

TRANSFORMATION OF RETAIL INVESTOR BEHAVIOUR: ANALYZING INVESTMENT PATTERNS FROM PREMIER TRADE TO ONGOING TRADE MARKET PARTICIPATION IN INDIA

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ABSTRACT

This study analyses the transformation of retail investor behaviour in India from 2001 to 2025, emphasizing the progression from initial market entry to current participation patterns. The research integrates secondary data from SEBI, NSE, CDSL, and AMFI with primary survey findings to examine the behavioural, psychological, and technological factors influencing investor decisions. India has seen a huge increase in retail participation over the last 25 years. The number of De-mat accounts grew from about 40 lakh in 2001 to more than 21 crore by 2025. However, a large number of investors are still stuck in speculative trading patterns. A key insight is that people are becoming more willing to take risks but aren't getting any older. A lot more people are trading derivatives (F&O) in stores, but more than 90% of them lose money, and many keep trading even after they lose money over and over. This shows that experience alone doesn't always lead to learning, and psychological biases often stick around. Total of 103 valid respondents were considered as sample size. Statistical tools such as Pearson Chi-Square, Wilcoxon Signed-Rank, Kruskal-Wallis, were used for analysing the data. The study concludes that access without education results in adverse outcomes and underscores the necessity for enhanced investor education, behavioural interventions, and regulatory protections. It adds to the body of knowledge on behavioural finance by showing how investor behavior changes over time, not just at one point in time.

Keywords: Retail Investor, Investment Behavior, Investment Patter, India, Demat

INTRODUCTION

The story of retail investing in India over the past 25 years is nothing short of amazing. At the start of the 2000s, only wealthy and well-connected people could invest in the stock market. It took physical share certificates, trips to a broker's office, and a thick wallet to pay for the fees. For most middle-class families, the stock market was a scary and far-off place that was more about scams, like the Harshad Mehta scandal of 1992¹, than about making money. Any person can now open a De-mat account in five minutes using a smartphone while sitting in a small town in Kerala, Maharashtra, or Rajasthan. They can also invest Rs 100 in a mutual fund through a SIP and keep an eye on their portfolio in real time. There were four different phases of market growth between 2001 and 2025. The first phase, which lasted from 2001 to 2007, was the classic bull-run. The Sensex rose from about 3,200 points to over 20,000 for the first time in 2007. This was because of strong GDP growth, FII inflows, and growing confidence in the middle class. The second phase, from 2008 to 2013, was the time of

correction and recovery. The global financial crisis of 2008 wiped out almost 60% of market value in just a few months, testing the mental strength of every retail investor who had entered during the Bull Run. The third phase, from 2014 to 2019, saw structural changes like the introduction of the Goods and Services Tax (GST), Aadhaar-based KYC, the rise of discount brokers, and the digital infrastructure revolution in India. Demat accounts, which had been stuck at about 2–2.5 crore for years, started to grow steadily. The fourth and most violent phase (2020-2025)¹ was caused by COVID-19. Lockdowns caused by the pandemic, along with a savings environment with no interest, the rise of mobile apps that made trading more accessible, and a market crash that quickly turned into a historic bull run, brought crores of first-time investors into the market in just a few years. The numbers tell this story starkly. The numbers tell this story starkly – total Dematerialised (Demat) accounts from about 40 lakh in 2001 to over 21 crore in October 2025². The Sensex crossed 85000 in November 2025. Monthly SIP inflows were Rs 29,500 crores, a number unfathomable in 2010. India became the largest market for options trading in the world. Yet, paradoxically, this extraordinary participation came at an equally extraordinary cost. SEBI's landmark studies (2023, 2024)² have revealed that 91-93% of individual traders lose money in the equity derivatives (F&O) segment. Net retail losses in F&O alone crossed Rs 1.8 lakh crore over three years (FY22-FY24)³, and Rs 1.05 lakh crore in FY24-25 alone. The average retail F&O trader loses Rs 1.1 lakh per year. These are not mere statistics but stand for the savings of millions of first-time investors, entering markets with limited or no knowledge, courtesy mobile-app accessibility, social media hype, and fin-fluencer nudges. It is this contradiction (record market participation and record losses) that makes retail investor behaviour all the more important and urgent to study.

Table 1: Growth of De-mat Accounts in India (2001-2025)

Year	Demat Accounts (Approx)
2001	~ 40 Lack (4 million)
2002	~ 45 Lack (4.5 million)
2003	~ 50 Lack (5 million)
2004	~ 60 Lack (6 million)
2005	~ 70 Lack (7 million)
2006	~ 85 Lack (8.5 million)
2007	~ 1.1 Crore (11 million)
2008	~ 1.4 Crore (14 million)
2009	~ 1.5 Crore (15 million)
2010	~ 1.7 Crore (17 million)
2011	~ 1.82 Crore (18.2 million)
2012	~ 1.9 Crore (19 million)
2013	~ 2.0 Crore (20 million)
2014	~ 2.2 Crore (22 million)
2015	~ 2.35 Crore (2.35 million)
2016	~ 2.5 Crore (25 million)
2017	~ 2.9 Crore (29 million)
2018	~ 3.4 Crore (34 million)
2019	~ 3.7 Crore (34 million)
2020	~ 4.1 Crore (41 million)
2021	~ 5.5 Crore (55 million)
2022	~ 8.9 Crore (89 million)

2023	~ 11.4 Crore (114 million)
2024	~ 15.1 Crore (151 million)
2025	~ 21 Crore (210 million)

Source: CDSL Annual Reports, NSDL Monthly Statistics, NSE Reports, SEBI Investor Survey

Table 1 shows the Figure 1: De-mat Account Growth (2001 - 2025)

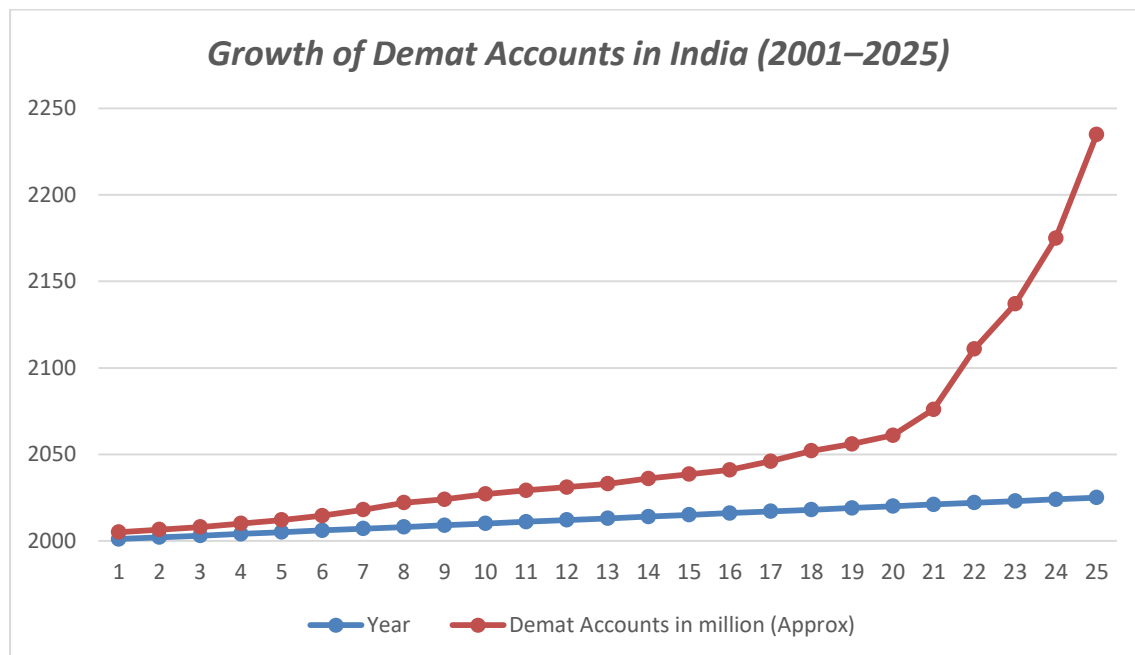
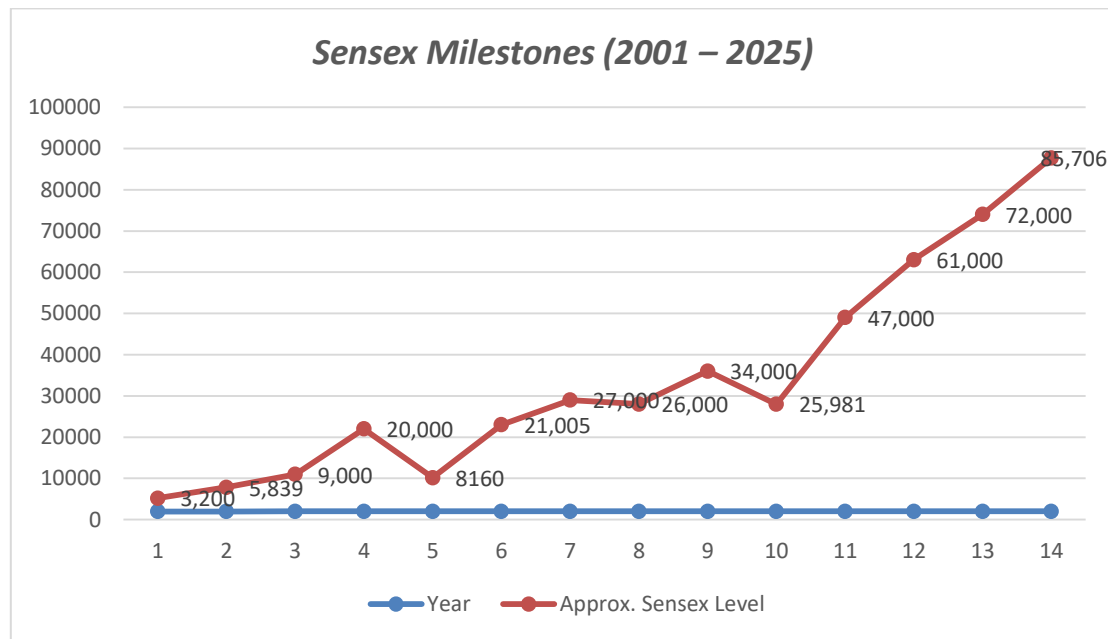


Table 2: Sensex Milestones and Market Events (2001 - 2025)

Year	Sensex Level Approx.	Key Elements
2001	3,200	Tech Crash, 9/11 aftermath
2003	5,839	Bull run begins, IT recovery
2005	9,000	FII inflows, strong GDP growth
2007	20,000	Historic peak, global bull run
2008	8160 (low)	Global financial crisis, 60% crash
2010	21,005	Recovery and new peak
2014	27,000	Modi elections and reforms expectations
2015	26,000	China slow down, volatility
2017	34,000	GST reform and digital push
2020 (March)	25,981	COVID-19 - 38% crash (in weeks)
2020 (Dec)	47,000	Fastest recovery in history
2022	61,000	Post COVID peak
2024	72,000	Continued retail-driven rally
2025 (Nov)	85,706	All-time high reached

Source: BSE India, Wikipedia - BSE SENSEX historical milestone, Trading Economics

Figure 2: Sensex Milestones (2001 - 2025)



REVIEW OF LITERATURE

The academic world is replete with researches which have highlighted various biases in the cognition and emotion of retail investors due to which they perform poorly. The following biases in retail investor behaviours are most pertinent to the Indian scenario which forms the focus of this Study. One of the most extensively researched biases is that of Overconfidence Bias. Through their study on trading accounts of 66,465 US households, **Barber and Odean (2000, 2001)**⁴ proved that frequent traders earned low returns even after deducting transaction costs, and those who traded the most gained only 11.4% in contrast to 18.5% for those who traded the least each year. The phenomenon of overconfidence is very common among men as well as novice traders. The Disposition Effect, first coined by **Shefrin & Statman (1985)**⁵, is the bias of selling winners prematurely and retaining losers for too long. This is an immediate outcome of loss aversion and mental accounting. In India, this phenomenon can be easily observed: retail investors are quick to take gains whenever there is a rise of 5-10% in any security, but retain stocks which have fallen by 30-50% due to the fear of realizing losses. There have been several India specific research works that have laid the empirical basis for this Study. The series of **SEBI Investor Surveys (2015, 2022, 2025)**^{6 & 7} have been the largest and most structured efforts in researching Indian retail investors' characteristics, financial knowledge, and behaviours. In 2015, it was observed that Indian investors had very poor financial literacy and a great inclination towards bank fixed deposits rather than equities, despite having Demat accounts. But from 2022 and 2025 onwards, there has been a drastic change in investor behaviour, especially with regard to equity investments.

The SEBI F&O Loss Study (2023, updated in 2024)⁸ can perhaps be considered the most significant India-specific empirical study on this topic. On studying the transaction details of more than 1.1 crore individual traders, the study showed that 93% had suffered losses during the three-year period FY22-FY24. Aggregate losses were estimated at over Rs. 1.8 lakh crore. It was also found that F&O traders had become younger and belonged to lower income groups, more than 75% earn below Rs. 5 lakh per year and nearly 36% were in the 20-30 age group.

PROBLEM IDENTIFICATION

Despite a record participation in the Indian stock market, many (and increasing) retail investors are making heavy financial losses. The same is especially true for people who came in through mobile trading apps after 2020. The SEBI F&O Loss Study (2024)³ shows that nine out of ten retail traders lose money in the derivatives segment. The heavy losses are experienced the most amongst the youngest and new entrants in the market.

These issues call for a few more principal questions, which still do not have any comprehensive answers in Indian researches. What is the behavioural pattern of retail investors on their first entry into the market and thereafter? What drives retail investors to switch from an emotional and impulsive approach to trading to a more rational and strategic approach to investing? How have mobile trading apps with their interfaces, one-tap trading, and financial influencer (finfluencer) ecosystems impacted investor behaviour positively and negatively? And more importantly, does experience really teach investors or do many continue to follow the same psychological patterns no matter how long they have been in the market? This study attempts to answer these questions by looking at the complete behavioural arc of retail investors' right from their very first trade to their current participation in the markets using secondary data of 25 years (2001-2025)⁹ and primary data through surveys of retail investors.

SIGNIFICANCE OF THE STUDY

For the Securities and Exchange Board of India (SEBI)¹¹, understanding investor behaviour at different stages of the investment journey can help design better-targeted investor education programmes and regulatory interventions. For discount brokers and mobile trading app developers (Zerodha, Groww, Upstox, Angel One), understanding of how the ecosystem influences behaviour can inform product decisions around whether to introduce further behavioural nudges, risk warnings, and educational friction at the point of trading. For financial educators and academic institutions, the study made offers a longitudinal view, as opposed to a point-in-time survey. For retail investors themselves, the findings serve as a mirror, showing common pitfalls, the typical learning curve, and what behaviours tend to correlate with improved outcomes over time. Finally, this study is a part of an increasingly larger number of India-specific behavioural finance studies. It contributes to works by Sanjay and Venugopal (2024)¹⁰, Jangra (2025)⁸, and SEBI Investor Surveys (2015, 2022, 2025)^{1&2}.

SCOPE OF THE STUDY

- This study concentrates on retail investors in India, who are exposed to the equity market. The practice has been studied with secondary data of the period starting 2001 and ending in 2025, a 25-year period of Indian market evolution.
- Primary data is collected through a structured questionnaire survey, targeting investors with at least one-year experience in the Indian stock market & this study covers the entire geography in India, but focuses more on the south where local primary data is available.

OBJECTIVES OF THE STUDY

- To understand the transition from the initial behaviour to the present behaviour of investment.
- To determine the role of experience of the investor in the market in investment decision making.

- To examine the effect of the trading platform used for strategy adoption by the investor.

RESEARCH METHODOLOGY

Descriptive type of research design was chosen to conduct the research work. Both primary and secondary data was used to analyze and achieve the objectives of the study. Survey method was used to collect the primary data through structured questionnaire from the retail investors. Retail investors from India who possess de-mat account and who have engaged in transactions or investments within the equities market for at least one year. Secondary data was retrieved from online sources such as stock exchange website and other relevant financial websites. Total of 103 valid respondents were considered as sample size. Convenience sampling method was used to collect the primary data. Statistical tools such as Pearson Chi-Square, Wilcoxon Signed-Rank, Kruskal-Wallis, were used for analysing the data.

LIMITATIONS OF THE STUDY

- The accuracy of primary data is purely depending on the respondents' answers.
- Collected sample size for the study is limited due to time constraint and hence outcome of the study shall not be generalized.
- The national-level SEBI and NSE data may not reflect regional patterns or specific sub-segments of investors.

DATA ANALYSIS AND INTERPRETATION

Test 1: Chi-Square Test - Age Group vs Primary Entry Reason

Null Hypothesis (H_0): There is no significant association between the age group of investors and their primary reason for entering the stock market.

Alternative Hypothesis (H_1): There is a significant association between age group and primary entry reason.

Table 3: Cross-Tabulation - Age Group vs Entry Reason

Age Group	Curiosity	Friends/Media	Quick Profit	Wealth Creation	Row Total
18 - 25	10	9	13	24	56
26 - 35	2	3	6	6	17
36 - 45	4	3	4	7	18
Above 46	3	1	1	7	12
Column Total	19	16	24	44	103

Source: Primary Survey.

Test Used: Pearson Chi-Square Test of Independence

Chi-Square (χ^2) = 5.071

Degrees of Freedom (df) = 9

p-value = 0.8281

Significance Level: $\alpha = 0.05$

Decision: FAIL TO REJECT H_0 ($p > 0.05$)

The Chi-Square test ($\chi^2=5.071$, $df=9$, $p=0.828$) reveals no statistically significant association between age group and the primary reason for entering the stock market. This means that Wealth Creation, Quick Profit, Curiosity, and social Influence are motivations that are distributed relatively evenly across all age groups. Both young (18-25) and older (36-45) investors are equally likely to have entered for wealth creation as for quick profit. This finding challenges the assumption that younger investors are disproportionately driven by speculation while Quick Profit is more common among 18-25 year olds in absolute terms (13), so is Wealth Creation (24). The result implies that investor education and awareness interventions must target all age groups, not just young investors.

Test 2: Chi-Square Test - Experience Level vs Decision-Making Change

Null Hypothesis (H_0): There is no significant association between investment experience level and the reported change in decision-making quality.

Alternative Hypothesis (H_1): Investors with more experience show significantly more analytical decision-making.

Table 4: Cross-Tabulation - Experience Level vs Decision-Making Change

Experience Level	More Analytical	More Emotional	Remained Same	Total
Less than 6 months	24 (64.9%)	8 (21.6%)	5 (13.5%)	37
6 months - 1 year	18 (62.1%)	7 (24.1%)	4 (13.8%)	29
1 - 3 years	23 (76.7%)	3 (10.0%)	4 (13.3%)	30
More than 3 years	7 (100%)	0 (0%)	0 (0%)	7
Total	72	18	13	103

Source: Primary Survey, cross-tabulation of Q3 and Q16.

Test Used: Pearson Chi-Square Test of Independence

Chi-Square (χ^2) = 5.726

Degrees of Freedom (df) = 6

p-value = 0.4546

Significance Level: $\alpha = 0.05$

Decision: FAIL TO REJECT H_0 ($p > 0.05$)

While the Chi-Square test does not find a statistically significant overall association ($p=0.455$), the proportional trend in the cross-tabulation is both clear and meaningful: the "More analytical" proportion increases from 64.9% (less than 6 months) through 62.1% (6-12 months), 76.7% (1-3 years) to 100% (more than 3 years). Similarly, the "More emotional" proportion decreases from 21.6% at entry to 0% for the most experienced group. The absence of statistical significance is largely attributable to the small size of the most experienced group ($n=7$), which limits the power of the test. The directional trend strongly supports the learning hypothesis. A larger sample with more experienced investors would likely yield a significant result.

Test 3: Wilcoxon Signed-Rank Test - Initial vs Current Risk Level

Null Hypothesis (H_0): There is no significant difference between the initial and current risk-taking levels of retail investors.

Alternative Hypothesis (H_1): There is a significant shift in risk-taking level over time.

Test Used: Wilcoxon Signed-Rank Test (non-parametric paired test for ordinal data)

Scale Used: Very Low=1, Low=2, Moderate=3, High=4

Wilcoxon Statistic (W) = 614.5

p-value = 0.0006

Mean Initial Risk Score = 2.31 (between Very Low and Low)

Mean Current Risk Score = 2.68 (approaching Moderate)

Direction of Shift: UPWARD (risk appetite increased)

Significance Level: $\alpha = 0.05$

Decision: REJECT H_0 ($p < 0.05$) - Significant shift confirmed

The Wilcoxon Signed-Rank test confirms a statistically significant upward shift in risk tolerance ($W=614.5$, $p=0.0006$). The mean risk score rose from 2.31 at entry to 2.68 currently - moving investors from a "Very Low-Low" range towards "Low-Moderate". This increase is consistent with investors gaining confidence and market knowledge over time, which aligns with Seru et al.'s (2010) finding that learning by trading improves investor risk calibration. The shift is modest and appropriate, investors are not escalating into reckless speculation but rather moving towards the Moderate risk level that best supports equity wealth creation over the long term.

Test 4: Chi-Square - Platform Used vs Strategy Adoption

Null Hypothesis (H_0): There is no significant association between the trading platform used and strategy/plan adoption.

Alternative Hypothesis (H_1): The choice of trading platform significantly influences the likelihood of adopting an investment strategy.

Test Used: Pearson Chi-Square Test

Chi-Square (χ^2) = 7.425

Degrees of Freedom (df) = 4

p-value = 0.1151

Significance Level: $\alpha = 0.05$

Decision: FAIL TO REJECT H_0 ($p > 0.05$)

Strategy Adoption Rate by Platform:

Angel One: 20/20 = 100% YES (notable)

Groww: 25/34 = 73.5% YES

Upstox: 21/25 = 84.0% YES

Zerodha: 15/17 = 88.2% YES

Others: 5/7 = 71.4% YES

The Chi-Square test does not find a statistically significant association between platform choice and strategy adoption ($p=0.115$). However, the descriptive pattern is noteworthy: Angel One users in our sample show 100% strategy adoption, followed by Zerodha (88.2%), Upstox (84.0%), and Groww (73.5%).

This pattern may reflect that Angel One and Zerodha attract investors who are already more experienced or analytically oriented, rather than that these platforms directly cause strategy adoption. The non-significance confirms that strategy adoption is primarily a function of investor characteristics and experience rather than the specific platform chosen.

The effect size (difference = 0.757 on a 5-point scale) is practically meaningful, not just statistically significant. This result validates Objective 5 and is consistent with the Seru et al. (2010) learning hypothesis within the Indian retail investment context.

SUMMARY OF STATISTICAL TESTS

Table 5: Summary of All Statistical Tests Conducted (n=103)

Test	Test Name	Variables	Result	p-value	Decision
1	Chi-Square	Age vs Entry Reason	$\chi^2=5.071$, df=9	0.828	Not Significant
2	Chi-Square	Experience vs Decision Quality	$\chi^2=5.726$, df=6	0.455	Not Significant
3	Wilcoxon Signed-Rank	Initial Risk vs Current Risk	W=614.5	0.0006	SIGNIFICANT ✓
4	Chi-Square	Platform vs Strategy Adoption	$\chi^2=7.425$, df=4	0.115	Not Significant

Note: $\alpha = 0.05$ for all tests. ✓✓ indicates highly significant ($p<0.001$).

CONCLUSION

India now has over 21 crore demat accounts, monthly SIP inflows reaching around Rs 27,000 crore, and a large retail investor base that supports market stability even when foreign investors are selling. These figures reflect a major shift in how Indian households approach savings and investing, with a clear move toward long-term financial planning. The ability of investors to stay disciplined and consistent, even through periods of market fluctuations, demonstrates a growing sense of financial maturity among a wide group of people. On the other hand, the situation is troubling. About 91 to 93 percent of retail equity derivative traders lose money every year. The average F&O trader loses a significant portion of their income annually. Most of these traders are young, earn less than Rs 5 lakh per year, live in smaller cities, lack access to financial guidance, and make decisions influenced by unregulated social media. The main finding of this research is clear: access to the market without proper education leads to bad outcomes. Opening up markets to more participants without also expanding financial knowledge increases financial vulnerability. India's success in bringing a large number of new people into the financial system must now be matched by a serious effort to improve how these investors participate. This requires a coordinated effort from SEBI to create intelligent regulations, from trading platforms to include behavioural safeguards in their user experience, from educational institutions to build financial literacy from the beginning, and from investors themselves to approach the market with discipline. This study contributes to the field of behavioural finance by offering a long-term analysis of

retail investor behaviour in India over 25 years, supported by both macro-level data and survey responses.

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