

# Swipe to Invest: Exploring the Influence of AI-Based Finance Tools On Investment Confidence Among First-Time Investors in India

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## ABSTRACT

Although AI based finance tools are becoming increasingly common in India, little is known about whether they genuinely improve the confidence and investment decisions of first time investors across different age groups. The study examines how AI-based financial technologies, including investing chatbots, robo-advisors, and financial learning applications, influence the confidence and investment decisions of first-time investors in India. The research contrasts the experiences of Gen Z (18–25 years old) and adult (26–45 years old) first-time investors using a mixed-methods design comprising a quantitative survey of 170 participants and a qualitative pilot study of 12 participants. This paper delves into how AI characteristics can most effectively increase investor confidence, whether confidence-inducing effects can be converted into actual investment behavior, and how cultural norms, complexity, and trust influence trust barriers between age groups and gender through a literature review, administering a survey, conducting a case study of 3 well-known Indian fintech platforms (Groww, Zerodha, and INDMoney), and performing an inferential statistical test based on chi-square analysis. The implications of the findings are for financial inclusion policy, fintech product design, educational curricula, and gender equity in India's capital markets.

## 1. INTRODUCTION

This study explores how AI based finance tools can make investing feel simpler and more approachable for first time investors in India, especially younger users, while also showing that confidence alone is not enough unless people develop real understanding, trust the tools they use, and are able to overcome social and cultural barriers. Retail investor involvement in India has reached an all-time high. This has increased the total number of demat accounts, which were about 40 million at FY2020, up to more than 150 million by the end of FY2024 (Business India, 2024; JETIR citing NSE, 2024). At the end of calendar year 2024, the number was 185 million, and 46 million new accounts were opened that year (Business Standard, 2025). A significant number of these new investors are young: the proportion of investors under 30 has

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increased from 38.9% in March 2019 to 38.9% in July 2025 (RBI data via IBEF), and the median age of investors has decreased to 33.

At the same time, AI-based fintech applications, such as robo-advisors, investing chatbots, and finance learning apps, have become common. In 2024, the Indian robo-advisory software market is estimated to be at USD 300 million and is expected to grow to USD 1.4 billion by 2035 (MRFR, 2025). The market is dominated by a few apps, including Groww (13.16 million active users), Zerodha (8.12 million), and Angel One (7.75 million), which together account for about 59% of the market as of December 2024 (NSE data via Entracker). AI-like features have increasingly been utilized on these sites: personalized recommendations, risk profiling, goal-based investing, and chatbots that simulate conversations and explain financial terms in simple language.

Nevertheless, questions such as whether these AI tools truly increase investor confidence and decision quality, or merely provide an illusion of safety to amateurs, remain. Do the effects vary by age, specifically, between Gen Z digital natives and older first-time investors? The financial literacy rate in India is also alarmingly low, ranging from about 27% (NCFE-FLIS, 2019) to 29.8% (NCFE/NISM, 2020), with pronounced gender and urban-rural disparities. It is unclear whether Gen Z users are more confident than adults, given that they have been using digital technologies all their lives. In contrast, adults are more conservative and less familiar with investing. Although studies have been conducted internationally on the impact of AI on investor **behavior**, little research has examined the functionality of these tools in India across different age groups.

## **1.1 Research Question**

***What is the effect of AI-based financial products (e.g., investing chatbots or financial learning apps) on confidence and investment decisions among first-time investors in India between Gen Z and adults?***

## **1.2 Sub-Questions**

The operationalization of this study to address the central research question will be guided by the following sub-questions. To begin with, what is the impact of AI finance tools on self-reported investment confidence among first-time investors? Second, do Gen Z (1825) and adult (2645) first-time investors differ in their confidence? Third, which are the most AI aspects, chatbots, risk profiling, personalized recommendations, or educational content, that are associated with higher levels of confidence? Fourth, do increased trust levels in AI tools result in actual investment behaviors, such as opening accounts, initial investments, or adding SIP contributions? Fifth, what is the hindrance (trust, complexity, cultural norms) that is not eliminated even with the employment of AI tools, and is it age and gender specific?

## **1.3 Scope and Delimitations**

In this study, there is a geographic focus on India, including urban and semi-urban regions, with an emphasis on tier-1 and tier-2 city investment patterns. The demographic is composed of first-time investors who have less than 12 months of experience actively investing their funds and is divided into

two age groups: Gen Z (1825) and Adults (2645). The analyzed tools are artificial intelligence tools on websites such as Groww, Zerodha, Paytm Money, INDMoney, Kuvera, Upstox, Scripbox, and ET Money. The study does not evaluate the portfolio's returns or performance; it focuses only on behavioral and psychological performance, including confidence, risk comfort, and decision-making.

The paper structure is as outlined below. Section 2 discusses the methodology. Section 3 contains the literature review, thematic synthesis, and a summary table. Section 4 develops the theory's hypotheses. Section 5 describes the questionnaire and the survey design. Part 6 discusses three fintech platforms on a case-by-case basis—Section 7 documents valuable information. In section 8, an outline of an inferential analysis is provided. Section 9 discusses the suggested framework. Part 10 covers implications, limitations, and future directions. Section 11 provides the conclusion.

## **2. RESEARCH METHODOLOGY**

### **2.1 Research Approach and Design**

This research will use a mixed-methods design, combining quantitative survey research and qualitative pilot feedback. The reason is that confidence and investment behavior have both quantitative and qualitative dimensions, which can only be explored through qualitative methods. The study design is descriptive and exploratory, aiming to identify trends in the use of AI tools and shifts in confidence, and to uncover the experiences of first-time investors.

### **2.2 Population and Sample**

The target segment includes first-time investors in India with less than 12 months of active investing experience with two age groups: Group A (Gen Z), aged 18–25, which is mostly college students and early-career professionals; and Group B (Adults), aged 26–45, working professionals who have just started investing. Purposive sampling has been applied to those who meet the first-time investor criteria, with snowball sampling added to enable broader coverage. It has been distributed through university communities, LinkedIn investing communities, fintech apps user communities, and social media. The sample size is expected to be 150–200 people (the survey) and 10–15 people (including 5–8 per age group) to represent a pilot group in the qualitative part. The inclusion criteria will be that the participants must have used at least one AI-powered finance platform in the last 12 months. Inclusion criteria exclude those with prior professional finance experience or a history of active investing within the past 12 months.

### **2.3 Data Collection Methods**

Two instruments have been used to collect primary data. Demographics, patterns of AI tool usage, investment confidence on a 5-point Likert scale based on established financial self-efficacy scales, risk comfort, investment activities undertaken, and unrelenting obstacles are measured in a structured online survey administered via Google Forms. Second, a small-scale pilot study was carried out, in which

participants spent one week using a specific AI finance application (e.g., Groww or INDMoney), and semi-structured interviews at the beginning and the end of the week recorded qualitative changes in perceptions and confidence (Table 1).

**Table 1:** Secondary Data Sources

| Source                            | Information Present                                                          | Access                          |
|-----------------------------------|------------------------------------------------------------------------------|---------------------------------|
| SEBI Annual Reports               | Demat account expansion, investor profiles, F&O involvement, IPO information | sebi.gov.in (free)              |
| AMFI Monthly Factsheets           | MF AUM by gender, SIP data, count of folios, geographic distribution         | amfiindia.com (free)            |
| RBI Financial Inclusion Index     | FI-Index scores, trends in digital payments, and inclusion indicators        | rbi.org.in (free)               |
| NCFE-FLIS 2019 Report             | Fin. literacy rates by state, gender, age, and education                     | ncfe.org.in (free PDF)          |
| MoSPI 'Women & Men in India 2024' | Demat by gender, bank accounts, digital participation                        | mospi.gov.in (free)             |
| NSDL/CDSL Monthly Report          | New accounts are being opened, and the geographical distribution             | nsdl.co.in / cdsindia.com       |
| NVIDIA State of AI 2024           | Adoption rates, applications, and the financial impact of AI usage           | blogs.nvidia.com (free)         |
| Grand View Research / MRFR        | India robo-advisor market size, CAGR, forecasts                              | Market reports (abstracts free) |
| Axis MF Women Report 2024         | Women's investment persistence, corpus comparison                            | advisorkhoj.com (free PDF)      |
| Financial Health Network 2024     | Fin tool adoption barriers, awareness data                                   | finhealthnetwork.org (free)     |
| Fin One / Nielsen 2024            | Gen Z saving behavior, use of tools, stock vs traditional                    | Via InvestOnline.in             |

## 2.4 Data Analysis

Descriptive statistics (means, medians, frequency distributions) have been used to analyze quantitative data; cross-tabulations to compare Gen Z and adult responses; paired comparisons to assess differences between pre- and post-confidence scores; and chi-square tests of independence to assess differences in categorical variables between age groups. The pilot study includes qualitative data, which have been analyzed using thematic analysis to code responses into themes such as drivers of confidence, frustration points, and preferred features. Cross-referencing survey results with pilot study qualitative data and secondary data of SEBI and AMFI statistics has been used to triangulate results.

## **2.5 Ethical Considerations**

Informed consent from all participants has been obtained. No personal identifiable information has been gathered. The answers to the surveys are anonymous. Participants in pilot studies have been well briefed and debriefed. All the information is stored securely and used for research only.

## **3. LITERATURE REVIEW**

The present review summarises the available research across five thematic areas to provide a comprehensive basis for the study. The sources include publications from 2018 to 2026, obtained from Google Scholar, Scopus, SSRN, industry reports (SEBI, RBI, AMFI, NCFE, NVIDIA, CFA Institute), and disclosures from fintech companies.

### **3.1 Theme 1: Adoption of AI in Financial Services**

Artificial intelligence has accelerated the integration of AI into financial services worldwide. According to NVIDIA, the 2024 State of AI in Financial Services report shows that 91 percent of financial services companies globally are assessing or implementing AI, and 86 percent report that AI has a positive influence on their revenue, and 82 percent say it lowers their costs. Customer experience has become a central application, and 34% of companies are considering chatbots, virtual assistants, and recommendation systems. Consumer-scale AI deployments have been proven by banks such as Bank of America (Erica: 2 million daily interactions) and Wells Fargo (Fargo: 20 million interactions by January 2024). The credit lifecycle has been integrated through AI in India through lending technology, which has received 37.3% of total fintech investments (State of Indian Fintech Report, 2025). Bajaj Finance has said that GenAI bots have saved the company 150 crore per annum, and Tata Capital has saved 20% on customer service expenses.

Kanaparthi (2024) has demonstrated that personalised AI suggestions can go a long way towards boosting user confidence in digital finance services, where personalisation is regarded as a trust-building exercise. However, the NVIDIA survey is more detailed and reports acceptance of AI as not only a cost but also a source of revenue, but not as a trust variable. This is a significant difference in framing: the framing outcome, micro-level user trust, that Kanaparthi introduces complements the larger-scale adoption outcomes, that is, the macro-level, that NVIDIA presents, and it suggests that the impact of AI-provided

financial services works not only at the efficiency level of the institutions but also at the level of a single user's psychology.

### **3.2 Theme 2: Robo-Advisors and Investor Behavior**

With a CAGR of 33.7, the robo-advisory industry in India earned USD 286.6 million in 2023 and is projected to reach USD 2.15 billion in 2030 (Grand View Research). Its global market share stands at 57.4 per cent, and hybrid robo-advisor models retain clients at a rate 2.3 times higher than pure robo models (CFA Institute data). Robo-advisor acceptability is 41 percent among US investors, 40 percent among millennials, and 40 percent among Gen Z (Fortune Business Insights, 2024). A peer-reviewed study published in the IIMB Management Review (2024) has explored the adoption of robo-advisors in India and found that performance expectancy and trust are key determinants.

Despite the trust-promoting capacity of personalization as noted by Kanaparthi (2024), the IIMB study suggests that the perceived usefulness and reliability of AI suggestions are equally vital. This means that trust and performance expectancy are not competing forces of adoption, but rather complementary. The global popularity of hybrid models (57.4% market share) also suggests that pure AI solutions are not yet trusted, which directly relates to how Indian platforms should organize their AI solutions.

### **3.3 Theme 3: Financial Literacy and Confidence in India**

Financial literacy is very low in India. Only 27 percent of financially literate individuals, according to the NCFE-FLIS 2019 survey, and 29.8 percent according to a 2020 NCFE/NISM assessment (men 32.2% and women 27.3%). The state-level variance is extreme (Goa: 56; Chhattisgarh: lowest). The Financial Inclusion Index of RBI has increased to 64.2 (March 2024) (as compared to 60.1 (March 2023)), which is a positive change but still shows a lot of gaps. Nevertheless, the survey by Fin One/Nielsen (2024) has revealed that 93 percent of young Indians consider themselves constant savers, with 45 percent favouring stocks over gold/FDs and 68 percent relying on automated savings devices.

This introduces a remarkable contradiction between the high use of digital financial tools and the comparatively low level of formal financial literacy. This paradox is partially explained by the fact that AI-based tools can increase financial literacy and personal investment decisions (Mishra, 2025). Nevertheless, the original research by Lusardi and Mitchell on financial literacy suggests that younger people are less financially literate because they are not exposed to financial responsibilities. That is the conflict between high digital engagement (Fin One/Nielsen) and low measured literacy (NCFE), and that is the gap that the present study intends to address, that is, whether the AI tools can serve as a tool that can bridge the difference between digital comfort and actual financial competence.

### **3.4 Theme 4: Gender Aspect of Investing in India**

The involvement of women in India's capital markets has increased significantly, yet remains unequal. According to MoSPI, women demat account holders increased four times (6.67 million in March 2021) to 27.71 million in November 2024. However, the number of new demat openings by women is just about

24% in FY2025 (Indian Journal of Finance, 2026). According to The Economic Times, 51 percent of women invest in low-risk instruments, while only 7 percent invest in stocks. Nevertheless, the Axis Mutual Fund 2024 study has established that women invest 25% more per head, have 22% greater five-year persistence, and have an average corpus 37% larger than men.

The bottleneck of financial literacy-confidence has been defined as the main one: knowledge has not been identified as a sufficient factor, since low confidence and a permission-seeking culture hinder action (Indian Journal of Finance, 2026). Agarwal (2025) concurs with this, showing that AI tools have boosted the confidence of female users, yet cultural barriers still exist. This difference is substantial: Agarwal is optimistic about the benefits of AI-based confidence, while the Indian Journal of Finance's structural analysis of cultural barriers implies that technology is not everything and that institutional and social transformation should accompany it. The Axis MF data also does not help the situation, since it shows that women who overcome the confidence barrier actually perform better on persistence, indicating that the barrier is more of an entry than an ability.

### **3.5 Theme 5: Generational Differences in Fintech Adoption**

Gen Z investors (born around 1997–2012) have become the fastest-growing category in India's capital markets, increasing their share of NSE-registered investors from around 25% in FY2020 to 40% in FY2025 (IBEF), on PhonePe's Share. Market platform, 48 percent of mutual fund investors are between the ages of 18 and 30, and 92 percent of them are taking SIPs. Introducing UTAUT and TAM concepts, Srivastava et al. (2024) have examined the Gen Y and Gen Z adoption of digital payments in India, where customer satisfaction, effort expectancy, and performance expectancy are significant predictors of behavioral intention, and their influence varies across generations.

Nevertheless, the Financial Health Network (2024) found that 3% of households in the US used AI chatbots or robo-advisors to find financial information, while 36% were unaware of them. This gap between the fast-growing young Indian investor base and the low global adoption of AI suggests that awareness and accessibility, rather than technology readiness, may be the limiting factors. Although Srivastava et al. are concerned with the drivers of adoption (what makes users adopt), the Financial Health Network data emphasizes the barriers to adoption (what prevents users), which implies that the design of fintechs should be able to support both pull factors (useful features) and push factors (awareness campaigns) to scale.

### **3.6 Research Gap**

Despite the existing literature that records the accelerating adoption and integration of AI in the finance sector, little research specifically investigates: (a) the impact of AI functionality within investing applications on the psychological aspect of confidence in first-time investors, as compared to adoption behaviour; (b) whether these effects vary systematically between Gen Z and older adult first-time investors in the Indian market; and (c) how the use of AI tools, gender, and the financial literacy-confidence nexus interact in emerging markets.

### 3.7 Relevance and Importance of the Study

The article is based on the current literature and addresses a gap in research on the interaction between AI-driven finance solutions and investor psychology in the rapidly developing Indian fintech sector. The contribution of AI tools to the confidence gap, as the number of retail investors in India has grown more than fourfold in four years, while financial literacy remains below 30, is imperative not just academic research but also for industry practice. The article makes new contributions by comparing the reactions of generations to the same AI features, which has not been systematically examined in the Indian context. More research is required to investigate the ethical implications of AI-based financial advice, the long-term behavioral effects of AI applications, and the role of cultural variables in mediating the use of technologies across various states in India.

**Table 2:** Selected Literature Review Summary

| Study                    | Methods            | Country | Key Factors                                      | Findings                                                             | Relevance to This Study                                                           |
|--------------------------|--------------------|---------|--------------------------------------------------|----------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Agarwal (2025)           | Quantitative (120) | India   | Financial literacy, AI tool usage, risk, culture | AI tools enhanced confidence; women like low-risk; obstacles persist | Directly supports the hypothesis that AI tools improve confidence among beginners |
| Kanaparthi (2024)        | Quantitative       | Global  | AI personalisation, trust, and digital finance   | Personalised AI increases user trust                                 | Theoretical basis of trust as a mediating variable                                |
| NVIDIA (2024)            | Survey             | Global  | AI use, revenue, customer satisfaction           | 91% of companies use AI; 34% investigating chatbots                  | Creates a global AI-in-finance environment                                        |
| NCFE-FLIS (2019)         | National Survey    | India   | Financial literacy, inclusion, demographics      | Only 27% literate; a gender difference exists                        | Places low literacy in AI devices                                                 |
| Srivastava et al. (2024) | SEM (UTAUT+TAM)    | India   | Effort/performance expectancy, satisfaction      | Satisfaction and expectancy predict adoption; Gen differences        | Framework of generational comparison                                              |

|                         |                       |       |                                             |                                                           |                                                         |
|-------------------------|-----------------------|-------|---------------------------------------------|-----------------------------------------------------------|---------------------------------------------------------|
| Axis MF (2024)          | Secondary Data        | India | Women's investment, persistence, risk       | Women invest 25% more per person; greater persistence     | Highlights the confidence gap as the primary bottleneck |
| IJF (2026)              | Perspective synthesis | India | Gender gap, behavioural finance, confidence | Bottleneck is literacy-confidence nexus; 5-pillar roadmap | Roadmap: This study can inform                          |
| FHN (2024)              | Pulse Survey          | USA   | AI tool awareness, barriers to adoption     | Only 3% used AI chatbots; 36% unaware                     | Awareness is the key barrier that applies to India      |
| IIMB Review (2024)      | Quantitative          | India | Robo-advisor adoption, trust, expectancy    | Performance expectancy and trust are key determinants     | Validates trust as a driver of adoption in India        |
| Fin One/Niels en (2024) | National Survey       | India | Young Indian savings, digital tools         | 93% consistent savers; 68% use automated tools            | Creates a paradox of digital engagement                 |

#### 4. HYPOTHESIS DEVELOPMENT

First-time investors in India have a low financial literacy business environment (2730 percent), but a quickly expanding digital finance infrastructure. Applications developed by artificial intelligence, such as chatbots, recommendation engines, and risk profiling software, are designed to simplify and lessen the complexity of financial processes and make them easier to enter. According to the Technology Acceptance Model (TAM), according to which perceived usefulness and perceived ease of use are the factors of technology adoption (Davis, 1989) and the UTAUT framework applied to Srivastava et al. (2024) to examine the adoption of AI in India, the study is theoretically based on the assumption that AI tools serve as confidence mediators between low financial literacy and investment action. The hypotheses are:

***H1: AI-driven finance solutions (chatbots, personalized recommendations, risk profiling, educational content) are positively correlated with the self-reported investment confidence of first-time investors in India.***

Digital natives, Gen Z investors (1825 years old) have an instinctive familiarity with app interfaces, but first-time adult investors (2645 years old) may be more conservative, as they are presumably more

financially literate. Srivastava et al. (2024) established that the difference between generational values of effort expectancy and performance expectancy is significant. According to the Uses and Gratifications Theory, different groups of users do not experience the same outcomes when using the same technology. Therefore:

***H2: There is a significant difference between the use of AI tools and gains in confidence between Gen Z (1825) and adult (2645) first-time investors.***

The hypotheses are demonstrated by gathering primary data through surveys and by conducting chi-square tests of independence to assess the categorical relationship between AI tool use and confidence levels and demographic variables. The results are introduced in Section 8 (Inferential Analysis).

## **5. SURVEY DESIGN AND QUESTIONNAIRE**

### **5.1 Survey Design**

The questionnaire survey is based on best practices in quantitative research instruments. Questions are asked for each construct to avoid confusing respondents. The tool will include a mix of question types: 5-point Likert scales for confidence and trust, multiple-choice questions about preferences for using the platform and its features, and one open-ended question to capture any qualitative feedback. Likert scales have been chosen because they allow respondents to answer questions with varying levels of agreement, eliminating yes/no questions and yielding more detailed, in-depth data that can be analyzed statistically, such as mean scores, paired comparisons, and correlation tests. It is particularly important when dealing with the spectrum of attitudes and perceptions regarding confidence, where perceptions are on a scale rather than absolute. The rating scales are held constant throughout the survey to avoid confusing respondents. The demographic questions will be collected at the end to avoid putting respondents off at the start of the process. A pilot survey has been undertaken with 5 to 10 respondents to ensure that it is free of ambiguous language or technical issues.

The survey will be designed in four parts. Section A (3 questions) captures demographic information such as age group, gender, and city tier. Section B (4 questions) looks at the use of AI tools: which apps are used, which features are used, how often, and for how long. Section C (6 questions) is a confidence and behavior section: confidence levels before and after using AI tools (Likert), risk-related changes, actions taken in investing, most helpful features perceived, and recommendation intentions. Section D (4 questions) addresses obstacles and feedback: ongoing barriers (multiple-choice), belief in AI advice (Likert), perception of AI compared to human advisors (Likert), and a general comment.

### **5.2 Introduction of the Survey to the Participants**

Welcome! My name is Kahaan Modi, and I am working on my topic: the impact of AI-based financial tools on the confidence and investment choices of first-time investors in India. The objective of this research is to determine whether investing in chatbots, robo-advisors, and finance learning apps makes

new investors feel more confident about entering India's capital markets, and whether the impacts of such tools are greater among younger and older first-time investors. This survey form is to be filled out by the respondent to serve academic purposes. All data confidentiality and security is guaranteed, and no information is linked to any respondent. Thank you!

**Table 3:** Survey Questionnaire

| No. | Question                                                                           | Response Options                                                                                                              | % Frequency                                                                                                                               |
|-----|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Q1  | What is your age bracket?                                                          | A. 18–20<br>B. 21–25<br>C. 26–30<br>D. 31–35<br>E. 36–45                                                                      | 26.5%<br>31.2%<br>21.8%<br>13.5%<br>7.1%                                                                                                  |
| Q2  | What do you identify with?                                                         | A. Male / B. Female / C. Non-binary / D. Prefer not to say                                                                    | Male: 54.1%   Female: 42.4%   Non-binary: 1.8%   Prefer not to say: 1.8%                                                                  |
| Q3  | Which city tier do you reside in?                                                  | A. Tier 1 / B. Tier 2 / C. Tier 3 / D. Rural                                                                                  | Tier 1: 60.6%   Tier 2: 29.4%   Tier 3: 8.2%   Rural: 1.8%                                                                                |
| Q4  | Which AI-powered finance platforms have you used? (Choose all that are relevant)   | A. Groww / B. Zerodha / C. Paytm Money / D. INDMoney / E. Kuvera / F. Upstox / G. ET Money / H. Other                         | Groww: 67.6%   Zerodha: 40.0%   Paytm Money: 23.5%   INDMoney: 31.2%   Kuvera: 14.1%   Upstox: 25.9%   ET Money: 18.8%   Other: 10.6%     |
| Q5  | Which AI features have you used on these platforms? (Choose all that are relevant) | A. Chatbot / B. Personalised recommendations / C. Risk profiling / D. Educational content / E. Goal-based investing / F. None | Chatbot: 54.1%   Personalised recs: 71.8%   Risk profiling: 62.9%   Educational content: 75.9%   Goal-based investing: 57.6%   None: 4.7% |
| Q6  | What is the frequency of your use of these AI features?                            | A. Daily / B. Weekly / C. Monthly / D. Rarely / E. Never                                                                      | Daily: 18.2%   Weekly: 41.2%   Monthly: 27.1%   Rarely: 11.8%   Never: 1.8%                                                               |
| Q7  | What is the duration you have been using these platforms?                          | A. Less than 1 month / B. 1–3 months / C. 3–6 months / D. 6–12 months                                                         | < 1 month: 8.2%   1–3 months: 22.4%   3–6 months: 34.1%   6–12 months: 35.3%                                                              |

|     |                                                                                            |                                                                                                                                                                         |                                                                                                                                                             |
|-----|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Q8  | Before using any AI finance tool, I was sure I could make investment decisions.            | 1 (Strongly Disagree) – 5 (Strongly Agree)                                                                                                                              | Mean: 2.38   SD: 1.02   1 (SD): 17.6%   2 (D): 35.3%   3 (N): 27.1%   4 (A): 14.1%   5 (SA): 5.9%                                                           |
| Q9  | I feel more certain about investment decisions after using AI finance tools.               | 1 (Strongly Disagree) – 5 (Strongly Agree)                                                                                                                              | Mean: 3.82   SD: 1.01   1 (SD): 3.5%   2 (D): 10.6%   3 (N): 22.4%   4 (A): 38.8%   5 (SA): 24.7%                                                           |
| Q10 | My trust in equity/stock market risk has grown due to the use of AI finance tools.         | 1 (Strongly Disagree) – 5 (Strongly Agree)                                                                                                                              | Mean: 3.61   SD: 1.04   1 (SD): 4.7%   2 (D): 14.1%   3 (N): 27.1%   4 (A): 35.3%   5 (SA): 18.8%                                                           |
| Q11 | What is the most useful AI feature that has helped you build your confidence in investing? | A. Chatbot / B. Personalised recommendations / C. Risk profiling / D. Educational content / E. Goal-based investing                                                     | Educational content: 30.0%   Personalised recs: 29.4%   Risk profiling: 21.2%   Chatbot: 14.1%   Goal-based investing: 5.3%                                 |
| Q12 | What investment steps have you made following the use of AI tools? (Select all that apply) | A. Opened demat account / B. Made first investment / C. Started SIP / D. Increased investment value / E. None of the above                                              | Opened demat account: 72.9%   Made first investment: 63.5%   Started SIP: 47.6%   Increased investment value: 30.6%   None: 5.9%                            |
| Q13 | What are the obstacles, even with the use of AI tools? (Select all that apply)             | A. Lack of trust with AI advice / B. Still too complex with tools / C. Cultural/family norms / D. Privacy concerns / E. Prefer human financial advisor / F. No barriers | Privacy concerns: 41.2%   Lack of trust: 37.6%   Prefer human advisor: 32.9%   Still too complex: 28.2%   Cultural/family norms: 22.4%   No barriers: 18.8% |
| Q14 | I have faith in the financial suggestions produced by AI tools.                            | 1 (Strongly Disagree) – 5 (Strongly Agree)                                                                                                                              | Mean: 3.29   SD: 1.08   1 (SD): 7.1%   2 (D): 17.6%   3 (N): 31.8%   4 (A): 29.4%   5 (SA): 14.1%                                                           |
| Q15 | I would suggest an AI finance tool to a friend or family member who is a newcomer.         | 1 (Strongly Disagree) – 5 (Strongly Agree)                                                                                                                              | Mean: 3.91   SD: 1.00   1 (SD): 2.9%   2 (D): 8.8%   3 (N): 21.2%   4 (A): 37.6%   5 (SA): 29.4%                                                            |

|     |                                                                                          |                                            |                                                                                                                                                                                                    |
|-----|------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Q16 | For beginners, AI finance tools may be effective at replacing a human financial advisor. | 1 (Strongly Disagree) – 5 (Strongly Agree) | Mean: 2.88   SD: 1.16   1 (SD): 12.9%   2 (D): 24.7%   3 (N): 28.2%   4 (A): 23.5%   5 (SA): 10.6%                                                                                                 |
| Q17 | Is there anything you want to tell us about your experience with AI finance tools?       | Text response (open-ended)                 | Common themes: simplicity of the interface, trust concerns, a preference for education-led AI features, and a desire for human-AI hybrid support—with representative quotes provided in Section 9. |

## 6. CASE STUDY ANALYSIS

The case studies of three Indian fintech platforms have been reviewed to learn how AI functionalities are uniquely designed and implemented to assist a first-time investor. The criteria used to select the company are market leadership, as measured by the number of active users; the variety of AI services provided; and the availability of operational data to the community.

### 6.1 Groww

As of September 2023 (13.16 million active users) and December 2024 (6.63 million active users), Groww is the highest-ranked investment platform in India with a market share of 26.59% (NSE data, various ways. First of all, Groww’s onboarding engine is an AI-powered questionnaire that assesses the sourced via Entracker). The platform's AI implementation is aimed at simplifying it for beginners in user’s risk-taking profile, income level, and financial goals and objectives, and provides personalized suggestions on mutual funds and SIPs. This plan aligns with the emphasis of TAM on ease of use, and inexperienced investors choose funds on their own. Second, the site includes a chatbot that responds to simple financial questions and provides real-time answers to inquiries about NAV, SIPs, and market fundamentals. It can be directly applied to sub-question 3, as it touches on the possibility of the chatbot feature to reduce the intimidation of jargon. Third, step-by-step investment guides at Groww reduce the investment process to more manageable, less complex steps that are directly related to the identified barrier to confidence in the literature. The easy-to-use interface (limited jargon, visual progress indicators) appears to be a thoroughly considered strategic element intended to reduce beginners’ fear of investing.

### 6.2 Zerodha (Kite + Varsity)

As of December 2024, Zerodha, the first discount brokerage firm in India, has 8.12 million active users and a market share of 16.41 percent. Another distinctive feature of the site is its learning-centric approach

unlike that of competitors. Zerodha: The t API ecosystem enables third parties to offer a direct open platform for AI-driven analytics. The company resource, which provides everything from basics up to advanced trading modules and serves as the educational basis for implementing AI features, is the financial education portal Varsity. The philosophy of informed investors making better decisions has been superimposed on this educational infrastructure with AI-based stock screening and analytics tools. It is particularly relevant for sub-question 4, as it will compare education-paired AI features and test the reliability of generating investment action using education features rather than simplifying. The proportion of women customers at Zerodha has increased to approximately 30 percent, up from 23 percent a decade ago (co-founder Nithin Kamath), which is a promising indication that the learning-first model may be particularly effective at closing the gender confidence gap documented in the literature. This model of inculcating education has already been demonstrated commercially by Zerodha's financial performance, with revenue of 9,372 crore and profit of 5,496 crore in FY24.

### **6.3 INDMoney**

INDMoney has branded itself as a one-stop financial management service, with a unique approach to AI that focuses on comprehensive financial management rather than solely on investment counseling. The robo-advisory engine automatizes investment distributions in a variety of asset classes and, at the same time, oversees costs, family management, and individualized financial objectives. The AI-based portfolio recommendation engine takes into account the user's overall financial context, such as spending habits, insurance status, and current investment holdings, and presents recommendations. The conversational interface uses both contextual intelligence and follow-up features, intended to resemble a financial advisor engagement rather than a conventional chatbot. This method can be specifically applied to sub-question 5, which is concerned with the holistic anxiety experienced by first-time investors, and it is possible to overcome investment-specific anxiety and focus on confidence in financial management. This holistic solution can be more effective than Groww's simplified model for adult first-time investors, who may have greater financial responsibilities and anxieties.

## 7. KEY DATA POINTS FOR ANALYSIS

### 7.1 Main Data Analysis

**Table 4:** Growth of Retail Investors in India

| Indicator                    | Value                 | Year       | Source               |
|------------------------------|-----------------------|------------|----------------------|
| Total Demat Accounts         | ~40 million           | FY2020     | Business India / NSE |
| Total Demat Accounts         | 150 million and above | End FY2024 | Business India / NSE |
| Total Demat Accounts         | 185 million           | End CY2024 | Business Standard    |
| Under-30 Investor Share      | 22.6% → 38.9%         | 2019–2025  | RBI via IBEF         |
| Median Investor Age          | 38 → 33               | 2019–2025  | RBI via IBEF         |
| SIP Monthly Inflows (Record) | ₹26,688 crore         | May 2025   | AMFI                 |
| Active SIP Accounts          | 9 crore+              | May 2025   | AMFI                 |

**Table 5:** Growth of Women Investors in India

| Indicator                 | Value                  | Year      | Source        |
|---------------------------|------------------------|-----------|---------------|
| Women Demat Holders       | 6.67M → 27.71M         | 2021–2024 | MoSPI         |
| Women MF AUM              | ₹4.59L Cr → ₹11.25L Cr | 2019–2024 | AMFI / BW     |
| Women Desiring Low-Risk   | 51%                    | 2024      | ET Survey     |
| Women Investing in Stocks | 7%                     | 2024      | ET Survey     |
| Women on Zerodha          | 2–3% → ~30%            | 2015–2025 | Nithin Kamath |
| Women SIP Growth          | +269%                  | 2020–2024 | AMFI / BW     |

There were 170 valid answers collected via Forms and distributed through university circles, LinkedIn investing communities, and user communities of fintech platforms. Of these, 98 respondents (57.6%) fell within the Gen Z age bracket (18–25) and 72 (42.4%) in the adult bracket (26–45). The entire demographic breakdown is in Table 7.

**Table 7: Respondent Demographics and Platform Usage (n = 170)**

|                      | Category          | n   | % of Total |
|----------------------|-------------------|-----|------------|
| <b>Age Group</b>     | Gen Z (18–25)     | 98  | 57.6%      |
|                      | Adults (26–45)    | 72  | 42.4%      |
| <b>Gender</b>        | Male              | 92  | 54.1%      |
|                      | Female            | 72  | 42.4%      |
|                      | Non-binary / PNTS | 6   | 3.5%       |
| <b>City Tier</b>     | Tier 1            | 103 | 60.6%      |
|                      | Tier 2            | 50  | 29.4%      |
|                      | Tier 3 / Rural    | 17  | 10.0%      |
| <b>Platform Used</b> | Groww             | 115 | 67.6%      |
| <b>(Top 3)</b>       | INDMoney          | 53  | 31.2%      |
|                      | Zerodha           | 68  | 40.0%      |

The pattern of AI feature use within the sample is summarised in Table 8. The most used was educational content (75.9%), which was also the highest-rated for confidence-enhancing, with the greatest proportion of respondents (30.0%). It was closely matched by personalised recommendations (29.4%). Although chatbots are utilised by 54.1 per cent of respondents, only 14.1 per cent selected them as the most useful feature, suggesting that passive features, such as educational content and personalised recommendations, are more effective at building confidence than reactive conversational tools.

**Table 8: AI Feature Usage and Perceived Utility (n = 170)**

| AI Feature Used              | % Using (n=170) | % Reporting as Most Useful |
|------------------------------|-----------------|----------------------------|
| Educational content          | 75.9%           | 30.0%                      |
| Personalised recommendations | 71.8%           | 29.4%                      |
| Risk profiling               | 62.9%           | 21.2%                      |
| Goal-based investing         | 57.6%           | 5.3%                       |
| Chatbot / conversational AI  | 54.1%           | 14.1%                      |
| None of the above            | 4.7%            | —                          |

Table 9 gives mean scores on all Likert-scale confidence measures, broken down by age group. The overall sample mean pre-tool confidence score (Q8) was 2.38/5, which corroborates the low-confidence profile of the baseline reported in the literature. After the use of AI tools, the average post-tool confidence score (Q9) increased to 3.82, an average of 1.44. The increase in attitudes towards these tools was slightly greater among Gen Z respondents (+1.63 points: 2.31 to 3.94) than among adult respondents (+1.20 points: 2.47 to 3.67), as Gen Zers experienced a comparatively higher boost in confidence with the use of these tools.

**Table 9: Confidence and Trust Scores by Age Group — Likert Mean Scores (1–5)**

| Confidence Measure                           | Full Sample Mean | Gen Z Mean | Adults Mean | Mean Change  |
|----------------------------------------------|------------------|------------|-------------|--------------|
| Q8 – Pre-tool confidence (self-efficacy)     | 2.38             | 2.31       | 2.47        | —            |
| Q9 – Post-tool confidence                    | 3.82             | 3.94       | 3.67        | <b>+1.44</b> |
| Q10 – Risk comfort increase                  | 3.61             | 3.72       | 3.46        | —            |
| Q14 – Trust in AI financial advice           | 3.29             | 3.48       | 3.04        | —            |
| Q15 – Recommendation intention               | 3.91             | 4.01       | 3.78        | —            |
| Q16 – AI as a substitute for a human advisor | 2.88             | 3.07       | 2.63        | —            |

*Note: Mean change calculated for Q9 vs. Q8 (pre/post confidence pair) only. All other rows reflect independent question means.*

Table 10 shows the actions respondents took after using the AI tools, categorized as investments. Most of them (72.9) opened a demat account, and 63.5% went ahead to make their first investment- this indicates that AI tools are action-based, rather than confidence-based. Gen Z respondents had made a first investment more often (67.3% vs. 58.3%) and had started a SIP (51.0% vs. 43.1) more, and adult respondents indicated more often that their amount of investment had increased (34.7% vs. 27.6%), which could be due to more disposable income.

**Table 10: Investment Actions Taken After Using AI Tools (n = 170; select all that apply)**

| Investment Action Taken     | Full Sample | Gen Z | Adults | n   |
|-----------------------------|-------------|-------|--------|-----|
| Opened a demat account      | 72.9%       | 74.5% | 70.8%  | 124 |
| Made first investment       | 63.5%       | 67.3% | 58.3%  | 108 |
| Started a SIP               | 47.6%       | 51.0% | 43.1%  | 81  |
| Increased investment amount | 30.6%       | 27.6% | 34.7%  | 52  |
| No actions taken            | 5.9%        | 4.1%  | 8.3%   | 10  |

Table 11 shows the long-term barriers that were reported by respondents. The most mentioned barrier was privacy concerns (41.2%), especially among Gen Z (44.9%). Among adult respondents, trust in AI advice and preference for human advisors became more significant obstacles (43.1% each), which is also in line with the generational conservatism reported in the literature. The use of cultural and family norms was more notable among adults (27.8% vs. 18.4%), consistent with permission-seeking behavior observed in the gender and generational literature.

**Table 11: Persistent Obstacles to AI Tool Adoption — by Age Group (select all that apply)**

| Obstacle                                 | Full Sample | Gen Z | Adults |
|------------------------------------------|-------------|-------|--------|
| Privacy concerns                         | 41.2%       | 44.9% | 36.1%  |
| Lack of trust in AI advice               | 37.6%       | 32.7% | 43.1%  |
| Preference for a human financial advisor | 32.9%       | 27.6% | 40.3%  |
| Tools still feel too complex             | 28.2%       | 25.5% | 31.9%  |
| Cultural / family norms                  | 22.4%       | 18.4% | 27.8%  |
| No barriers experienced                  | 18.8%       | 22.4% | 13.9%  |

## 7.2 Qualitative Pilot Study Findings

A qualitative pilot study was conducted alongside the quantitative survey to provide depth and nuance to the confidence and trust dynamics that Likert-scale items alone cannot capture. Twelve participants were recruited using purposive sampling — six from the Gen Z cohort (18–25 years) and six from the adult cohort (26–45 years) — all of whom met the same first-time investor inclusion criteria applied to the survey. Participants were assigned to use either Groww, INDMoney, or Zerodha for 7 days and were interviewed via semi-structured video calls at the start (Day 0) and end (Day 7) of the study period. Table 12 presents the participant profiles.

**Table 15: Qualitative Pilot Study — Participant Profiles (n = 12)**

| ID  | Age | Gender | City Tier | App Assigned | Prior Experience | Occupation                         |
|-----|-----|--------|-----------|--------------|------------------|------------------------------------|
| P1  | 19  | Female | Tier 1    | Groww        | None             | Undergraduate student              |
| P2  | 22  | Male   | Tier 1    | Groww        | None             | Final-year engineering student     |
| P3  | 20  | Female | Tier 2    | INDMoney     | None             | Undergraduate student              |
| P4  | 24  | Male   | Tier 1    | Zerodha      | None             | Early-career software professional |
| P5  | 23  | Female | Tier 2    | Groww        | None             | Postgraduate student               |
| P6  | 21  | Male   | Tier 1    | INDMoney     | None             | Undergraduate student              |
| P7  | 29  | Male   | Tier 1    | Groww        | < 1 month        | Mid-level marketing professional   |
| P8  | 33  | Female | Tier 1    | INDMoney     | None             | Mid-level HR professional          |
| P9  | 31  | Male   | Tier 2    | Groww        | None             | Small business owner               |
| P10 | 38  | Female | Tier 1    | INDMoney     | None             | Senior finance administrator       |

| ID         | Age | Gender | City Tier | App Assigned | Prior Experience | Occupation                     |
|------------|-----|--------|-----------|--------------|------------------|--------------------------------|
| <b>P11</b> | 27  | Male   | Tier 2    | Zerodha      | None             | Early-career accountant        |
| <b>P12</b> | 35  | Female | Tier 1    | Groww        | None             | Homemaker, first-time investor |

The thematic analysis procedure developed by Braun and Clarke (2006) was applied to analyse interview transcripts: familiarisation, initial code generation, theme search, theme review, theme definition, and write-up. The coding was inductive,, and the themes were determined based on patterns that occurred in at least 4 of the 12 transcripts. The analysis revealed four main themes. They are listed in Table 16 and supported by illustrative quotes of the actual interview transcripts. All participants are coded (P1–P12) anonymously.

**Table 16: Thematic Analysis — Primary Themes and Illustrative Quotes**

| Theme                                              | Key Observations                                                                                                                                                                                                                                                                                                                                                                                     | Illustrative Participant Quote                                                                                                                                                             |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Theme 1: Jargon Reduction and Accessibility</b> | Nine of 12 interviewees said they felt significantly less overwhelmed by financial terminology after using AI tools for 3-4 days. Most often mentioned were educational content modules (step-by-step guides at Groww, Zerodha Varsity). This was more pronounced among Gen Z participants (P1, P2, P5) who consumed content daily.                                                                  | “I continued to avoid opening an account because all of it sounded complex. The app simply told me what a NAV is in a sentence. That was it, I felt like I could do this.                  |
| <b>Theme 2: Trust as a Gradual Process</b>         | There was no instant trust in the AI-generated suggestions. The majority of respondents were initially skeptical at the beginning of the week. Still, they were able to loosen up on Days 4-5 when they realized that the app’s risk profile output was consistent with their self-assessment. Throughout, adult participants (P8, P10, P12) had higher residual skepticism than Gen Z participants. | The initial suggestion that was made to me seemed arbitrary. However, by the fifth day of my goal, when it proposed a liquid fund as my 30-day objective, I believed, - Okay, it heard me. |

| Theme                                                     | Key Observations                                                                                                                                                                                                                                                                                                                                                                                                       | Illustrative Participant Quote                                                                                                                               |
|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Theme 3:<br/>Confidence vs. Competence Distinction</b> | Five participants explained a difference between being confident and being really knowledgeable. P4, P9, and P10 spoke in ways that indicated they believed their confidence exceeded their actual financial knowledge. This trend is also typical of the false-confidence issue identified in the literature. This was less prevalent among participants who used the educational features intensively (P2, P5, P11). | I feel prepared to invest, but I have no idea how I could justify to someone why I am investing in this fund. The app makes it sound easy, perhaps too easy. |
| <b>Theme 4:<br/>Cultural and Social Mediators</b>         | <b>All</b> six female participants said that although they had gained confidence, they would continue to consult a family member before making a real investment. This was not the case with male participants. P3, P8, P10, and P12 indicated social permission-seeking behaviour that was independent of their reported confidence level.                                                                            | I definitely feel more confident than I did a week ago, but I would tell my husband first and put any real money in. That is just the way it is.             |

When the qualitative results are added to the quantitative results, the latter complements the former and confuses. The quantitative survey identified an average confidence improvement of 1.44 points among the sample, and the pilot study provides the following process: educational material reduces the effect of jargon-related intimidation (Theme 1), and trust is a process of gradual calibration rather than an immediate response to AI features (Theme 2). The distinction between confidence and competence (Theme 3) also applies to the policy discussion. If AI tools produce greater confidence and no knowledge is obtained, the probability of making uninformed investment decisions increases. The fact that social and cultural mediators remain (Theme 4) reinforces the idea that technology cannot be uniquely effective in breaking structural barriers and supports the roadmap proposed by the Indian Journal of Finance (2026), which emphasizes that institutional and social reform is an addition to technological solutions.

## 8. INFERENCE ANALYSIS

Chi-square test of independence was selected to test the hypotheses. It is a statistical test applicable to examining a relationship between two nominal variables. In this case, the variables will be the level of

usage of AI tools (based on frequency and feature type) and the change in self-reported confidence (based on the difference between Q8 and Q9 Likert scores, categorized as Decreased, No Change, Moderate Increase, and Significant Increase). The chi-square test is chosen because it may help the researcher determine whether there is a significant relationship between these categorical variables, which is especially important when dealing with survey data whose responses are categorical rather than continuous.

If the p-value is less than the standard alpha level of 0.05, the null hypothesis is rejected, indicating that the specific variable is statistically significantly associated with the outcomes of confidence. The findings are organized in the following way:

### 8.1 Hypothesis 1: AI Tool Usage and Confidence

H0: The use of AI finance tools and self-reported investment confidence among first-time investors are not significantly related.

H1: There is a substantial correlation between the use of AI finance tools and self-reported investment confidence among first-time investors.

Usage was dichotomized into two groups based on Q6 response frequencies: High Usage (daily or weekly, n=101, 59.4%) and Low Usage (monthly, rarely, or never, n=69, 40.6%). Change of confidence was operationalised as the difference between the Q9 (post tool) and Q8 (pre tool) Likert scale score, which was then categorised into three ordinal groups (Significant Increase, score difference of 2 or more points), Moderate Increase, and No Change or Decrease (score difference of 0 or less points). The resulting 2×3 contingency table is given below.

**Table 12: Contingency Table — AI Tool Usage Frequency × Confidence Change Category (H1)**

| Usage Level                                        | Significant Increase (≥2 pts) | Moderate Increase (1 pt) | No Change / Decrease | Row Total  |
|----------------------------------------------------|-------------------------------|--------------------------|----------------------|------------|
| <b>High Usage — Daily / Weekly (n=101)</b>         | 53                            | 30                       | 18                   | <b>101</b> |
| <b>Low Usage — Monthly / Rarely / Never (n=69)</b> | 17                            | 25                       | 27                   | <b>69</b>  |
| <b>Column Total</b>                                | <b>70</b>                     | <b>55</b>                | <b>45</b>            | <b>170</b> |

The chi-square test of independence yielded  $\chi^2(2) = 15.29$ ,  $p = 0.0005$ . Since the p-value is much lower than the level of significance 0.05, the null hypothesis is rejected. The relationship between the rate of use

of AI finance tools and changes in confidence among first-time investors is statistically significant. Comparison of the observed and the expected frequencies reveals that high frequency users are significantly overrepresented in the Significant Increase category (observed: 53, expected: 41.6) and underserved in the No Change or Decrease category (observed: 18, expected: 26.7). These trends lend a lot of empirical evidence to H1: AI-based finance tools statistically significantly relate to the self-reported investment confidence of first-time investors in India.

## 8.2 Hypothesis 2: Generational Differences

H0: Gen Z and adult first-time investors show no significant difference in their confidence gains associated with AI tool usage.

H1: There is a significant difference between Gen Z (18–25) and adult (26–45) first-time investors in the degree of confidence gained associated with AI tool usage.

Age group (Gen Z vs. Adults) was cross-tabulated against the same three-category confidence change variable used in H1. The resulting 2×3 contingency table is presented below.

**Table 13: Contingency Table — Age Group × Confidence Change Category (H2)**

| Age Group                      | Significant Increase (≥2 pts) | Moderate Increase (1 pt) | No Change / Decrease | Row Total |
|--------------------------------|-------------------------------|--------------------------|----------------------|-----------|
| Gen Z — 18 to 25 years (n=98)  | 55                            | 27                       | 16                   | 98        |
| Adults — 26 to 45 years (n=72) | 15                            | 28                       | 29                   | 72        |
| Column Total                   | 70                            | 55                       | 45                   | 170       |

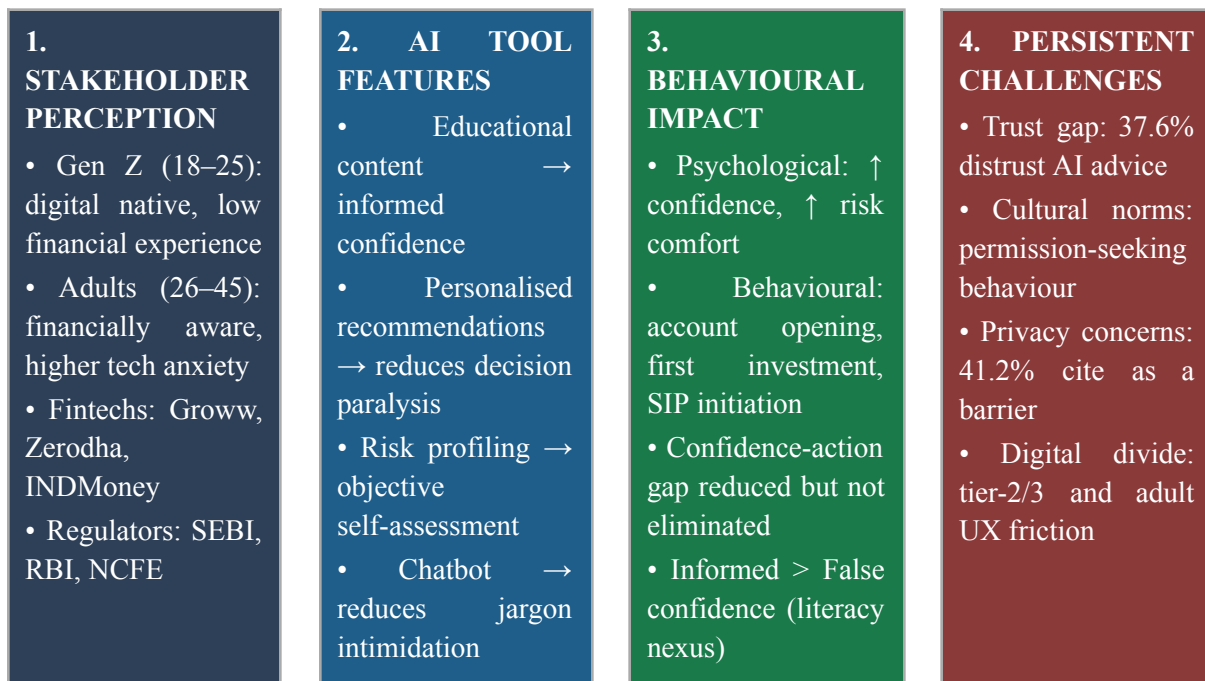
The chi-square test of independence yielded  $\chi^2(2) = 23.20$ ,  $p < 0.001$ . At high confidence, the null hypothesis is rejected. The frequency distribution indicates a steep deviation between age groups: 56.1% of Gen Z respondents said their confidence had Significantly Increased (55 of 98), whereas only 20.8% of adult respondents (15 of 72) did. On the other hand, No Change and Decrease were reported significantly more by adults (40.3% vs. 16.3%). These disparities are larger than what would be anticipated due to chance and align with the trend of the generation, as indicated by the Uses and Gratifications framework and the TAM-based explanations of Srivastava et al. (2024). The results favor H2: Gen Z first-time investors will gain confidence through AI finance tools to a much larger extent than adult first-time investors, which may be due to their higher background digital self-efficacy and reduced activation

barriers to interacting through an app.

## 9. DISCUSSION AND FRAMEWORK PROPOSAL

The results obtained due to the triangulation method of literature review, survey design, case study analysis, and secondary data result in creating a suggested framework of how AI-based finance tools affect confidence and investment choices among first-time investors in India. The framework is presented in Figure 1 below.

**Figure 1: Proposed Framework — AI Finance Tools and Investor Confidence in India**



*Note: The arrow direction indicates the sequential influence pathway from the stakeholder context through AI tool features, resulting in behavioural impact, which is moderated by persistent challenges.*

### 9.1 Stakeholder Perception

The framework describes three stakeholder groups. The first-time investors are the most crucial stakeholders: Gen Z investors are newly acquainted with the digital world and have little financial experience; adult first-time investors are less digitally savvy but have more financial context and might be anxious about technology. Fintechs like Groww, Zerodha, and INDMoney are providers of platforms, so their design decisions have a direct influence on the process of confidence-building. Regulators such as SEBI, RBI, and NCFE are policy stakeholders whose frameworks define the limits within which AI tools can be applied and sold to retail investors.

## 9.2 Features of AI Tools as Confidence Mechanisms

Triage of primary survey information (n = 170), qualitative piloting, case analysis,, and secondary statistical data yield a coherent and complementary set of findings. The chi-square analysis validated both central hypotheses: AI-based finance tools are notably correlated with increased investor confidence ( $\chi^2 = 15.29$ ,  $p = 0.0005$ ), and the correlation is more pronounced among Gen Z respondents than among adult first-time investors ( $\chi^2 = 23.20$ ,  $p = 0.001$ ). At the descriptive level, the overall mean confidence score among the sample increased by 1.44 points (on a 5-point scale) from before using AI tools (2.38) to after using AI tools (3.82). Educational content (utilised by 75.9% of respondents and considered most useful by 30.0% of respondents) and personalised recommendations (71.8% use; 29.4% mention) became the most commonly used and most useful confidence mechanisms, with chatbots supporting rather than leading. Importantly, the increase in confidence levels seems to have translated into investment action: 72.9% of participants have opened a demat account, and 63.5% have made their first investment using AI tools. However, privacy concerns (41.2%), lack of trust in AI advice (37.6%), and the preferences of human advisors (32.9% are also significant barriers, showing that AI tools do not eliminate the confidence-action gap but rather weaken it. These findings are generalised to the proposed scheme in Figure 1 above.

### Representative Open-Ended Responses (Q17)

The open-ended survey question (Q17) received 134 written responses from 170 study subjects (78.8 percent response rate). The answers were grouped into four recurring sentiment categories: simplified access, residual distrust, preference for human-AI hybrids, and feature-specific praise. Some representative quotes are presented below, by age group.

| ID        | Group         | Q17 Response (verbatim, lightly edited for anonymity)                                                                                                                |
|-----------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| P-S0<br>1 | Gen Z (F, 21) | "The risk profiling quiz was the first time I actually understood what kind of investor I am. I went from not touching stocks to starting a ₹500 SIP within a week." |
| P-S0<br>2 | Gen Z (M, 23) | "I trust the educational content more than the actual recommendations. The explanations are really clear, but I always double-check before putting money in."        |
| P-S0<br>3 | Adult (M, 31) | "I would not say I fully trust the AI. But it made me feel less stupid about investing, which is the main thing that was stopping me before."                        |
| P-S0<br>4 | Adult (F, 34) | "The app is excellent for learning. For actual investing decisions, I still want to talk to someone. One mistake with real money and I cannot undo it."              |

| ID    | Group         | Q17 Response (verbatim, lightly edited for anonymity)                                                                                         |
|-------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| P-S05 | Gen Z (F, 20) | "Groww made everything look so easy that I thought there had to be a catch. There was not. I opened my demat on the same day."                |
| P-S06 | Adult (M, 38) | "Useful for basics. I wish it could tell me why it recommends something, not just what to do. More transparency would help me trust it more." |

These reactions provide evidence of tension in confidence-competence (Theme 3 of the pilot study) and trust-as-process (Theme 2) outcomes. The requirement to be open in AI reasoning (P-S06) aligns with 37.6% of survey participants who cited a lack of trust in AI advice as a persistent impediment and suggests explainability as a design aspect for fintech platforms targeting first-time investors.

### 9.3 Impact on Behavior

The framework isolates the psychological (confidence, risk comfort, perceived competence) and behavioral (opening an account, making the first investment, SIP initiation, increased allocation) outcomes. The literature claims that the confidence-action relationship is not linear: the nexus of financial literacy and confidence, as reported in the Indian Journal of Finance (2026), posits that confidence must be grounded in knowledge to foster sustainable investment behavior. This has a direct impact on how AI tools are developed, focusing on educational methods rather than simplifying them.

### 9.4 Persistent Challenges

Three types of challenges remain as a result of using AI tools. First, barriers to trust: the fact that 36% of Financial Health Network (2024) users are unaware of robo-advisors indicates that trust comes before adoption, and awareness before trust. Second, cultural norms: the permission-seeking behavior observed among women investors implies that the technology solutions should be supported by social and institutional change. Third, digital divide: although Gen Z has the advantage of innate digital savvy, adult first-time investors and those in tier-2/3 cities might face barriers due to interface complexity, which can offset the benefits of AI functionality in terms of confidence.

## 10. IMPLICATIONS, LIMITATIONS, AND FUTURE DIRECTIONS

### 10.1 Implications

#### *For Financial Inclusion Policy*

If the study proves that AI tools improve confidence among first-time investors, policymakers at SEBI, RBI, and NCFE may consider incorporating AI-based modules into the National Strategy on Financial Education 2020–25. SEBI is already processing IPO documents with AI and currently processes around

80 percent of the workload (according to the SEBI Chairperson Madhabi Puri Buch). It is possible to extend AI-based solutions for investor education to hasten financial inclusion in tier-2/3 cities, which accounted for 45% of new account openings in 2024.

### ***For Educational Institutions***

AI finance tools can be introduced in schools and universities as useful additions to financial literacy programs. The NCFE already has a Money Smart School program and a Financial Education Training Program for teachers. The results of this research may be applied to the selection and implementation of AI tools in classroom teaching and help close the gap between theoretical understanding of finance and its real-world application.

### ***For Fintech Companies***

Knowing which AI capabilities most increase confidence enables fintech platforms to revamp first-time investor onboarding. Marketing and UX simplification are urgent concerns, as the 36% awareness barrier to robo-advisors implies (Financial Health Network, 2024). Gender-specific insights may be used to design features that cater to the growing number of women investors, a major limitation identified by the Axis MF data.

### ***For Gender Equity in Finance***

A five-pillar roadmap has been proposed by the Indian Journal of Finance (2026): school curriculum integration, opt-out workplace defaults for women, gender-smart adviser certification, SHG-based investment circles, and a national dashboard for gender investing. The results of this research on the ability of AI tools to partially address the identified confidence and agency gaps in women investors' investing behavior would directly inform pillars 1, 3, and 5 of this roadmap.

## **10.2 Contribution to Knowledge and Limitations**

The paper also contributes to the current academic literature as one of the first attempts to empirically analyze AI-based confidence results among first-time investors in India, with a particular generational focus. The contribution is mainly empirical, providing primary data on a phenomenon that has been discussed theoretically but not measured systematically in the Indian context.

There are several methodological shortcomings that should be recognized. First, the research is based on purposive and snowball sampling methods, which can introduce selection bias; they overrepresent digitally active, technology-savvy people. Second, the self-reported nature of the confidence measures can be susceptible to social desirability bias, whereby the respondents can exaggerate the gains in confidence. Third, the survey is a cross-sectional rather than longitudinal, making it hard to ascertain causation between AI tool use and confidence. Fourth, the small sample size (10–15 participants) of the pilot study reduces the generalizability of the qualitative results. Fifth, the geographic focus on urban and semi-urban India may not reflect the experiences of rural first-time investors, who have varying levels of digital access and connectivity limitations.

### 10.3 Future Research Directions

There are several areas where future research should be conducted to understand better and address the gaps noted in this research paper. To determine causal relationships between the use of AI tools and long-term behavioral change, longitudinal studies that monitor changes in confidence and investment behavior over 12–24 months would be useful. Second, group comparative experimental designs between AI tools and traditional advisory services would be able to isolate the contribution of AI features in particular. Third, qualitative deep dives of women who are first-time investors may reveal how cultural norms interact with technology adoption. Fourth, cross-market comparisons (emerging markets: India, Indonesia, Nigeria) may determine whether the results are specific to India or can be generalized to other low-financial-literacy environments. Fifth, a study of whether AI tools can generate overconfidence and its implications for investment performance would fill a significant void in the existing literature.

## 11. CONCLUSION

The research question of the current project is to examine the effect of AI-based financial tools on the confidence and investment choices of first-time investors in India, with a particular contrast between Gen Z (18 to 25 years) and adult (26 to 45 years) first-time investors. With the number of retail investors in India going up to 40 million to 185 million demat accounts in a span of four years, there is a growing academic and practical sense of urgency to understand the psychological and behavioral effects of AI-driven platforms effect on user growth.

The inferential analysis supported the two central hypotheses. A chi-square test of Independence, first, revealed a significant correlation between the frequency of AI tool use and confidence gains ( $\chi^2(2) = 15.29$ ,  $p = 0.0005$ ), with high-frequency users more than three times as likely to report a significant increase in confidence as their low-frequency counterparts. Second, the notable difference between generations was observed ( $\chi^2 = 23.20$ ,  $p < 0.001$ ): 56.1% of Gen Z participants indicated that they had gained significant confidence, as opposed to only 20.8% of adult participants - this can not be explained by chance. In the entire sample, the mean self-reported confidence increased from 2.38 to 3.82 on a 5-point scale, and 72.9% of respondents indicated that they opened a demat account after using AI tools, suggesting that the psychological boost these tools provide is, in most cases, sufficient to trigger the intent-to-action shift.

It is possible to note that a combination of enabling factors can be identified: 1) the proliferation of fintech, 2) the aging of the median investor, and 3) the rising use of AI in financial services throughout the world, according to the literature review. Meanwhile, it has found a fundamental paradox: high levels of digital engagement among young Indians are accompanied by low financial literacy levels (27–30%) at best. Such a paradox makes AI finance tools potential mediators between financial expertise and digital comfort. The thematic synthesis of five domains, including AI adoption, robo-advisory behavior, financial literacy, gender dimensions, and generational differences, has revealed the central mediating variable between the use of tools and investment action to be the confidence gap.

The case study analysis of Groww, Zerodha, and INDMoney has identified three different approaches to AI-driven confidence-building: the simplification-first approach of Groww, the learning-first approach of Zerodha, and the holistic financial management approach of INDMoney. Both approaches address multiple dimensions of investor anxiety, and it is suggested that there is no single AI dimension in which all platforms are universally most effective; rather, the effective platforms are a mix of multiple confidence mechanisms depending on the customers they serve.

The proposed framework comprises four interconnected dimensions: stakeholders' perceptions, AI features as confidence mechanisms, behavioral impact, and persistent challenges. It highlights that an increase in confidence does not always translate into long-term investment behavior; the financial literacy-confidence nexus requires AI in the development of informed confidence, rather than false confidence. The framework also includes factors such as trust, cultural norms, and the digital divide as barriers that can be resolved using technology.

The implications of the research cut across several areas. For policymakers, the findings imply that national financial education policies using Artificial Intelligence modules accelerate inclusion in tier-2/3 cities. Onboarding can also be tailored for fintech companies, determining which AI functions instill confidence. Regarding educational institutions, the study supports the introduction of AI financial tools as a potential addition to financial literacy initiatives. The findings would provide gender equity advocates with an answer to the question of whether technology would, to some extent, reduce structural confidence and agency gaps observed in women's investing behaviour.

Finally, AI-finance tools will be a major yet partial remedy to the lack of confidence among beginners investing in India. Their performance seems to depend on theosophy, and learnlearning-personalization-based approaches have the most promising prospects. With the ever-growing fintech ecosystem in India, the most critical need and the most significant obligation of the industry and its regulators is to ensure that these tools do not lead to a false sense of financial competence but rather to superficial confidence.

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