



Retail Investor Participation and Trading Behaviour in India's Equity Markets: A Behavioural Finance Review

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Abstract

Retail participation in India's equity markets has expanded at an unprecedented pace. The number of demat accounts crossed 150 million for the first time in March 2024 and reached about 234 million by July 2026, driven by low-cost digital brokerages, simplified onboarding and strong market returns. Much of the new activity, however, has flowed into equity derivatives, where outcomes for individuals have been poor. Studies by the Securities and Exchange Board of India (SEBI) show that 93 per cent of more than one crore individual futures and options traders made losses between 2021-22 and 2023-24, with aggregate losses exceeding ₹1.8 lakh crore, and that 91 per cent made losses in 2024-25. This paper reviews the behavioural finance literature that helps explain these outcomes and examines the policy response. Using a structured narrative review of peer-reviewed studies and SEBI publications, it organises the evidence around three themes: the drivers of retail participation, the behavioural biases that shape trading decisions, and the effects of regulation. The review finds that overconfidence, attention-driven trading, lottery preferences and learning from random outcomes, all well documented internationally and in India, are consistent with the observed pattern of frequent, loss-making derivative trading. SEBI's October 2024 measures were followed by a 20 per cent decline in unique traders, although aggregate losses rose in 2024-25. The paper discusses implications for regulators, brokers and investor education and proposes a research agenda on fintech design, investor learning and long-term wealth outcomes.

Keywords: - Retail Investors, Behavioural Finance, Equity derivatives, Overconfidence, SEBI

I. INTRODUCTION

Household participation in equity markets is often regarded as a sign of financial deepening. When households invest directly in shares and mutual funds, they gain access to the long-term returns of corporate growth, and firms gain a broader base of domestic capital. In India, where household savings have traditionally been concentrated in bank deposits, gold and real estate, the recent shift towards market-linked investments represents a significant structural change.

The scale of this shift is striking. India's demat account tally crossed 150 million for the first time in March 2024, and by July 2026 it had reached about 234 million, with monthly additions of around 2.9 million accounts. This expansion was supported by digital onboarding through electronic know-your-customer processes, the rise of discount brokerages offering low or zero brokerage on delivery trades, and the strong performance of Indian equities after 2020.

Not all of this participation, however, has taken the form of long-term investment. A large share of new retail activity has been concentrated in equity derivatives, particularly short-dated index options. SEBI's studies paint a stark picture: 93 per cent of more than one crore individual traders in equity futures and options (F&O) incurred losses between 2021-22 and 2023-24, with aggregate losses exceeding ₹1.8 lakh crore (SEBI, 2024a). In 2024-25, 91 per cent of individual traders again made net losses, and their aggregate net loss rose by 41 per cent to ₹1,05,603 crore (SEBI, 2025).

Why do so many individuals persist in an activity that leaves most of them worse off? Standard finance theory, which assumes rational investors with consistent preferences, offers limited answers. Behavioural finance, by contrast, has documented systematic patterns in how individual investors trade, many of which appear relevant to the Indian experience. This paper addresses the following research question: what does behavioural finance research suggest about the drivers of retail trading outcomes in India, and how effective has the regulatory response been? It contributes by linking international

and Indian evidence on investor behaviour to SEBI's recent data and policy measures, and by identifying priorities for further research.

The rest of the paper is organised as follows. Section 2 reviews the literature, Section 3 describes the method, Section 4 presents the findings, Section 5 discusses implications, and Section 6 concludes.

II. LITERATURE REVIEW

2.1. Household finance and participation

Campbell (2006) frames household finance as a field concerned with how households use financial markets to achieve their objectives, and he notes that many households make investment mistakes, including non-participation, under-diversification and excessive trading. These mistakes are more common among less wealthy and less educated households. Lusardi and Mitchell (2014) show that financial literacy is low in many countries and that it is strongly associated with better financial decisions, including retirement planning and avoidance of high-cost borrowing.

Emerging economies present distinct challenges. Badarinsa et al. (2019) document that households in emerging markets hold a larger share of wealth in physical assets and face greater frictions in accessing formal financial products. As these frictions fall, rapid entry by first-time investors with limited market experience is to be expected, and this makes the quality of early investment experiences particularly important.

2.2. Behavioural biases in individual trading

A large literature shows that individual investors trade too much. Barber and Odean (2000), using data on more than 60,000 US households, find that those who traded most frequently earned substantially lower net returns than those who traded least, primarily because of transaction costs. They attribute this pattern to overconfidence. In a related study, Barber and Odean (2001) find that men traded more than women and earned lower net returns as a result, consistent with gender differences in overconfidence.

Evidence from Taiwan provides a particularly relevant benchmark. Using complete trading records for the Taiwanese market, Barber et al. (2009) show that individual investors suffered large aggregate losses from trading, much of which accrued to institutions, and that a substantial portion of these losses arose from aggressive orders and transaction costs. The parallel with SEBI's finding that proprietary traders and foreign portfolio investors earned profits while individuals lost money in F&O is notable.

Other biases shape what investors trade and when. Prospect theory holds that people evaluate outcomes relative to a reference point and are more sensitive to losses than to equivalent gains (Kahneman & Tversky, 1979). One consequence is the disposition effect, the tendency to sell winning investments too early and hold losing ones too long (Shefrin & Statman, 1985), which Odean (1998) confirms in brokerage data. Kumar (2009) shows that some individual investors exhibit a preference for lottery-like stocks with low prices and high skewness, accepting low average returns in exchange for a small chance of a large gain. Out-of-the-money options share these lottery-like features.

2.3. Technology, attention and learning

Digital platforms have changed how individuals trade. Barber et al. (2022) find that users of the Robinhood app in the United States engaged in more attention-induced trading than other retail investors, and that stocks heavily bought by these users subsequently earned negative returns averaging 4.7 per cent over 20 days. They attribute part of this effect to app design features that make certain stocks more salient.

Indian evidence shows that investors may also learn the wrong lessons from experience. Using random allocations of shares in oversubscribed initial public offerings, Anagol et al. (2021) find that investors who were randomly allocated IPO shares that subsequently rose in value increased their trading in other stocks, while those allocated shares that fell reduced it. Because the allocations were random, the results suggest that investors interpret luck as evidence of their own skill, which is consistent with overconfidence driven by early outcomes.

2.4. Research gap

The behavioural finance literature is extensive, and SEBI has published detailed data on trading outcomes. However, academic work connecting the two in the Indian derivatives context remains limited, and the effects of the 2024 regulatory measures have not yet been examined in peer-reviewed research. This review seeks to bridge this gap.

III. METHODS

The study adopts a structured narrative review design, combining peer-reviewed research with official regulatory data. This design is appropriate because the evidence spans different methods and settings and because the most recent Indian data are available only in regulatory publications.

3.1. Sources and selection

Academic studies were identified through Google Scholar, RePEc/IDEAS and SSRN using combinations of the terms "individual investors", "retail trading", "overconfidence", "disposition effect", "lottery stocks", "fintech trading", "derivatives" and "India". Regulatory evidence was drawn from SEBI studies on individual traders in equity derivatives published between 2023 and 2025 and from the SEBI circular of October 2024 on the equity index derivatives framework. Market participation data were drawn from depository statistics as reported by market sources. Studies were included if they

- Analysed individual investor behaviour or outcomes using trading data, experiments or surveys, or provided the theoretical basis for such analysis

- Appeared in peer-reviewed journals or official publications
- Were relevant to the Indian context. Selection was purposive, prioritising large-sample studies with credible identification.

3.2. Analysis

Studies were coded by setting, data, method and principal findings and grouped into themes. Regulatory data were analysed descriptively to compare outcomes across periods before and after the 2024 measures. Because the study relies entirely on published material, no primary data were collected and ethical approval was not required.

IV. RESULTS

4.1. Scale of participation and outcomes

Table 1 summarises the main indicators. Participation has risen sharply, but outcomes in the derivatives segment have been consistently poor. The share of loss-making individual traders has remained around nine in ten across every SEBI study, and losses are concentrated: over the three years to 2023-24, the top 3.5 per cent of loss-makers lost an average of ₹28 lakh each, while only about 1 per cent of traders earned profits above ₹1 lakh.

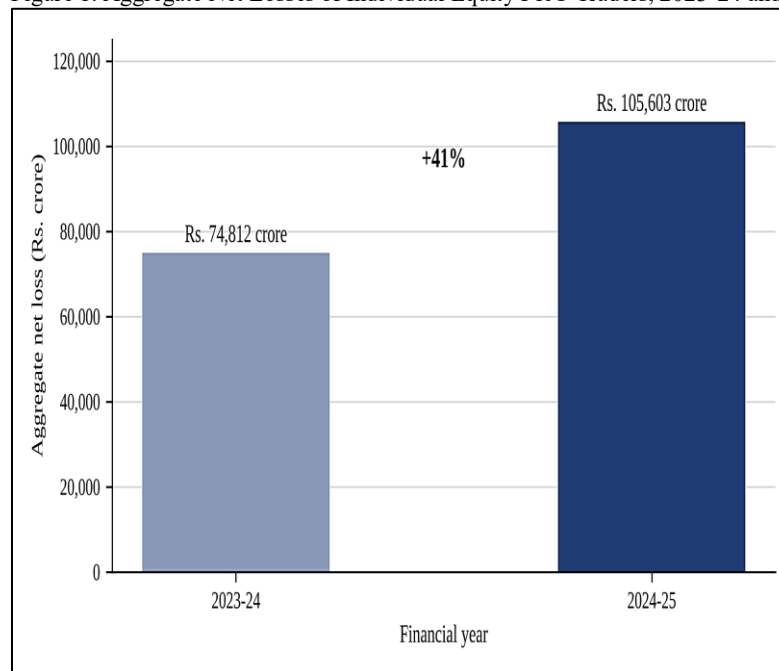
Table 1. Retail Participation and Equity Derivatives Outcomes in India

Indicator	Value	Period	Source
Demat accounts	150 million (first crossed)	March 2024	Market reports
Demat accounts	234.4 million	July 2026	360 ONE Capital
Individual F&O traders making losses	93% of over 1 crore traders	2021-22 to 2023-24	SEBI (2024a)
Aggregate losses of individual F&O traders	Over ₹1.8 lakh crore	2021-22 to 2023-24	SEBI (2024a)
Average loss per trader	About ₹2 lakh	2021-22 to 2023-24	SEBI (2024a)
Individual traders with net losses	91%	2024-25	SEBI (2025)
Aggregate net loss of individual traders	₹74,812 crore to ₹1,05,603 crore	2023-24 to 2024-25	SEBI (2025)
Unique individual index derivative traders	Down 20% year on year	Late 2024-25	SEBI (2025)

Source: Compiled by the author(s) from SEBI (2024a, 2025) and market reports on depository statistics (Business Standard, 2024; 360 ONE Capital, as reported in 2026). Losses include transaction costs where stated by SEBI.

Figure 1 compares the aggregate net losses of individual F&O traders in 2023-24 and 2024-25. Losses widened by 41 per cent in 2024-25, even though the share of loss-making traders was unchanged and participation declined in the latter part of the year.

Figure 1: Aggregate Net Losses of Individual Equity F&O Traders, 2023-24 and 2024-25



Source: SEBI (2025). Figures in ₹ crore.

4.2. Synthesis of behavioural evidence

Table 2 synthesises the principal studies reviewed. The evidence consistently shows that individual investors who trade frequently underperform, that overconfidence and attention play central roles, and that investors draw inferences about their skill from outcomes that are largely random.

Table 2. Synthesis of Selected Empirical Studies on Individual Investor Behaviour

Study	Setting and data	Principal finding
Odean (1998)	United States; brokerage accounts	Investors sell winners more readily than losers (disposition effect)
Barber & Odean (2000)	United States; 66,465 household accounts	Most active traders earn the lowest net returns, consistent with overconfidence
Barber & Odean (2001)	United States; brokerage accounts by gender	Men trade more than women and earn lower net returns
Barber et al. (2009)	Taiwan; complete market trading records	Individuals lose substantially from trading; institutions gain
Kumar (2009)	United States; individual portfolios	Some investors prefer lottery-like stocks despite low average returns
Anagol et al. (2021)	India; random IPO allocations to 1.5 million investors	Random gains raise subsequent trading, suggesting investors mistake luck for skill
Barber et al. (2022)	United States; Robinhood users	App users engage in attention-induced trading followed by negative returns

Source: Compiled by the author(s).

4.3. The regulatory response

On 1 October 2024, SEBI announced six measures to strengthen the equity index derivatives framework (SEBI, 2024b). From 20 November 2024, the minimum contract size for index derivatives was raised from ₹5 lakh to ₹15 lakh, weekly expiries were limited to one benchmark index per exchange, option premiums were to be collected upfront from buyers, an additional extreme loss margin of 2 per cent was applied to short options on expiry day, and calendar spread benefits were removed on expiry day. Intraday monitoring of position limits followed in April 2025.

The early evidence on these measures is mixed. SEBI (2025) reports that the number of unique individual traders in index derivatives fell by about 20 per cent year on year in the latter part of 2024-25, and that losses declined in the final quarter of the year. However, aggregate net losses for 2024-25 as a whole were 41 per cent higher than in 2023-24, and the share of loss-making traders remained above 90 per cent. The measures appear to have reduced participation at the margin without, so far, changing outcomes for those who continue to trade.

V. DISCUSSION

The findings indicate that the pattern of retail derivatives trading in India is closely consistent with what behavioural finance research would predict. Short-dated options combine low upfront cost, high leverage and lottery-like payoffs, which appeal to investors with a preference for skewness (Kumar, 2009). Frequent trading driven by overconfidence erodes returns through transaction costs (Barber & Odean, 2000), and app-based trading may amplify attention-driven decisions (Barber et al., 2022). The Indian evidence from IPO lotteries suggests that early wins, even when random, can encourage further trading (Anagol et al., 2021). The concentration of profits among proprietary traders and foreign portfolio investors mirrors the transfer from individuals to institutions documented in Taiwan (Barber et al., 2009).

These findings carry implications for several groups. For regulators, the results suggest that measures which raise entry costs may reduce participation but are unlikely on their own to change the behaviour of committed traders. Complementary approaches could include suitability assessments for derivatives trading, prominent disclosure of individual loss statistics at the point of trade, and limits on features that encourage impulsive trading. For brokers, particularly app-based platforms, the evidence on attention-induced trading highlights a responsibility to avoid design choices that gamify trading. For investor educators, the evidence indicates that financial literacy programmes should address behavioural biases directly, including overconfidence and the tendency to learn from luck, rather than focusing only on product knowledge (Lusardi & Mitchell, 2014). Behavioural tools such as default options and well-timed reminders may also help (Thaler & Sunstein, 2008).

The broader picture is not wholly negative. Growth in demat accounts and long-term investment products indicates that many new investors are building market-linked savings. The central policy challenge is to channel growing participation towards diversified, long-term investing while limiting harm from speculative trading.

The review has limitations. Most of the behavioural evidence comes from developed markets, and its applicability to Indian investors requires direct testing. SEBI's studies report aggregate statistics and do not allow analysis of individual behaviour or causal attribution of outcomes to specific biases. The period since the 2024 measures is short, and later data may reveal different effects. Finally, as a narrative review, the study involves judgement in the selection and interpretation of evidence.

VI. CONCLUSION

This paper reviewed behavioural finance evidence relevant to India's rapid growth in retail market participation and the poor outcomes of individual derivatives traders. It finds that overconfidence, attention-driven trading, lottery preferences and learning from random outcomes provide a coherent explanation for why around nine in ten individual F&O traders lose money. SEBI's 2024 measures reduced participation but have not yet improved outcomes for those who continue to trade.

Several areas merit further research. First, account-level studies using broker or exchange data could test which biases best predict losses among Indian traders, and how this varies by age, gender, income and region. Second, research on platform

design could examine how features such as notifications, leaderboards and simplified order screens affect trading frequency and outcomes. Third, longitudinal studies could track whether investors who incur derivatives losses exit markets entirely or shift towards long-term investing. Fourth, evaluations of the 2024 measures using difference-in-differences designs could estimate their causal effects as more data become available. Fifth, field experiments could test whether loss disclosures or suitability prompts reduce harmful trading. Addressing these questions would help ensure that India's expanding investor base translates into durable household wealth.

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