



Social Media, Artificial Intelligence, and Behavioural Finance: Effects on Indian Retail Investors

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Abstract

The proliferation of social media platforms and the rapid advancement of artificial intelligence (AI) tools have fundamentally disrupted traditional patterns of financial decision-making among retail investors in India. This paper investigates how these twin forces interact with well-established behavioural finance biases—herding, overconfidence, loss aversion, anchoring, and availability bias—to shape investment choices in one of the world's fastest-growing retail equity markets. Drawing on a synthesis of theoretical frameworks from behavioural finance, information systems research, and technology adoption literature, alongside an analysis of recent empirical evidence from the Indian market, this study argues that social media and AI do not merely amplify pre-existing cognitive biases but also introduce entirely new forms of irrational behaviour. The paper further examines the regulatory implications of this convergence and proposes a framework for investor education and policy intervention. Studies show that when used the right way, AI could help mitigate bias and increase decision quality, but that its unregulated use in social media channels on a large scale, only through natural market forces without suitable applied sociological oversight, presents systemic risks to both corporate performance and household financial sustainability.

Keywords: *Behavioural finance, social media, artificial intelligence, Indian retail investors, cognitive biases, herding behaviour, market sentiment, fintech*

1. Introduction

The evolution of Demat accounts in India from 40 million accounts to 160+ million active demat accounts between 2020 and 2024. This quadrupling was merely partly a consequence of higher post-tax incomes, and lower win-win brokerage fees (a fall from 20% to 7%) but both factors helped. Much of this was driven, however, by the Regal's phone screen. Young Indians, many who were first time investors, understood stock markets via YouTube videos, made decisions based on Reddit threads, learned about IPOs through WhatsApp forwards and placed trades in seconds on mobile apps that gamified the investing experience. At the same time, Advisory tools based on artificial intelligence, robo-advisors and sentiment-analysis platforms started to compete with—indeed replace—human financial advisors.



The melding of social media and AI in how financial decisions are made is no neutral act. Classical finance theory holds agents who efficiently process information and maximize expected utility. Behavioural finance emerged as a counter to this perspective, documenting how actual human investors systematically behave irrationally. The role of social media and AI is to change the context in which these deviations occur: sometimes they are exaggerated, sometimes diminished, but often introducing a form of maladaptive bias altogether without an analogue in the literature pre-digital.

India offers a particularly compelling case study. The country has the world's second-largest internet user base, a median investor age significantly younger than in developed markets, a securities regulatory framework that is still catching up with technological change, and a cultural relationship with financial markets that blends traditional risk aversion with newly acquired speculative appetite. Understanding how social media and AI interact with behavioural biases in this context is not merely an academic exercise—it has real consequences for household wealth, market stability, and financial inclusion.

This paper proceeds as follows. Section 2 provides a theoretical background on behavioural finance and its core concepts. Section 3 examines the role of social media in shaping investor psychology and behaviour. Section 4 analyses how AI tools are transforming the investment landscape. Section 5 explores the intersection of all three forces in the Indian market. Section 6 discusses regulatory implications and policy recommendations. Section 7 concludes.

2. Theoretical Background: Behavioural Finance

2.1 Origins and Core Claims

The seeds of the behavioural finance theory were sown when, behind the elegant efficient market hypothesis (EMH), we found that it could not explain many of the documented market anomalies—from the January effect and momentum anomalies to asset bubbles being overreacted on a large scale. Most fundamental: Kahneman and Tversky's (1979) Prospect Theory illustrated as an empirical matter that losses loom larger than equal gains, that people make outcome decisions based on impacts relative to reference points rather than absolute terms, and that their assessments of probability are consistently biased.

Stock price volatility is much larger than that can be explained by the information in dividends (Shiller, 1981), which means market movement contains a great deal of psychological force. Thaler (1985) reported the phenomenon of mental accounting, whereby people use money differently based on its source or intended usage, which violates the fungibility assumption that is at the heart of standard finance. Collectively, these works defined that markets do not consist of Homo economicus but humans with limited attention spans, bounded rationality, reactions to uncertainty.



2.2 Key Cognitive Biases Relevant to Indian Investors

2.2.1 Herding Behaviour

Herding includes the abandoning of private information or judgement for the pursuit of following the crowd. This results in correlated trading behaviour on financial markets, which can cause asset prices to deviate a long way from fundamental levels. Bikhchandani and Sharma (2000) introduced a distinction between spurious herding (similar responses to common information) and intentional herding (deliberate imitation of others). As this paper argues, social media exponentially favours the latter. Herding is common among Indian retail investors particularly in IPO, small-cap equities, and cryptocurrency trading.

2.2.2 Overconfidence

Investors frequently overestimate the accuracy of their knowledge and the quality of their forecasts. True overconfidence shows itself in terms of too much trading, lack of diversification or too little hedging. According to Barber and Odean (2001) overconfident investors trade 45% more than their less confident peers and earn returns that are around 2.65 percentage points lower per annum. AI tools have created illusions of analytical competence whilst at the same time, they've made access to market data easier than ever before thus ironically worsening overconfidence among so many retail investors.

2.2.3 Anchoring

Anchoring refers to the tendency to underestimate the time it will take to finish a future task or project. In finance, you routinely see people anchoring to purchase prices, recent highs or round numbers (52-week highs and IPO issue prices being particularly prevalent anchors in India). Social media amplifies these anchors, as a single quote of 'target price' in a post can create an expectation in the mind of thousands.

2.2.4 Availability Bias

People assess how likely something is to happen based on how easily they can think of examples. Prominent losses, winning lottery-type stock "success stories," and other outlier outcomes all become overrepresented in social media environments, skewing investors' subjective estimates of probabilities. For example, a fresh investor who has seen dozens of posts about an individual making 10x their money on a small cap stock is going to systematically overestimate what that return is like.

2.2.5 Loss Aversion and Disposition Effect

The psychological phenomenon of loss aversion results in the disposition effect, which states that people tend to sell their profitable stocks prematurely to realize the gains but hold onto their unprofitable stocks for too long to prevent themselves from realizing any losses. This effect has been well documented by Shefrin &



Statman (1985). In the Indian retail market, the disposition effect is even more pronounced due to the influence of taxation and social shame involved in acknowledging bad decisions.

3. Social Media and Investor Behaviour

3.1 The Information Environment Has Changed

Twenty years ago, a retail investor in India received financial information through a narrow set of channels: business newspapers like Economic Times and Business Standard, television programmes on CNBC Awaaz and ET Now, research reports from brokerages, and word of mouth within social networks. It was filtered information, came from recognizable sources, and was delivered in a steady pace. In today's world, the same individual is immersed in a social media environment which gives him/her an endless stream of information on finances coming from various sources of very diverse nature.

WhatsApp groups focused on 'multibagger' stock suggestions have millions of members. Telegram channels are distributing research papers – real as well as fake ones – immediately. YouTube channels run by self-proclaimed financial gurus have millions of followers. Twitter (now known as X) has become the key platform for market analysis performed by institutional investors, journalists, and individual investors. Instagram has 'finfluencers' or investment influencers who post aspirational content as well as stock tips. There are Indian investment subreddits similar to the famous WallStreetBets subreddit. All these channels have different algorithmic principles, but one feature unites them all: the design of engagement maximizing sites with emotionally loaded and extreme content.

3.2 Mechanisms of Social Media Influence on Investment Decisions

3.2.1 Social Proof and Herding Amplification

Cialdini's (1984) concept of social proof—the tendency to look to others' behaviour as a guide for one's own—is dramatically amplified in social media environments. When a stock recommendation accumulates thousands of 'likes', when hundreds of investors publicly announce they have bought a particular security, or when a hashtag becomes trending, it creates powerful social proof that can override individual judgment. Bollen et al. (2011) demonstrated that Twitter mood states have predictive power over Dow Jones Industrial Average movements. The Indian equivalent is visible in stocks that trend on Twitter or see extraordinary retail inflows following viral WhatsApp messages.

3.2.2 FOMO and the Urgency Effect

Fear of Missing Out (FOMO) is not a term from classical behavioural finance, but it is increasingly treated as a distinct psychological mechanism in the literature on social media and decision-making. When investors observe others celebrating gains from investments they did not make, the psychological discomfort motivates



impulsive action. Social media algorithms are particularly adept at surfacing FOMO-inducing content at scale. In the context of Indian markets, FOMO was a primary driver of retail participation in IPOs of companies like Zomato, Paytm, and Nykaa—many of which subsequently declined significantly from their listing prices.

3.2.3 Misinformation and Pump-and-Dump Schemes

The low cost of publishing financial content on social media has enabled a proliferation of coordinated manipulation schemes. Pump-and-dump operations, in which a group of investors accumulates positions in illiquid stocks, generates artificial excitement through social media posts, and then exits as retail investors buy in, have become a significant problem for the Securities and Exchange Board of India (SEBI). In 2023 alone, SEBI took enforcement action against multiple social media-based 'tip providers' who had charged subscription fees for manipulated recommendations. The same information environment that democratises access to financial knowledge also democratises access to financial fraud.

3.2.4 Finfluencers: Education or Persuasion?

The rise of financial influencers on Instagram, YouTube, and Twitter has produced a complex ecosystem that blends genuine financial education with commercial interests. Some finfluencers serve a valuable function, translating complex financial concepts into accessible formats for first-generation investors. Others operate in grey zones, receiving undisclosed payment to recommend specific stocks or financial products while presenting themselves as independent educators. SEBI's 2023 consultation paper on finfluencer regulation acknowledged this duality and proposed a registration and disclosure framework—a belated but necessary response to a phenomenon that has grown faster than regulatory capacity to monitor it.

4. Artificial Intelligence in Financial Decision-Making

4.1 The AI Landscape for Indian Investors

Artificial intelligence is not a single technology but a family of techniques that includes machine learning, natural language processing, large language models, and reinforcement learning. In the context of retail investing in India, AI manifests across several distinct use cases: algorithmic trading platforms that execute strategies at speeds and scales beyond human capacity; robo-advisors that construct and rebalance portfolios based on stated risk preferences and financial goals; sentiment analysis tools that process news and social media to generate trading signals; chatbots and virtual assistants that provide financial guidance; and fraud detection systems used by brokerages and regulators.

Each of these applications interacts differently with investor psychology and raises distinct questions about bias amplification versus bias mitigation. A robo-advisor that systematically prevents impulsive trading during market downturns can reduce loss-aversion-driven panic selling. A sentiment analysis algorithm trained



primarily on English-language data may systematically misread the predominantly Hindi and regional-language financial discourse on Indian social media platforms.

4.2 AI as Bias Amplifier

The proposition that AI can make investors more rational is appealing but requires careful qualification. Several mechanisms through which AI can amplify rather than reduce cognitive biases deserve attention.

First, AI systems trained on historical data inherit the biases embedded in that data. If the training data reflects a period of sustained bull market conditions—as much Indian retail investing data from 2020-2021 does—an AI model may systematically underestimate downside risk and generate overconfident buy recommendations. Second, the opacity of many AI systems creates a delegation trap. When investors do not understand the basis for an AI recommendation, they may either follow it uncritically (abdicating judgment) or reject it wholesale (discarding potentially valuable signal). Neither response is rational. The black-box problem is particularly acute for the large language model-based financial tools that have proliferated since 2023, which can produce fluent, confident-sounding financial advice that is actually a sophisticated hallucination.

Third, AI-powered personalisation algorithms on social media platforms optimise for engagement rather than accuracy. An investor who has shown interest in growth stocks will receive a disproportionate number of posts celebrating growth stock returns, reinforcing confirmation bias and creating a filter bubble that systematically excludes disconfirming information.

4.3 AI as Bias Mitigator

The case for AI as a force for more rational investing is also real and should not be dismissed. In this way, robo advisors that ensure automatic rebalancing are capable of avoiding the procrastination and status quo biases that cause investors to have overly concentrated and age inappropriate portfolios. Rule-based algorithmic systems that carry out pre-programmed strategies amid market turbulence may avoid the panic selling that harms the returns of retail investors during market corrections. Natural language processing programs that recognize the emotional valence of investment related content—signaling to the user that they are reading content that is disproportionately euphoric or catastrophic in nature—might be real de-biasing interventions.

Techniques to ensure that algorithms in XAI are more transparent to users to allow for more careful analysis of their recommendations are emerging in the nascent field of explainable artificial intelligence (XAI). If the AI system recommends selling an asset but also explains why, for example, because it has moved outside of the investor's risk profile by a measurable amount, then the user is able to consider following the recommendation.



5. The Intersection: Social Media, AI, and the Indian Retail Investor

5.1 Demographics and Culture

The Indian retail investor demographic is much younger than that of any other developed country. A SEBI survey in 2022 showed that around 45% of newly created Demat accounts belonged to people under 30 years old. The generation that opened Demat accounts has been brought up with social media being their major source of information and they have no experience of any market cycle—these investors started trading during and after the rally in 2020-2021 caused by the Coronavirus crisis and thus did not see any bear market period before the current period.

Cultural factors also matter. Indian households have historically maintained high savings rates but directed savings primarily into real estate, gold, fixed deposits, and insurance products rather than equities. The shift toward equity markets represents a significant cultural change, and first-generation investors often lack the financial literacy to contextualise market movements, assess risk, or distinguish credible information from speculation. This gap in financial literacy makes them particularly susceptible to the influence of social media narratives and AI tools that promise to simplify complexity.

5.2 The Gamification Problem

Several Indian discount brokerages have adopted design choices that explicitly gamify the investment experience—confetti animations when a trade is executed, streaks and badges for daily login, leaderboards displaying top performers, and push notifications that create artificial urgency around market movements. These elements, adopted from the repertoire of addictive mobile apps, are in direct contradiction with the patient, long-term approach that correlates with successful retail investment experiences.

Gamification and social media influence each other in a vicious circle. The investors post their successes on social media but hide their failures – a selective bias in information exchange resulting in a distorted collective perception of the average retail investor experience. The new investors who are watching a social media feed with success stories set themselves unattainable expectations and get into excessive risk-taking.

5.3 Case Analysis: Market Episodes Driven by Social Media and AI Interaction

5.3.1 Small-Cap Frenzy (2023-2024)

The performance of Indian small and mid-cap indices in 2023 and early 2024 was much better compared to their larger counterparts, and this created amazing gains for some retail investors. The social media buzz around these returns through YouTube clips, Twitter posts, and WhatsApp forwarding led to huge flows of money from retail investors in small-cap mutual funds and stocks. Momentum algorithms of domestic and foreign mutual funds fueled further price rises. SEBI later voiced its concerns regarding valuation issues in this space and asked the mutual funds to take action on managing the flow.



5.3.2 The Options Trading Surge

India has become one of the world's largest derivatives markets by volume, with retail participation in Futures and Options (F&O) growing dramatically. SEBI's own research found that approximately 89% of individual F&O traders in India incur losses. Despite this, social media platforms are saturated with content teaching options strategies, celebrating short-term wins, and selling subscription-based 'signals'. AI tools that claim to predict options pricing movements based on sentiment analysis are widely marketed to retail audiences. The combination of complex financial instruments, social media hype, AI-generated false confidence, and limited investor understanding creates conditions for significant wealth destruction.

5.4 Summary: Interaction Effects Matrix

Bias	Social Media Effect	AI Effect	Combined Risk
Herding	Amplified (viral tips, trending stocks)	May amplify (momentum algo) or dampen (contrarian)	HIGH — mutual reinforcement in bull markets
Overconfidence	Amplified (selective success sharing)	Amplified (opacity of AI advice)	HIGH — illusion of informed decision-making
Availability Bias	Amplified (vivid stories dominate feeds)	Partially mitigated (data-driven signals)	MODERATE — depends on tool quality
Anchoring	Amplified (viral price targets)	Partially mitigated (portfolio rebalancing)	MODERATE — anchor propagated rapidly
Loss Aversion	Amplified (FOMO creates urgency)	Mitigated (robo-advisor rule adherence)	MODERATE — robo-advisors help if used

6. Regulatory Implications and Policy Recommendations

6.1 The Regulatory Challenge

SEBI faces a regulatory challenge unlike anything in its thirty-year history. The activities that it needs to regulate are those that straddle jurisdictions, occur at speed that is greater than any form of conventional surveillance and are undertaken by players who (individually on social media platforms or using AI) are beyond any current classification of regulatory activity. The Consultation Paper on the finfluencers issued by SEBI in 2023 was an important step in the right direction, but the whole regulatory landscape is still fragmented and reactive.

6.2 Specific Policy Recommendations



6.2.1 Mandatory Disclosure for AI-Generated Advice

A requirement to make such an AI system reveal itself as an AI and give an explanation of the factors behind the recommendation, along with stating its limitations, would be a reasonable approach in this situation. This suggestion corresponds to the general direction of the EU's Artificial Intelligence Act, which obliges 'high-risk' AI systems, including those used in finance, to adhere to certain transparency and documentation principles.

6.2.2 Finfluencer Registration and Audit

SEBI needs to introduce the mandate that all social media accounts that share financial information with an audience above a certain threshold must register. The registered finfluencers must disclose all their financial relations with the financial product companies, keep a record of their recommendations, and undergo audits at periodic intervals. It is important to concentrate on influential individuals only and not every social media account holder.

6.2.3 Platform Liability

The social media companies that operate in India must have some level of accountability for the economic disinformation that is disseminated through their networks. SEBI should consider establishing collaborations with the leading social media sites, which would allow for the quick deletion of any obviously fraudulent information.

6.2.4 Financial Literacy Integration

The most durable solution to the behavioural risks created by social media and AI is a more financially literate retail investor base. This requires integration of behavioural finance concepts—not just product knowledge—into school curricula, into the AMFI certification requirements for mutual fund distributors, and into the onboarding processes of discount brokerages. Investors who understand why they are susceptible to FOMO, herding, and overconfidence are better equipped to recognise and resist these impulses when they arise.

7. Conclusion

The interaction of social media, artificial intelligence, and behavioural finance biases is reshaping the landscape of retail investing in India in ways that are simultaneously democratising and destabilising. Millions of Indians who lacked access to financial markets twenty years ago now participate actively. This is a genuine achievement. But participation without understanding—amplified by the psychological architecture of social media and the false authority of AI tools—creates systemic risks at both the individual and market level.

This paper has argued that social media overwhelmingly amplifies cognitive biases: it accelerates herding, intensifies FOMO, propagates anchors, and creates filter bubbles that insulate investors from disconfirming information. In contrast, the application of AI tools may be even more nuanced – they could, under certain



conditions and with proper design, help reduce biases through rule enforcement, diversification, and emotional analysis. Yet AI technologies could become another vector for bias if used improperly, e.g. when poorly transparent, biased in their training or integrated into engagement-optimizing social networks.

The Indian market provides an illustrative example due to its younger population of retail investors, high level of technological adoption, yet-to-be-defined regulatory framework and great heterogeneity in terms of financial literacy. Nevertheless, the lessons learned in India are applicable not only to this specific country but also to all markets where the same trends could be observed. Given the growing mediation of investing by social platforms and the increased use of AI technologies in finance around the globe, the problems outlined above would need to be solved by regulators, scientists and market players worldwide.

The aim of addressing these issues should not be reducing participation of people in the stock markets or considering retail investors as too simple to understand complexity. Instead, the aim is creating such environment where decision-making would be facilitated, not impeded, by technology. It is a task shared by regulators, tech companies, financial organizations and scientists.

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