the importance of examining how investor characteristics and behavioural biases interact to shape preference between hybrid and standalone robo-advisors, a gap this study directly addresses through its analysis.

5. Regulation and Ethics

The regulatory environment plays a central role in determining how robo-advisors evolve, operate, and are trusted by investors. In developed markets such as the United States and the European Union, clear regulatory frameworks have enabled faster adoption by establishing minimum standards for disclosure, fiduciary responsibility, and data protection (Fisch et al., 2019). The U.S. Securities and Exchange Commission requires robo-advisors to register as investment advisors, mandating transparency in algorithms and suitability of advice (Jung et al., 2018). Similarly, the European Union's Markets in Financial Instruments Directive II enforces robust disclosure and investor protection requirements, fostering a higher degree of institutional trust in automated systems (Hou et al., 2023).

But in emerging markets, regulatory oversight remains fragmented. Many jurisdictions are still developing frameworks that define accountability for algorithmic decisions, manage cross-border data flows, and ensure auditability of digital advice. Researchers have noted that the absence of consistent oversight can amplify investor concerns

about bias, privacy, and algorithmic manipulation (Ashrafi, 2023). Ethical questions such as who bears responsibility for losses due to algorithmic errors and how fairness can be assured in opaque systems remain largely unresolved (Zarifis & Cheng, 2022).

In India, SEBI has taken incremental steps toward formalising robo-advisory regulation. Its 2016 guidelines for advisors introduced provisions requiring registration, suitability assessments, and conflict-of-interest management. However, these rules were designed primarily for traditional advisors and do not explicitly address algorithmic transparency, data handling, or audit mechanisms. As a result, the responsibility for ethical conduct still rests heavily on the service providers themselves (Zarifis & Cheng, 2022). This regulatory ambiguity leaves investors dependent on perceived trustworthiness rather than codified standards, reinforcing the appeal of hybrid models where human oversight offers reassurance of accountability.

Ethical considerations further complicate the picture. Beyond compliance, issues of algorithmic fairness, data privacy, and the potential for reinforcing socio-economic biases have drawn scholarly attention (Castelo et al., 2020). Belanche et al. (2019) argue that transparency and explainability are moral imperatives in financial AI, not merely operational requirements. In markets where data literacy is uneven, lack of algorithmic clarity can create informational asymmetry, undermining trust even when outcomes are objectively sound.

The regulatory and ethical landscape surrounding robo-advisors is still evolving. While developed markets are moving toward mature, transparent oversight systems, emerging economies such as India continue to rely on a mix of self-regulation and fragmented supervision. For Indian investors, this context magnifies concerns around fairness, responsibility, and data protection. Consequently, ethical trust – the belief that human and algorithmic agents act in good faith – becomes central to adoption decisions. These regulatory and ethical complexities form the backdrop against which this study examines investor trust and preference for hybrid versus standalone robo-advisory models.

In summary, the regulatory and ethical landscape surrounding robo-advisors is still evolving. While developed markets are moving toward mature, transparent oversight systems, emerging economies such as India continue to rely on a mix of self-regulation and fragmented supervision. For Indian investors, this context magnifies concerns around fairness, responsibility, and data protection. Consequently, ethical trust the belief that both human and algorithmic agents act in good faith becomes central to adoption decisions. These regulatory and ethical complexities form the backdrop against which this study examines investor trust and preference for hybrid versus standalone robo-advisory models. .

Methodology

3.1 Research Design

This study adopted a mixed-methods design that integrates quantitative and qualitative approaches to understand investor trust and platform preference in India's robo-advisory market. Quantitative analysis identifies measurable relationships between investor attributes and platform choice, while qualitative analysis explores the

reasoning and perceptions underlying those decisions. This combination aligns with calls in fintech research to blend behavioural insights with empirical data when investigating technology adoption and trust formation (Belanche et al., 2019; Zarifis & Cheng, 2022)).

The design seeks to test hypothesised relationships between digital literacy, investment experience, and trust while also uncovering contextual nuances that quantitative data alone may overlook. This approach is particularly suitable for emerging-market research, where behavioural and regulatory conditions differ from developed economies. A mixed-methods approach was chosen because fintech adoption involves both quantifiable behavioural patterns and subjective perceptions of trust. Similar studies have shown that combining quantitative and qualitative evidence offers a more comprehensive understanding of investor decisions in technology-mediated finance (Belanche et al., 2019; Zarifis & Cheng, 2022 Fisch et al., 2019).

3.2 Population and Sampling

The study focused on individual investors in India who have awareness of, or prior engagement with, digital investment platforms. A non-probability purposive sampling method was employed to reach participants who could provide informed perspectives on robo-advisors. Data were collected using an online survey distributed through Google Forms between January and March, 2025.

A total of 49 valid responses were retained after screening for completeness and relevance. The sample included a variety of age, gender, and income groups with respondents concentrated in major urban centres such as Mumbai, Delhi, Bengaluru, and Pune. Although smaller than samples in other fintech studies, this size remains acceptable for exploratory mixed-methods research focused on behavioural trends (Sironi, 2016; Venkatesh & Bala, 2008). Purposive sampling is appropriate because the target group – digitally active investors – represents a relatively small and informed subset of India's broader investment population. Similar non-probability sampling has been applied in behavioural fintech studies where expertise has primacy over access to specific user groups (Venkatesh & Bala, 2008).

Given its modest scale, the sample offers indicative insights into digital investor behaviour rather than statistically generalisable conclusions. The findings should therefore be interpreted as exploratory evidence guiding future, larger-scale research.

3.3 Data Collection Instrument

The primary data collection tool was a structured questionnaire designed to capture both quantitative metrics and qualitative insights. The survey consisted of three sections:

1. Demographics and investor profile (age, gender, income, investment experience, digital literacy).
2. Platform preference and satisfaction, measured through closed-ended questions comparing hybrid and standalone robo-advisors.
3. Behavioural and ethical perceptions, using five-point, Likert-scale items assessing trust, data privacy, transparency, and perceived fairness (adapted from Belanche et al., 2019; Zarifis & Cheng, 2022).

Open-ended questions invited respondents to elaborate on the reasons behind their preferences and concerns, forming the basis for thematic analysis. The survey

instrument was pilot-tested with ten participants to ensure clarity and reliability. Minor adjustments were made to simplify wording and sequencing before full deployment.

The use of Likert-scale items to measure perceptions of trust, satisfaction, and ethical concern follows established fintech trust scales validated by Belanche et al. (2019) and Zarifis & Cheng (2022) . Open-ended questions were included to complement statistical analysis with respondent narratives, ensuring depth and contextual richness (Braun & Clarke, 2008). Participation was voluntary, and respondents were informed about the study's academic purpose and data confidentiality measures.

3.4 Variables and Operational Definitions

The study examined three core dimensions investor characteristics, behavioural trust factors, and platform preference.
These dimensions are operationalised below through the classification of dependent, independent, and mediating variables. .

1. Dependent variable: Platform preference (coded as 1 for hybrid and 2 for standalone robo-advisors).
2. Independent variables: Digital literacy (self-rated on a five-point scale), investment experience (measured in years), and age group.
3. Mediating variables: Trust and satisfaction (composite Likert-scale scores).

Trust was measured via technical trust (confidence in algorithmic reliability and data security) and relational trust (confidence in empathy, accountability, and personalised support), following Belanche et al. (2019). Digital literacy referred to an investor's perceived comfort and competence in using digital platforms and interpreting digital financial information, rather than formal technical expertise (Belanche et al., 2019; Zarifis & Cheng, 2022).

3.5 Data Analysis Techniques

Quantitative data were analysed using descriptive statistics and chi-square tests of independence to explore associations between investor attributes and platform preference. The chi-square test was chosen because it suits categorical data and does not assume a normal distribution (Sironi, 2016). The strength of relationships was measured using Cramer's V to interpret the magnitude of associations.

Qualitative responses were examined using thematic analysis, following Braun and Clarke's (2008) six-phase framework. Responses were coded, themes were identified (e.g., trust, transparency, and algorithmic understanding), and interpretations were verified through iterative review. Integrating both data types provided a more holistic understanding of investor trust and adoption behaviour, consistent with recommendations in behavioural finance research (Belanche et al., 2019).

3.6 Reliability and Validity

Reliability and validity procedures were applied to enhance methodological rigour. Cronbach's alpha exceeded 0.75 for trust and satisfaction scales, indicating acceptable internal consistency. Content validity was supported through pilot testing and the use of validated trust scales from Belanche et al. (2019) and Zarifis & Cheng (2022). Triangulation of structured items and open-ended responses improved construct validity.

3.7 Ethical Considerations

All participants provided informed consent before completing the survey. No personally identifiable information was collected, and respondents were free to withdraw at any stage. Data were stored securely and used exclusively for academic purposes. Ethical approval for this study was obtained from Dublin Business School's postgraduate research ethics committee. The research design conforms to the ethical principles of transparency, confidentiality, and voluntary participation. Ethical protocols followed guidelines for human participant research outlined by Dublin Business School (DBS, 2025) and aligned with principles of informed consent and data protection under GDPR standards.

3.8 Section Summary

This section outlined the methodological framework guiding the study. A mixed-methods approach was selected to capture both measurable associations and qualitative nuances in investor behaviour. The following section presents the data analysis and results, interpreting how trust, literacy, and behavioural biases shape investor preferences for hybrid versus standalone robo-advisors in India.

Data Analysis and Results

This chapter presents the quantitative and qualitative findings from the survey of the 49 respondents on robo-advisor adoption in India. It explores platform preference, satisfaction, trust dynamics, behavioural influences, and regulatory and ethical perceptions. The goal is to understand how digital literacy, investment experience, and trust shape investor choices between hybrid and standalone robo-advisors.

4.1 Platform Preference

Among 49 respondents, 67% preferred hybrid robo-advisors while 33% favoured standalone platforms. Hybrid models were valued for their combination of automation and human interaction, perceived as safer and more transparent. Respondents commonly noted that 'human validation adds accountability' and that 'technology alone still feels risky.'

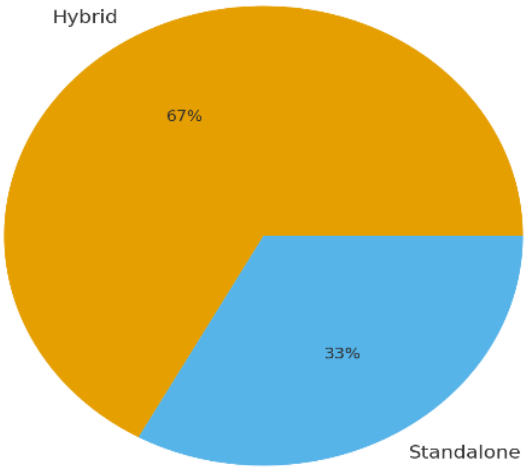

Figure 1. Investor platform preference in India (hybrid vs. standalone). Platform preference among Indian investors (n = 49). A majority (67%) prefer hybrid robo-advisors, indicating sustained demand for human oversight alongside automation

4.2 Satisfaction Across Platform Types

Hybrid users reported higher satisfaction (mean = 4.3) than standalone users (mean = 3.6), reflecting the continued importance of personalised interaction in financial advice.

Platform Type	Mean Satisfaction Score	Standard Deviation
Hybrid	4.3	0.62
Standalone	3.6	0.74

Table 1. Mean satisfaction scores by platform type (n = 49)These results confirm that emotional reassurance and accessibility to human input remain central to perceived service quality in automated finance.

4.3 Investor Trust Levels

Trust emerged as a key differentiator between hybrid and standalone users. Respondents expressed stronger confidence in hybrid models (average trust = 4.4) compared to standalone models (average trust = 3.5). Qualitative responses revealed

that investors equate trust with ‘someone being accountable’ and ‘knowing who to reach if something goes wrong.’

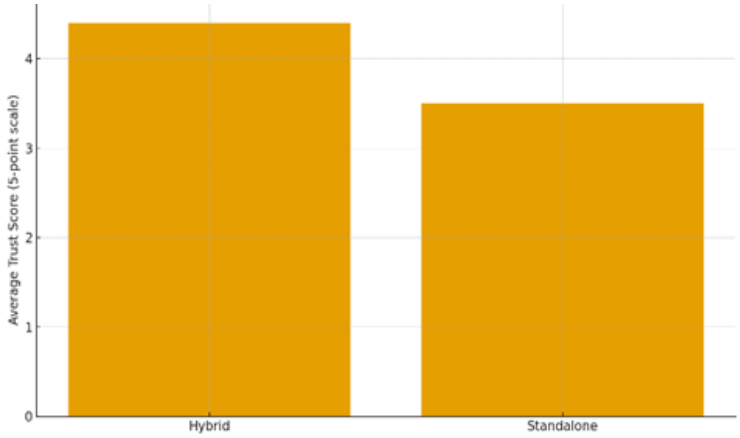

Figure 2. Comparison of Investor trust levels

These findings support H3, which proposed that perceived transparency and accountability enhance trust and drive adoption.

4.4 Digital Literacy and Platform Preference

To test H1 (the relationship between digital literacy and platform preference) and H2 (the association between investor characteristics and platform preference), cross-tabulations and chi-square tests were used. The results show that digital literacy moderates platform preference: investors with higher literacy are slightly more inclined toward standalone robo-advisors, though hybrid systems dominate across all categories.

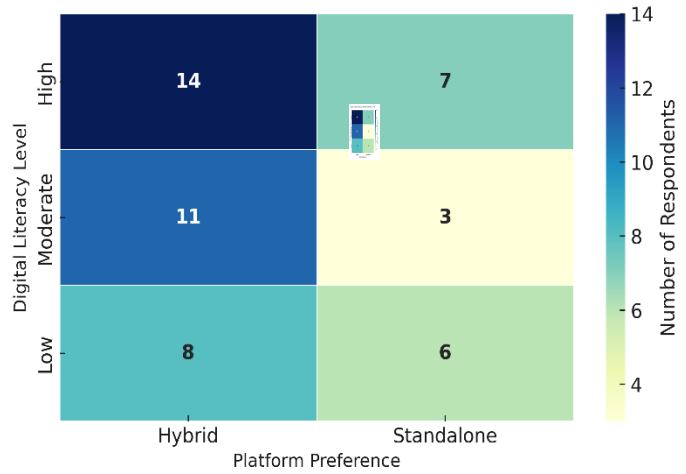

Figure 3. Digital literacy vs. platform preference (n = 49)

The heat map visualises how higher digital literacy increases openness to standalone platforms, though hybrid systems remain preferred overall.

4.5 Key Statistical Associations

Table 2. Chi-square test results for key variables and platform preference (n = 49)

Variable	χ^2 (chi-square)	df	p-value	Association Strength (Cramer's V)
Digital Literacy vs Platform Preference	11.36	2	0.021	0.34
Investment Experience vs Platform Preference	9.24	2	0.043	0.29
Trust vs Platform Preference	14.72	2	0.008	0.37

The chi-square test confirmed a statistically significant relationship ($\chi^2 = 11.36$, $p = 0.021$), with a moderate association (Cramer's V = 0.34). This suggests that while digital literacy influences openness to automation, other behavioural factors – particularly trust – continue to play a strong role.

All three associations were significant ($p < 0.05$), with trust showing to be the strongest. This reinforces the idea that behavioural and experiential factors rather than purely technical ones drive adoption in India's wealth management landscape.

4.6 Regulatory and Ethical Perceptions

Respondents expressed high concern about data privacy (78%), algorithmic transparency (72%), and accountability (70%). These were followed by fairness (65%) and regulatory oversight (60%). These perceptions underscore the role of ethical trust as a condition for adopting technology-led finance.

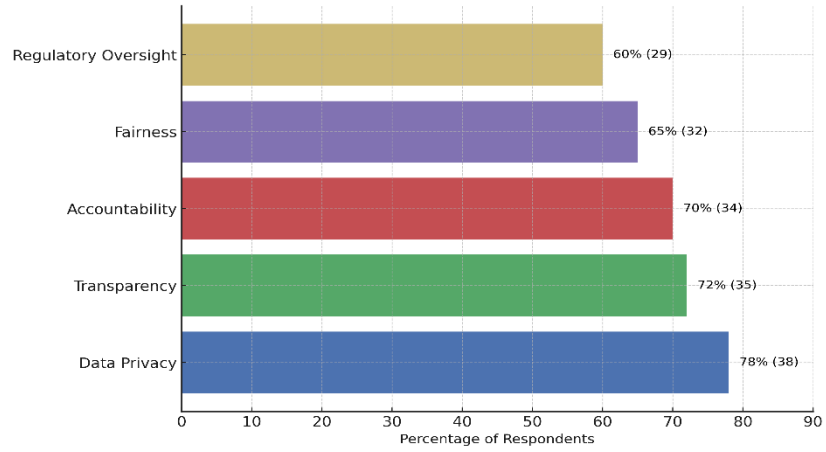

Figure 4. Regulatory and ethical concerns in robo-advisory adoption (n = 49)

Data privacy, transparency, and accountability were the most frequently cited issues among respondents. The following verbatim excerpts from open-ended survey responses highlight these themes:

- "Data handling policies should be more transparent."
- "Who is responsible if the algorithm fails?"
- "Regulators should audit algorithms like financial statements."

These insights support H3, showing that ethical and regulatory trust remain barriers to the wider acceptance of standalone robo-advisors.

4.7 Summary of Findings

The quantitative and qualitative analyses converge on several key insights:

1. Hybrid dominance: Investors prefer human-assisted models that blend automation with personalised advice.
2. Trust and literacy: Digital literacy improves comfort with automation but does not eliminate the need for human validation.
3. Ethical and regulatory sensitivity: Concerns about data privacy and accountability remain major inhibitors to standalone adoption.
4. Moderate associations: Trust (Cramer's V = 0.37) and literacy (Cramer's V = 0.34) show moderate strength of association with platform choice.

Together, these results provide empirical support for the hypotheses and set the stage for deeper interpretation in the Discussion section.

Discussion

This study examined how trust, digital literacy, and investor experience shape the preference for hybrid versus standalone robo-advisors in India. The results reaffirm that behavioural factors, especially relational trust and perceived accountability, remain central to technology adoption in financial decision-making. Yet, unlike findings from developed markets, Indian investors exhibit a sustained preference for hybrid models, suggesting that human interaction continues to anchor trust even as automation becomes mainstream.

5.1 Interpretation of Findings

The dominance of hybrid robo-advisors (67%) highlights a persistent reliance on human judgement in financial contexts. This aligns with findings by Belanche et al. (2019) and Phoon and Koh (2018), who note that even digitally capable investors seek emotional reassurance when financial stakes are high. This study extends that argument by showing that in India, trust acts not only as a comfort mechanism but also as a risk-mitigation tool compensating for uncertainty around data privacy and regulatory enforcement (Zarifis & Cheng, 2022). .

As predicted in H2, investors with lower digital literacy and limited experience displayed stronger hybrid preference, supporting behavioural explanations such as algorithm aversion (Dietvorst et al., 2015) and ambiguity aversion (Kahneman & Tversky, 1979). Conversely, the positive association between digital literacy and openness to standalone models (H1) reflects a generational and cognitive shift rather than a structural one. Even digitally fluent investors valued transparency and accountability, traits typically associated with human oversight, demonstrating that automation acceptance remains conditional, not absolute (Fisch et al., 2019; Sironi, 2016).

5.2 Theoretical Implications

This study contributes to behavioural finance by extending trust theory into emerging-market fintech contexts. Prior models, including the Technology Acceptance Model(TAM), largely treat trust as secondary to perceived usefulness. The present

findings reverse that order: in India, trust is the gateway variable shaping both perceived usefulness and intention to adopt.

This supports Belanche et al. (2019) and Castelo et al. (2020), who emphasise that fintech trust combines both psychological assurance and institutional credibility. By demonstrating that Indian investors coproduce trust through human presence and algorithmic transparency, the study refines existing frameworks to include dual-trust dynamics. This duality relational versus technical trust explains why hybrid systems persist even in digitally mature settings.

5.3 Implications for Practice and Policy

The findings have clear implications for platform designers, regulators, and investor education initiatives.

- For platform designers: Hybrid systems are not transitional but behaviourally optimal for markets where emotional reassurance complements automation. Fintech firms should maintain human touchpoints through periodic reviews, advisory chat interfaces, or transparent algorithm explanations.
- For regulators (the Securities and Exchange Board of India (SEBI) and the Reserve Bank of India (RBI)): Trust deficits arise less from technology and more from opacity and accountability gaps. Regulatory guidance should address algorithmic explainability, data governance, and liability for automated advice. Developing oversight similar to the EU's Markets in Financial Instruments Directive II (MiFID II) may reduce investor hesitation (Sironi, 2016).
- For investor education: Behavioural biases can be reduced by improving financial literacy, particularly around algorithmic logic and data protection. Integrating such modules into Digital India and financial inclusion programs could gradually normalise trust in automation without eroding accountability.

These steps can bridge the behavioural gap between efficiency-driven fintech innovation and relationship-based financial culture.

5.4 Comparison with Previous Research

Globally, researchers have often viewed hybrid models as a transition stage toward full automation. This study challenges that assumption. The findings indicate that hybrid systems may represent a stable equilibrium where investors gain both efficiency and emotional assurance.

Unlike studies in Western markets that prioritise cost and speed (Ashrafi, 2023), Indian investors emphasise fairness, transparency, and relational accountability traits hybrid systems uniquely deliver (Baulkaran & Jain, 2021; Zarifis & Cheng, 2022)

This positions India closer to East Asian behavioural patterns, where trust is relational and context-dependent, rather than Western models based primarily on institutional trust (Fisch et al., 2019; Sironi, 2016).

5.5 Limitations and Future Research

The study's findings should be interpreted in light of certain limitations. The modest sample size (n = 49) limits statistical generalisability, although it remains appropriate for exploratory mixed-methods research. Future studies could employ larger and longitudinal samples to assess how trust dynamics evolve as regulatory clarity and investor familiarity increase.

Comparative research across emerging and developed markets could further examine how trust shifts from relational to institutional forms over time. Additional work could also explore how explainable AI tools influence investor confidence and reduce algorithm aversion.

5.6 Chapter Summary

This chapter demonstrated that in India, investor trust remains the behavioural anchor of robo-advisor adoption. The findings extend behavioural finance theory by showing how relational and technical trust coexist rather than compete. Hybrid robo-advisors emerge not as temporary solutions but as enduring models suited to culturally and institutionally complex markets.

Conclusion and Recommendations

This study examined how trust, digital literacy, and investor experience influence the adoption of hybrid and standalone robo-advisors in India's wealth management sector. Using a mixed-methods approach with 49 respondents, it explored investor perceptions of transparency, accountability, and data ethics, linking behavioural finance theory with technology adoption outcomes. The findings directly addressed the study's three hypotheses.

- H1 proposed that higher digital literacy would increase openness to standalone platforms. This was partially supported. While digitally proficient investors were more comfortable with automation, many still preferred hybrid models, indicating that trust, not just skill, drives adoption.
- H2 posited that lower financial experience and literacy predict stronger hybrid preference, and was clearly supported: investors with limited exposure to financial technology relied more on human validation and perceived security.
- H3 suggested that ethical and regulatory concerns negatively affect standalone adoption, and this was confirmed. The majority of respondents cited data privacy, accountability, and transparency as decisive factors when choosing between platform types.

Taken together, these findings reinforce the proposition that in India, trust operates as a dual construct both technical (confidence in the algorithm) and relational (confidence in human oversight). Hybrid models thrive because they combine efficiency with emotional and ethical reassurance. Rather than being a temporary phase, hybrid robo-

advisors represent a stable model for emerging markets where cultural norms and regulatory maturity continue to shape technology acceptance.

From a policy and industry perspective, the results highlight the need for stronger oversight and education. Regulators such as the Securities and Exchange Board of India (SEBI) and the Reserve Bank of India (RBI) should formalise guidelines on algorithmic transparency, data protection, and accountability for digital investment advice. At the same time, financial literacy initiatives should expand to include awareness of artificial intelligence (AI) -based tools, enabling investors to interpret algorithmic advice with informed confidence. For fintech designers, embedding explainable AI features and optional human touchpoints may enhance adoption and retention.

This research contributes to behavioural finance literature by demonstrating that adoption in fintech depends as much on ethical and relational trust as on technological performance. It extends the global conversation on robo-advisors by showing how socio-cultural and institutional factors redefine investor behaviour in emerging economies.

The study's main limitation, its modest sample size (n = 49), suggests opportunities for future work. Larger and longitudinal studies could validate the behavioural patterns that were found and test how evolving regulation alters trust over time. Comparative studies across markets with varying regulatory structures could also reveal how trust shifts from relational to institutional as investor familiarity grows.

In summary, this study shows that hybrid robo-advisors are not an intermediate step toward full automation, but the providers of a behavioural equilibrium between efficiency and reassurance. As India's fintech landscape matures, sustained investor confidence will depend on how well platforms and policymakers integrate transparency, accountability, and human connection into digital finance.

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