International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

The Role of Mobile Investment Apps in Encouraging First-Time Investors: Evidence from Groww and Zerodha

Kirpa Khanna

ABSTRACT

India's banking landscape has undergone a rapid digital transformation over the past decade, driven by large-scale public digital infrastructure (UPI), identity and onboarding innovations (Aadhaar-based e-KYC and paperless e-KYC), and the rise of technology-first challengers commonly called neobanks. This study examines the role of two prominent platforms, Groww and Zerodha, in encouraging new investors to enter equity and mutual fund markets. Using secondary research and analysis of platform features, user engagement strategies, and investor onboarding processes, the study highlights how simplified interfaces, educational content, low transaction costs, and real-time notifications reduce traditional barriers such as lack of knowledge, high capital requirements, and procedural complexity. Behavioral intention is the prime concern while opting and using a product or service.By analyzing the impact of mobile investment apps, this research demonstrates the potential of digital tools to democratize investing, enhance financial inclusion, and shape the evolving landscape of retail investment in India.

KEYWORDS: UTAUT model, Behavioral intention, Digital investing platforms, gamification, financial technology, Behavioural finance, Behavioural Biases,Mobile Trading Apps, COVID-19.

CHAPTER 1: INTRODUCTION

1.1 Background of the Study

Over the past decade, India has witnessed a fundamental transformation in its retail investing ecosystem. Since approximately 2015, participation in equity and mutual fund markets has increased sharply, driven by a combination of technological innovation, regulatory reform, and evolving investor demographics. The development of large-scale digital public infrastructure, particularly Aadhaar-based electronic Know Your Customer (e-KYC) systems and the Unified Payments Interface (UPI), has significantly reduced procedural barriers associated with financial onboarding and transactions (Hemal, 2025). These systems have enabled faster account creation, seamless fund transfers, and real-time access to financial services, thereby expanding access to capital markets for a broader segment of the population.

Within this rapidly evolving financial environment, mobile-first discount brokerages such as Groww and Zerodha have emerged as influential intermediaries reshaping retail investing in India. These platforms have replaced traditional broker-assisted models with app-based systems that emphasize simplicity, transparency, and low cost. By offering paperless onboarding, zero or minimal brokerage fees, and intuitive interfaces, such platforms have lowered both financial and psychological barriers to market entry (Rukmini et al., 2025). As a result, investing has increasingly shifted from being perceived as a complex, expert-driven activity to one that is accessible and self-directed through mobile technology.

A particularly significant outcome of this transformation has been the rapid rise of young and first-time investors. Increased smartphone penetration, improved internet connectivity, and widespread exposure to financial information through digital media have encouraged younger demographics to engage with investment opportunities earlier than previous generations. Industry evidence suggests that a substantial share of new demat account holders in India belongs to the 18–35 age group, with many individuals initiating their investment journey through mobile applications rather than traditional brokerage firms (Vivek & Kumar, 2023). This trend accelerated during the COVID-19 pandemic, when lockdowns, increased discretionary time, and heightened awareness of financial vulnerability prompted individuals to explore alternative avenues for income generation and wealth creation (Vishwambhar, 2023). Consequently, mobile investment applications now occupy a central role in shaping how first-time investors access, understand, and interact with financial markets.

1.2 Problem Statement

Despite the growing accessibility of capital markets through mobile investment applications, concerns remain regarding the readiness of first-time investors to make informed financial decisions. While platforms such as Groww and Zerodha have successfully lowered entry barriers, many new investors enter the market with limited financial literacy and an incomplete understanding of market dynamics, risk exposure, and long-term investment strategies (Khan et al., 2023). This creates a potential imbalance between ease of participation and the ability to evaluate investment decisions critically.

Moreover, the design and functionality of mobile investment applications play a significant role in shaping investor behaviour. Interface elements such as real-time price fluctuations, frequent notifications, visual performance indicators, and simplified execution mechanisms can enhance engagement and accessibility. However, these same features may also encourage impulsive decision-making, excessive trading, overconfidence, or herd behaviour, particularly among inexperienced users (Shukla et al., 2024). The behavioural influence of app design therefore presents a dual challenge, as technological convenience may simultaneously empower users while exposing them to behavioural biases.

Existing research has largely examined fintech platforms through the lens of technological adoption or user satisfaction, offering limited insight into how specific app features influence investor behaviour beyond initial adoption. There remains insufficient understanding of whether the convenience offered by mobile investment applications translates into informed and disciplined investing or merely accelerates market entry without adequate preparation. Addressing this concern is essential given the increasing reliance of first-time investors on digital platforms as their primary gateway to capital markets.

1.3 Research Gap

The current body of literature on financial technology and digital investing predominantly focuses on adoption intent, perceived usefulness, and user satisfaction with mobile financial platforms (Alaa, 2020). While these studies provide valuable insights into why individuals adopt fintech applications, they often fail to examine how specific platform features actively encourage first-time investors to enter and remain engaged in financial markets.

Furthermore, there is a notable lack of India-specific research addressing first-time investor behaviour in the context of mobile investment applications. Much of the existing behavioural finance and fintech literature is grounded in Western markets, where financial systems, investor maturity, and cultural attitudes toward risk differ significantly from those in India. As a result, these findings cannot be directly generalized to the Indian context without empirical and contextual examination.

In addition, comparative analyses of platform design elements remain limited. Few studies systematically evaluate how differences in onboarding processes, interface simplicity, educational content, and notification strategies across platforms such as Groww and Zerodha influence novice investor confidence and participation. Moreover, the literature rarely connects behavioural outcomes such as trading frequency, risk perception, or continued engagement directly to app usage patterns. This study seeks to address these gaps by focusing on the role of mobile investment applications in encouraging first-time investor participation within the Indian capital market.

1.4 Research Question

This study is guided by the following central research question: How do mobile investment apps such as Groww and Zerodha encourage first-time investors to enter, engage with, and continue participating in the Indian stock market?

1.5 Objectives of the Study

The primary objective of this study is to examine the role played by mobile investment applications in facilitating and encouraging first-time investor participation in India's capital markets. Specifically, the study aims to identify the key platform features that influence the adoption of mobile trading applications among novice investors. It further seeks to analyse behavioural changes associated with mobile app usage, including shifts in investor confidence, engagement patterns, and perceptions of risk. Additionally, the study evaluates user satisfaction and overall experience with Groww and Zerodha based on secondary research evidence. Finally, the research undertakes a comparative assessment of these platforms to determine their relative suitability for beginners and their effectiveness in supporting the transition from initial market entry to sustained participation.

1.6 Scope and Delimitations

This study is confined to the Indian financial market and focuses specifically on mobile investment applications, with particular emphasis on Groww and Zerodha. The research relies exclusively on secondary sources, including academic literature, industry reports, regulatory publications, and prior empirical studies published between 2015 and 2025. The scope is limited to retail first-time investors and does not include institutional investors or experienced market participants.

Furthermore, the study does not involve primary data collection methods such as surveys or interviews. As a result, its findings are constrained by the availability, accuracy, and interpretation of existing data. Despite these limitations, the study offers a focused and contextually relevant analysis of how mobile investment applications influence first-time investor participation in India.

1.7 Structure of the Report

The report is structured to systematically address the research question through a progressive analytical framework. Chapter 1 establishes the research context, problem statement, objectives, scope, and significance of the study. Chapter 2 examines the evolution of retail investing in India from 2015 to 2025, highlighting key regulatory, technological, and demographic changes. Chapter 3 provides an overview of mobile investment applications and their functional characteristics. Chapter 4 discusses relevant technology adoption models, while Chapter 5 explores behavioural influences arising from mobile trading platforms. Chapter 6 analyses the impact of the COVID-19 pandemic on app-based investing. Chapter 7 evaluates user satisfaction and experience, followed by Chapter 8's discussion of financial literacy and educational features. Chapter 9 presents a comparative analysis of Groww and Zerodha, and Chapter 10 concludes the study by summarising findings and identifying directions for future research.

CHAPTER 2: EVOLUTION OF RETAIL INVESTING IN INDIA (2015–2025)

2.1 Rise of Digital Retail Participation

Between 2015 and 2025, India experienced a significant expansion in retail participation in capital markets, fundamentally reshaping the structure of individual investing. One of the clearest indicators of this shift is the rapid increase in the number of demat accounts, particularly after 2020. According to regulatory data published by the Securities and Exchange Board of India, the total number of demat accounts in India crossed 100 million, with a sharp surge occurring during the pandemic and post-pandemic period (SEBI, 2023). This growth reflects a structural transition from a historically low-equity-participation economy to one increasingly characterized by mass retail involvement.

A major factor contributing to this trend has been the widespread penetration of smartphones and affordable internet services across India. Studies indicate that declining data costs and the expansion of 4G connectivity significantly improved access to digital financial platforms, particularly in Tier II and Tier III cities (Vivek & Kumar, 2023). As a result, participation in stock and mutual fund markets has become less dependent on geographic proximity to brokerage offices and more reliant on mobile accessibility.

In addition, the availability of low-cost digital brokerage platforms has played a critical role in encouraging market entry. Mobile-first brokers reduced transaction costs and simplified market access, attracting individuals who were previously excluded due to financial and procedural constraints (Rukmini et al., 2025). This period also marked the growing entry of younger investors, particularly millennials and Generation Z, who exhibit greater digital literacy and a higher willingness to engage with app-based financial services (Vivek & Kumar, 2023). Together, these factors contributed to a sustained rise in digital retail participation across India.

2.2 Shift from Traditional to Discount and Mobile Brokers

Before the widespread adoption of digital platforms, retail investing in India was dominated by traditional full-service brokers. These brokers typically charged high brokerage fees and relied on physical documentation, manual onboarding, and intermediary-driven processes. Such structures discouraged small and first-time investors, as high costs and administrative complexity acted as significant entry barriers (Vishwambhar, 2023).

The emergence of discount and mobile-first brokers represented a decisive break from this model. Platforms such as Zerodha and Groww introduced technology-driven brokerage services that eliminated intermediaries and streamlined the investment process through fully digital interfaces. Research shows that the introduction of flat-fee and zero-brokerage models, particularly zero brokerage on equity delivery, significantly altered investor perceptions of affordability and accessibility (Vivek & Kumar, 2023).

Moreover, faster onboarding processes became a defining advantage of mobile brokers. Digitally savvy users were drawn to platforms that enabled account opening and activation within hours rather than weeks. This shift not only increased retail participation but also intensified competition within the brokerage industry, compelling traditional brokers to reassess their pricing structures and service delivery models (Rukmini et al., 2025).

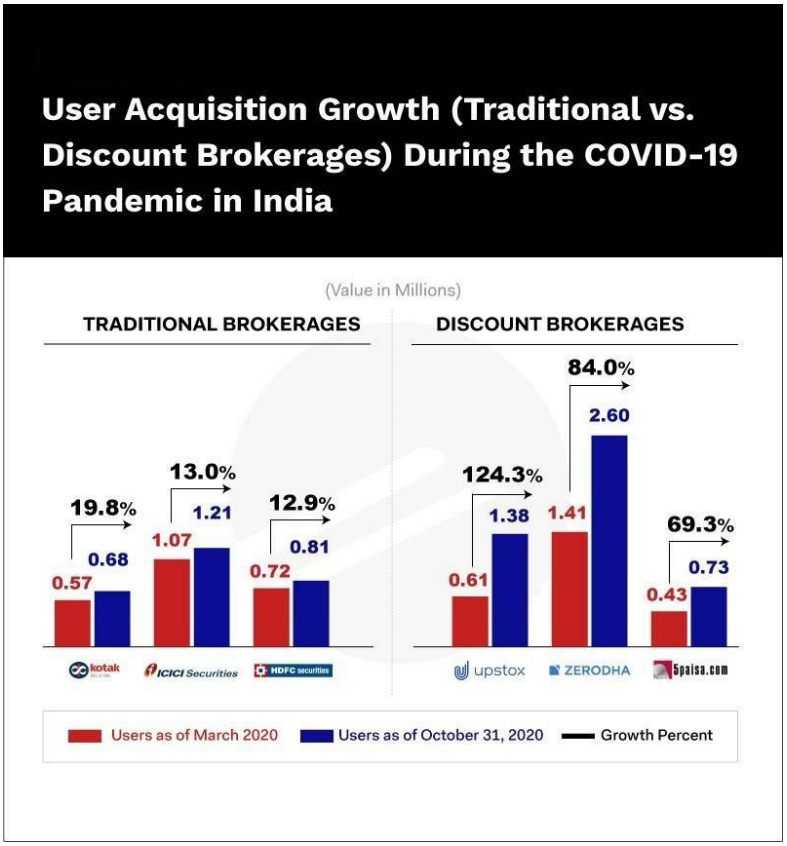

Figure 1: User acquisition growth of traditional and discount brokerages in India during the COVID-19 period (March–October 2020).

2.3 Impact of FinTech Infrastructure (UPI and Aadhaar-based KYC)

The expansion of retail investing during this period was strongly supported by India's fintech infrastructure, particularly the Unified Payments Interface (UPI) and Aadhaar-based electronic Know Your Customer (e-KYC) systems. UPI transformed retail payments by enabling instant, low-cost, and interoperable fund transfers across banks and platforms. For retail investors, this innovation eliminated delays associated with traditional banking channels and allowed seamless funding of trading accounts (Hemal, 2025).

Equally important was the implementation of Aadhaar-based e-KYC, which enabled digital identity verification without physical documentation. Studies indicate that Aadhaar-enabled KYC reduced account opening time from several days to as little as ten minutes, dramatically lowering onboarding friction for first-time investors (Hemal, 2025). The adoption of digital signatures further replaced physical paperwork, increasing efficiency and compliance accuracy.

The integration of UPI, Aadhaar e-KYC, and digital documentation created an end-to-end digital investing ecosystem. This infrastructure allowed users to move seamlessly from account creation to fund transfer and market participation within a single mobile interface, reinforcing the perception of investing as a convenient and accessible activity (Hemal, 2025).

2.4 Pandemic-Induced Acceleration

The COVID-19 pandemic acted as a major catalyst in accelerating retail participation in Indian capital markets. Nationwide lockdowns increased discretionary time for individuals while simultaneously heightening exposure to financial news and market discussions. Empirical studies show that this period

witnessed a sharp increase in finance app downloads and trading activity, particularly among first-time investors (Vishwambhar, 2023).

Market volatility during the pandemic further contributed to increased participation. Sharp price movements and heightened uncertainty created perceived opportunities for short-term gains, attracting new investors with limited prior experience (Sood & Sharma, 2022). Mobile investment applications, with real-time data and instant execution capabilities, enabled rapid responses to market fluctuations. Social media platforms also played a significant role in amplifying market curiosity. Exposure to investment-related content, success narratives, and peer discussions encouraged trial participation, often without adequate financial literacy (Sood & Sharma, 2022). As a result, the period between 2020 and 2022 recorded historically high demat account openings, firmly establishing mobile investment apps as the dominant entry point for new investors (SEBI, 2023).

2.5 Policy and Regulatory Environment

Regulatory developments between 2015 and 2025 played a crucial role in supporting the digital transformation of retail investing. The Securities and Exchange Board of India introduced several reforms aimed at simplifying online onboarding while strengthening investor protection mechanisms. Initiatives such as video-based KYC, relaxed documentation requirements for digital accounts, and standardized disclosure norms facilitated the growth of app-based investing (SEBI, 2023).

At the same time, regulators increased emphasis on transparency and risk disclosure, particularly for retail investors. Mandatory disclosures related to brokerage fees, risk warnings, and grievance redressal mechanisms were strengthened to protect inexperienced users from misinformation and exploitation (SEBI, 2023). Brokers with advanced digital infrastructure benefited from simplified compliance processes, encouraging further technological investment.

Overall, the policy and regulatory environment during this period successfully balanced innovation with oversight. By legitimizing digital onboarding and reinforcing investor safeguards, regulatory authorities enabled the rapid expansion of retail investing while maintaining market integrity and investor confidence.

CHAPTER 3: OVERVIEW OF MOBILE INVESTMENT APPLICATIONS

3.1 Definition and Characteristics

Mobile investment applications are app-based digital platforms that enable individuals to invest in financial instruments such as equities, mutual funds, exchange-traded funds, and derivatives directly through smartphones. These applications form a core component of the broader financial technology (FinTech) ecosystem and are designed to provide continuous, location-independent access to capital markets (Alaa, 2020). Unlike traditional brokerage systems that rely on physical offices and human intermediaries, mobile investment apps integrate essential investment functions into a single digital interface.

A defining characteristic of these platforms is their emphasis on usability and accessibility, particularly for beginner investors. Prior research highlights that simplified interface design and reduced procedural complexity significantly improve adoption among first-time users with limited financial experience (Vivek & Kumar, 2023). Mobile investment applications typically integrate key processes such as identity verification, fund transfers, and trade execution within a unified workflow, thereby reducing friction associated with investing.

Another critical feature is real-time portfolio monitoring. Users can track market prices, portfolio valuation, gains and losses, and transaction history instantaneously. This continuous visibility enhances

user engagement and reinforces the perception of control over financial decisions, which has been identified as an important factor influencing continued usage of digital financial platforms (Rukmini et al., 2025).

3.2 Essential Functional Components

At a functional level, mobile investment applications are built around robust order placement and execution systems that allow users to buy and sell financial instruments with minimal latency. These systems are connected directly to stock exchanges and clearing mechanisms, ensuring timely execution of trades and transparent settlement processes (SEBI, 2023). The availability of multiple order types, including market orders and limit orders, allows users to engage with markets at varying levels of sophistication.

Market watchlists and price alert features constitute another essential component of these platforms. By allowing users to track selected securities and receive notifications for price movements or market events, these tools support continuous market awareness and prompt decision-making (Shukla et al., 2024). Portfolio analytics and performance charts further enable users to evaluate investment outcomes through visual representations of returns, asset allocation, and historical trends.

Additionally, mobile investment apps provide structured workflows for purchasing stocks and mutual funds. These workflows are designed to guide users step-by-step through the investment process, reducing the cognitive load associated with complex financial transactions. Research suggests that such structured flows are particularly effective in lowering anxiety and perceived risk among first-time investors (Khan et al., 2023).

3.3 User Interface and User Experience (UI/UX) Features

User interface (UI) and user experience (UX) design play a central role in shaping how investors interact with mobile investment applications. UI refers to the visual and interactive elements of the application, while UX encompasses the overall experience of navigating and using the platform. Prior studies indicate that minimalistic design approaches help reduce user confusion and improve task completion rates, especially among novice users (Bufe, 2025).

Mobile investment apps commonly employ simple navigation structures that prioritize core functions such as portfolio view, market prices, and order placement. Clear labelling of tools and features ensures that users can easily locate essential functions without extensive prior knowledge. This clarity is critical in financial contexts, where misunderstanding interface elements can lead to costly errors (Alaa, 2020).

Visual simplicity is another defining aspect of UI/UX design in investment apps. The use of limited color palettes, intuitive icons, and concise text supports cognitive ease and reduces information overload. Research in behavioural finance suggests that reducing interface complexity can mitigate decision paralysis and improve confidence among first-time investors, thereby encouraging continued participation (Shukla et al., 2024).

3.4 Value-Added Features

Beyond core trading functions, mobile investment applications increasingly differentiate themselves through value-added features aimed at enhancing user engagement and financial understanding. Educational content such as short videos, blogs, and explainers is commonly integrated within these platforms to support investor learning. Studies have shown that access to contextual financial education positively influences user confidence and perceived competence in investment decision-making (Khan et al., 2023).

Many applications also provide in-app stock explanations, simplified financial metrics, and risk labels that help users interpret market information. These features are particularly relevant for first-time investors who may lack the expertise to independently analyze financial statements or market indicators. Tools such as systematic investment plan (SIP) calculators and investment planning modules further assist users in aligning investments with long-term financial goals (Vivek & Kumar, 2023).

In addition, mobile investment apps often include curated news updates and research summaries sourced from financial analysts or partner institutions. While these features enhance information availability, existing literature cautions that excessive exposure to market news may also contribute to behavioural biases such as overtrading or recency effects, especially among inexperienced users (Shukla et al., 2024). As such, value-added features play a dual role in both enabling and influencing investor behaviour.

3.5 Indian Market Landscape

The Indian mobile investment application market has evolved rapidly over the past decade, driven by competition among technology-focused brokerage firms. Zerodha emerged as the first major discount broker in India to adopt a fully technology-driven model, emphasizing low costs, transparency, and scalable digital infrastructure. Its success demonstrated the viability of app-based investing and set new benchmarks for brokerage pricing and service delivery (Vivek & Kumar, 2023).

Groww later entered the market with a strong focus on beginner-friendly design and simplified investing workflows. By prioritizing ease of use and integrated educational content, Groww positioned itself as a platform particularly suited to first-time investors seeking long-term investment options such as mutual funds and equities (Rukmini et al., 2025). Upstox and other mobile-first brokers have also gained traction through aggressive marketing strategies, expanded product offerings, and competitive pricing.

The increasing number of mobile investment platforms has intensified competition within the Indian brokerage industry. This competition has driven continuous innovation in app features, pricing models, and user engagement strategies. From a broader perspective, the growing dominance of mobile-first brokers reflects a structural shift toward digital investing, where technology acts not only as a facilitator of access but also as a determinant of investor behaviour and market participation (SEBI, 2023).

CHAPTER 4: TECHNOLOGY ADOPTION MODELS IN MOBILE TRADING

4.1 Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM), originally proposed by Davis (1989), is one of the most widely used frameworks for understanding user adoption of information systems. The model posits that an individual's intention to use a technology is primarily determined by two cognitive beliefs: perceived usefulness and perceived ease of use. Perceived usefulness refers to the degree to which a person believes that using a particular system will enhance their performance or outcomes, while perceived ease of use reflects the extent to which the system is perceived as effortless to use (Davis, 1989).

In the context of mobile trading applications, perceived usefulness plays a critical role in motivating first-time investors to adopt these platforms. Investors are more likely to use trading apps when they believe that the platform enables faster execution, better access to market information, and improved control over their investments (Venkatesh & Davis, 2000). Features such as real-time price updates, instant order execution, and portfolio performance tracking strengthen perceptions of usefulness by directly linking app usage to tangible financial outcomes.

Perceived ease of use is equally important for beginner investors, who often lack prior exposure to financial markets. Simplified app interfaces, intuitive navigation, and guided workflows reduce the

learning effort required to engage with trading platforms, thereby lowering psychological barriers to entry (Gefen et al., 2003). Visual clarity, minimalistic design, and step-by-step processes improve user understanding and confidence, making mobile investment apps particularly attractive to first-time users. Empirical studies have consistently shown that ease of use has a stronger influence on adoption in early stages of technology engagement, especially when users have limited domain knowledge (Park, 2009).

While TAM provides a strong foundation for understanding adoption behaviour, it has been criticised for its limited consideration of social, contextual, and infrastructural factors. As a result, more comprehensive models have been developed to capture the complexity of technology usage in real-world settings.

4.2 Unified Theory of Acceptance and Use of Technology (UTAUT)

The Unified Theory of Acceptance and Use of Technology (UTAUT), developed by Venkatesh et al. (2003), extends earlier adoption models by integrating key constructs from multiple theoretical frameworks. UTAUT identifies four primary determinants of technology adoption: performance expectancy, effort expectancy, social influence, and facilitating conditions. This model is particularly relevant in the context of mobile trading, where adoption decisions are shaped not only by individual perceptions but also by social and infrastructural factors.

Performance expectancy, similar to perceived usefulness in TAM, refers to the degree to which users believe that a technology will help them achieve desired outcomes. In mobile trading applications, performance expectancy is reflected in users' beliefs that the app enables efficient investing, timely decision-making, and improved financial control (Venkatesh et al., 2003). Platforms that provide reliable execution, comprehensive market data, and analytical tools strengthen user trust and increase continued usage intentions.

Effort expectancy captures the perceived ease associated with using the technology. Smooth interface design, simple onboarding processes, and intuitive workflows reduce the cognitive effort required to operate trading apps, particularly for novice investors (Dwivedi et al., 2017). In the Indian context, where first-time investors often enter markets through mobile apps, effort expectancy plays a decisive role in shaping early adoption and sustained engagement. Social influence is another crucial determinant in the adoption of mobile trading applications. Recommendations from peers, family members, online communities, and social media influencers significantly affect app choice, especially among younger investors (Baptista & Oliveira, 2015). During periods of heightened market interest, such as the COVID-19 pandemic, social validation and peer behaviour amplified the diffusion of trading apps across demographic groups.

Facilitating conditions refer to the availability of technical and organisational infrastructure that supports technology use. In mobile trading, this includes reliable internet connectivity, digital payment systems, and regulatory support. Studies indicate that strong facilitating conditions enhance both adoption and continued use by reducing operational friction and perceived uncertainty (Venkatesh et al., 2003).

4.3 Risk Perception and Trust

Risk perception and trust are central psychological determinants influencing the adoption of mobile trading applications, particularly in financial contexts where uncertainty and potential losses are inherent. Risk perception refers to users' subjective assessment of potential negative outcomes, such as financial loss, data breaches, or fraud, associated with using a technology (Featherman & Pavlou, 2003). High perceived risk can significantly inhibit adoption, even when a platform offers clear functional benefits.

In mobile trading, fear of fraud, cybersecurity threats, and misuse of personal or financial data remains a major concern for first-time investors. Research shows that perceived security risks negatively influence

adoption intentions unless mitigated by strong trust signals (Pavlou, 2003). Trust, therefore, functions as a mediating factor that reduces perceived risk and enables users to engage with digital financial platforms. Trust in mobile investment apps is built through multiple mechanisms, including transparent pricing structures, regulatory compliance, robust security measures, and reliable customer support (Gefen et al., 2003). The reputation of the brokerage firm plays a critical role in establishing credibility, as users are more likely to trust platforms associated with regulatory approval and consistent service quality (Kim et al., 2008). Additionally, effective grievance redressal systems and responsive customer support enhance trust by reassuring users that assistance is available in case of technical or transactional issues.

4.4 Facilitating Conditions

Facilitating conditions represent the external factors that enable or constrain the effective use of mobile trading applications. In the Indian context, strong digital infrastructure has been a key enabler of adoption. High smartphone penetration, affordable mobile data, and the expansion of digital payment systems such as UPI have significantly reduced access barriers for retail investors (Hemal, 2025).

Reliable customer support mechanisms also constitute an important facilitating condition. Tutorials, help centres, chat-based assistance, and educational resources assist users in resolving technical difficulties and understanding platform features, thereby improving overall user experience (Dwivedi et al., 2017). Access to such support reduces frustration and increases user confidence, particularly among first-time investors. Furthermore, stable network performance and low system downtime are essential for maintaining trust and engagement. Interruptions during market hours or transaction failures can negatively affect user perception and discourage continued use. Studies indicate that system reliability is a key predictor of satisfaction and retention in digital financial platforms (DeLone & McLean, 2003).

4.5 Application to Indian Trading Applications

The relevance of TAM and UTAUT is clearly observable in the design and positioning of Indian mobile trading applications such as Groww and Zerodha. Groww places strong emphasis on perceived ease of use by offering simplified interfaces, guided investment workflows, and beginner-focused educational content. This approach aligns closely with TAM's emphasis on ease of use and UTAUT's effort expectancy, making Groww particularly appealing to first-time investors.

Zerodha, in contrast, prioritises performance expectancy and trust by offering advanced trading tools, transparent pricing, and a strong reputation as India's first major discount broker. Its focus on regulatory compliance, platform stability, and educational initiatives such as Varsity strengthens user trust and supports long-term engagement. The ease of Aadhaar-based KYC and digital onboarding across both platforms further accelerates adoption by reducing procedural complexity and perceived effort (Hemal, 2025).

Low pricing models adopted by these platforms reduce financial risk perceptions, encouraging experimentation and gradual market participation. Together, these design choices demonstrate how technology adoption models manifest in real-world mobile trading applications, shaping investor behaviour and supporting the growth of retail participation in Indian capital markets.

CHAPTER 5: BEHAVIOURAL INFLUENCES OF MOBILE TRADING APPLICATIONS

5.1 Trading Frequency

Mobile trading applications have fundamentally altered the temporal and spatial constraints of investing by enabling users to access financial markets at any time and from any location. This continuous accessibility has had a direct impact on trading frequency, particularly among first-time investors. Prior

research suggests that when transactional barriers are reduced and execution becomes frictionless, users are more likely to engage in frequent trading activity (Barber & Odean, 2001). In the context of mobile trading, the ability to place trades within seconds through a smartphone significantly lowers the threshold for action.

For beginner investors, this ease of execution often translates into higher trading frequency. Unlike traditional brokerage models that require deliberate effort, time, and sometimes professional assistance, mobile apps allow investors to react immediately to market movements. Empirical evidence indicates that increased trading frequency among retail investors is often associated with lower overall performance, as frequent trades are more likely to be driven by short-term signals rather than informed analysis (Barber & Odean, 2000).

Real-time notifications further reinforce this behaviour by continuously drawing users' attention to price movements, gains, or losses. Alerts related to market fluctuations or portfolio performance can prompt repeated app engagement and trading activity, even in the absence of strategic intent (Madan & Singh, 2019). As a result, reduced friction and constant availability may encourage impulsive decisions, particularly among inexperienced investors who lack structured investment plans.

5.2 Cognitive Biases Activated by App Design

The design features of mobile trading applications can activate a range of cognitive biases that influence investor decision-making. Behavioural finance literature has long established that investors do not always act rationally and are often influenced by heuristics and biases when processing financial information (Kahneman & Tversky, 1979). Mobile trading apps, by presenting information in simplified and visually engaging formats, can unintentionally amplify these behavioural tendencies.

One commonly observed bias is overconfidence, which may arise when users experience early gains through quick or opportunistic trades. Studies suggest that investors who achieve short-term success often overestimate their skill and underestimate market risk, leading to excessive trading and risk-taking (Glaser & Weber, 2007). Mobile apps that highlight short-term profits prominently may reinforce this bias, particularly among novice users.

Herd behaviour is another bias encouraged by certain app features, such as "trending stocks" or popular investment sections. These features can create social proof, leading investors to follow the actions of others rather than conduct independent analysis (Banerjee, 1992). Additionally, frequent alerts and performance highlights may trigger fear of missing out (FOMO), a behavioural response where investors feel compelled to act quickly to avoid perceived losses or missed opportunities (Przybylski et al., 2013). Confirmation bias may also emerge when users selectively focus on information that supports their existing beliefs while ignoring contradictory signals, especially when apps personalise content based on prior behaviour (Nickerson, 1998).

5.3 Notifications and Gamification

Notifications and gamification elements are increasingly embedded within mobile trading applications to enhance user engagement. Push notifications related to price changes, portfolio performance, or market news are designed to prompt immediate attention and action. While such alerts improve information flow, behavioural studies indicate that frequent notifications can also increase impulsive responses and reduce deliberative decision-making (Thaler & Sunstein, 2008).

Gamification refers to the incorporation of game-like elements, such as visual rewards, progress indicators, or celebratory graphics, into non-game contexts. Research suggests that gamified interfaces can increase user engagement by stimulating reward-seeking behaviour and reinforcing repeated interactions (Hamari

et al., 2014). In financial applications, however, these elements may blur the distinction between investing and speculative activity by making trading feel more like a game than a financial decision with real consequences. Visual cues such as colour-coded gains and losses, achievement-style indicators, and dynamic charts encourage frequent app visits and interaction. While these features enhance usability and engagement, they may also contribute to heightened emotional responses and short-term focus, particularly among first-time investors who lack experience in managing market volatility (Rodrigues et al., 2016).

5.4 Risk-Taking Behaviour

Mobile trading applications can significantly influence risk-taking behaviour, especially among novice investors. The simplified presentation of financial products may reduce the perceived complexity and risk associated with investing in volatile assets. Research in behavioural economics indicates that when risks are framed in an accessible or simplified manner, individuals are more likely to underestimate potential losses (Langer, 1975).

Beginner investors using mobile apps often show increased interest in high-volatility stocks, intraday trading, and derivatives such as futures and options. The ease of access to these instruments, combined with limited experience, can lead to disproportionate risk exposure (Bhatnagar & Aggarwal, 2021). Studies have shown that retail participation in derivatives markets is frequently associated with lower profitability and higher loss rates, particularly among inexperienced traders (Kumar, 2009).

The availability of leverage and complex products within app-based platforms may further amplify risk-taking tendencies. Without adequate financial literacy, users may engage in risky strategies without fully understanding downside risks. This suggests that while mobile trading apps democratize access, they may also increase vulnerability to adverse financial outcomes if risk awareness is insufficient.

5.5 Decision-Making Patterns

The behavioural influences of mobile trading applications collectively shape broader decision-making patterns among first-time investors. During periods of market volatility, emotional responses such as fear and excitement often dominate rational analysis, leading to reactive rather than strategic decisions (Loewenstein et al., 2001). Mobile apps, by providing continuous market updates, can intensify these emotional reactions. Evidence suggests that app-based investors are more inclined toward short-term trading strategies rather than long-term wealth accumulation, particularly in the early stages of market participation (Statman, 2014). Peer influence, social media discussions, and online communities further shape investment choices by normalizing speculative behaviour and reinforcing collective sentiment (Shiller, 2015).

Low levels of financial literacy exacerbate these behavioural tendencies. Investors with limited understanding of financial principles are more susceptible to biases, misinformation, and emotional decision-making (Lusardi & Mitchell, 2014). Consequently, while mobile trading applications enhance access and engagement, they also play a powerful role in shaping how first-time investors perceive risk, process information, and make financial decisions.

CHAPTER 6: COVID-19 AND APP-BASED INVESTING

6.1 Surge in Account Openings

The COVID-19 pandemic marked a decisive turning point in the growth of app-based investing in India. Between 2020 and 2022, the Indian capital market witnessed an unprecedented surge in the opening of new demat accounts, reflecting a sharp increase in retail participation. Regulatory data indicate that

millions of new accounts were created during this period, with the most significant growth occurring in the months following the first nationwide lockdown in March 2020 (SEBI, 2023). This surge represented not merely delayed participation but the entry of a new class of investors who had little or no prior engagement with financial markets.

The retail share in overall market participation increased substantially during this period, altering the composition of market activity. Studies show that younger demographics, particularly millennials and first-time salaried earners, dominated these new entries (Vishwambhar, 2023). With traditional consumption and mobility restricted, individuals began exploring financial markets as an alternative avenue for income generation, savings, and long-term financial security. Mobile investment applications emerged as the primary entry point for these investors due to their ease of access and minimal onboarding requirements.

Importantly, a large proportion of new investors entered the market after the initial lockdown phase, suggesting that prolonged exposure to pandemic-induced uncertainty played a role in motivating participation. This shift indicates that COVID-19 functioned as both a trigger and an enabler of behavioural change, accelerating trends that were already emerging prior to the pandemic.

6.2 Time Availability

One of the most significant behavioural changes during the pandemic was the increase in discretionary time available to individuals. Work-from-home arrangements, reduced commuting, and limited social activities created conditions in which individuals had greater flexibility to explore new activities, including financial investing. Research suggests that increased time availability is positively associated with information-seeking behaviour and experimentation in financial decision-making (Jaumotte et al., 2023).

This increase in available time allowed individuals to engage more deeply with financial content, monitor markets, and experiment with investment platforms. Mobile trading apps became accessible tools for quick learning, offering educational resources, tutorials, and simplified investment workflows. As a result, many users adopted a "do-it-yourself" (DIY) approach to investing, relying on apps rather than professional financial advisors (Lusardi et al., 2021).

The combination of time availability and low entry barriers encouraged trial participation, particularly among individuals who may not have considered investing under normal circumstances. While this facilitated financial inclusion, it also raised concerns about the depth of investor understanding, as learning was often informal and fragmented rather than structured.

6.3 Market Volatility

The pandemic period was characterised by extreme market volatility, which played a crucial role in shaping investor behaviour. Sharp market declines followed by rapid recoveries created the perception of abundant short-term profit opportunities. Behavioural finance research indicates that periods of high volatility often attract novice investors who associate visible price movements with profitability (Barberis et al., 2018).

Mobile trading applications amplified this effect by providing real-time access to price fluctuations and market news. For many first-time investors, the rapid rebound of markets following initial crashes reinforced the belief that investing could yield quick gains. This perception contributed to increased curiosity about stock markets and heightened trading activity, particularly in high-volatility stocks and short-term strategies (Sood & Sharma, 2022).

However, such conditions also encouraged riskier behaviour. Evidence suggests that during volatile periods, inexperienced investors are more likely to engage in speculative trading without fully accounting

for downside risks (Kumar, 2009). Mobile apps, by simplifying execution and reducing friction, enabled participation in such activities at scale, thereby amplifying both opportunity and risk.

6.4 Social Media Influence

Social media played a powerful role in shaping app-based investing behaviour during the COVID-19 period. Platforms such as YouTube, Telegram, Twitter, and Instagram saw a surge in content related to stock trading, personal finance, and investment strategies. Numerous channels emerged offering tutorials, stock tips, and market commentary, often targeted explicitly at beginners (Naseem et al., 2021). Influencers and content creators frequently promoted specific trading apps and investment strategies, normalising app-based investing as an accessible and even aspirational activity. Telegram groups and online communities dedicated to stock tips and trading discussions grew rapidly, facilitating peer-to-peer information sharing and collective decision-making. Behavioural research suggests that such environments can intensify herd behaviour and reduce independent analysis, particularly among inexperienced investors (Banerjee, 1992).

Viral investment content further lowered psychological barriers to entry by portraying trading as easy, profitable, and socially validated. While this contributed to widespread participation, it also increased exposure to misinformation and speculative narratives, reinforcing the need to examine behavioural outcomes associated with app-based investing.

6.5 Long-Term Effects

The impact of the COVID-19 pandemic on app-based investing extended beyond short-term participation spikes, leading to lasting behavioural and structural changes in the Indian financial market. Repeated engagement with mobile investment applications during lockdowns contributed to habit formation, as users became accustomed to monitoring portfolios, tracking markets, and executing trades through apps (Wood & Neal, 2007).

Evidence suggests that a significant proportion of investors who entered the market during the pandemic continued participating even after restrictions were lifted, indicating sustained adoption rather than temporary experimentation (SEBI, 2023). This persistence reflects a broader institutional and behavioural shift toward digital-first investing, where mobile platforms are perceived as the default mode of market participation.

At the market level, the influx of retail investors altered trading patterns, liquidity dynamics, and volatility profiles. Increased retail participation contributed to higher turnover and greater sensitivity to sentiment-driven movements, particularly in certain segments of the market (Shiller, 2015). These long-term effects underscore the role of COVID-19 as a catalyst that not only accelerated digital investing but also reshaped behavioural norms and market structures in lasting ways.

CHAPTER 7: USER SATISFACTION AND EXPERIENCE

7.1 Evaluation Frameworks for User Satisfaction (APPQUAL)

User satisfaction in mobile investment applications is best understood through structured service quality evaluation frameworks that account for both functional performance and perceptual experience. Traditional service quality models such as SERVQUAL were originally developed for physical service environments and focused on dimensions such as reliability, responsiveness, assurance, empathy, and tangibles (Parasuraman et al., 1988). As services increasingly migrated to digital platforms, researchers extended these models into electronic contexts through frameworks such as E-SERVQUAL and later application-specific models.

APPQUAL represents an adaptation of these frameworks tailored specifically to mobile and application-based services. It evaluates service quality across dimensions including system reliability, responsiveness, assurance, information quality, usability, and interface design, making it particularly suitable for mobile investment platforms where precision, trust, and ease of use are critical (Alnaser et al., 2018). Unlike generic satisfaction measures, APPQUAL allows researchers to examine how specific technological and service attributes contribute to overall user experience.

In the context of mobile trading applications, reliability refers to the consistent functioning of the app during trading hours, accuracy of transactions, and stability under high market load. Responsiveness captures the platform's ability to provide timely system feedback and customer assistance, while assurance relates to users' confidence in security protocols, regulatory compliance, and data protection mechanisms. Information quality and usability assess how clearly financial data is presented and how easily users can navigate complex investment processes (DeLone & McLean, 2003).

By applying APPQUAL, researchers can identify mismatches between user expectations and actual platform performance, enabling a more nuanced comparison of platforms such as Groww and Zerodha. This framework thus serves as a robust analytical tool for understanding satisfaction drivers in app-based investing environments.

7.2 User Review Analysis and Sentiment Patterns

User reviews constitute an important qualitative data source for understanding satisfaction and experience in mobile investment applications. Unlike structured surveys, reviews reflect spontaneous user reactions to real experiences, capturing both functional assessments and emotional responses. Prior research indicates that large-scale analysis of app store reviews can reveal consistent patterns related to usability, trust, frustration, and perceived value (Hu et al., 2017).

Positive reviews of mobile trading apps frequently emphasise ease of onboarding, clean interface design, and low transaction costs. For first-time investors, smooth account setup and guided workflows are often cited as reducing intimidation and anxiety associated with market participation. Many users associate simple design and minimal jargon with increased confidence and willingness to continue investing (Zhang et al., 2020).

Negative reviews, on the other hand, tend to highlight technical glitches, delayed order execution, system crashes during peak market hours, or difficulties in understanding advanced features. First-time users often express frustration when platform assumptions exceed their financial knowledge, indicating a gap between design intentions and user capability. These pain points are particularly relevant in financial applications, where errors or delays may result in perceived or actual monetary loss.

Sentiment analysis of reviews further reveals that emotional responses play a significant role in shaping overall satisfaction. Experiences of quick problem resolution often generate strong positive sentiment and trust reinforcement, while unresolved issues can lead to anger, anxiety, and platform abandonment. Thus, user review analysis provides insight not only into functional quality but also into the emotional dimension of app-based investing.

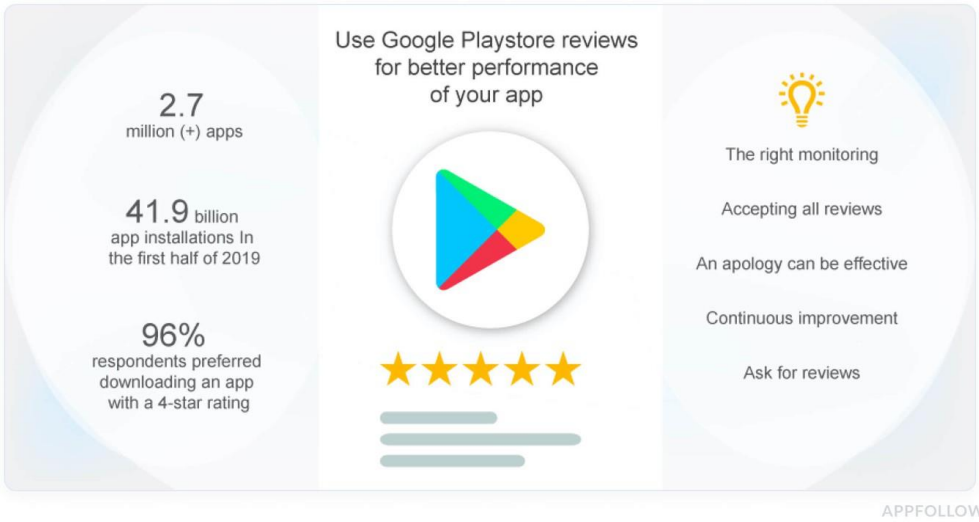

Figure 2: App store ratings and review sentiment play a significant role in shaping user trust and download decisions for mobile applications

7.3 Technical Performance and System Reliability

Technical performance is one of the most critical determinants of user satisfaction in mobile investment applications due to the time-sensitive and high-stakes nature of financial transactions. Server stability during market hours is essential, as even brief disruptions can prevent users from executing trades at desired prices. Studies in information systems research consistently show that system reliability has a direct and significant impact on perceived service quality and user trust (DeLone & McLean, 2003).

Order execution speed is another key component of technical performance. Delays between order placement and execution can lead to price slippage, causing dissatisfaction even when the platform is otherwise functional. For first-time investors, such experiences may undermine confidence and reinforce perceptions of market unfairness or platform inadequacy (Kim et al., 2008).

Downtime during periods of high market volatility has a disproportionate effect on trust, as users interpret system failures as indicators of weak infrastructure. In addition, the accuracy of charts, price feeds, and portfolio valuation data is essential for informed decision-making. Inaccurate or lagging data can distort investor perceptions, leading to poor decisions and dissatisfaction. Research suggests that consistency and accuracy of information presentation are as important as speed in shaping user satisfaction in digital financial services (Gefen et al., 2003).

7.4 Customer Support and Service Responsiveness

Customer support plays a pivotal role in shaping the overall experience of mobile investment applications, particularly for first-time investors who may require assistance in navigating technical or procedural challenges. Effective support systems reduce uncertainty, reinforce trust, and serve as a safety net when users encounter difficulties. Empirical studies show that responsiveness and quality of support interactions significantly influence satisfaction and continued usage intentions in digital services (Zeithaml et al., 2002).

Mobile trading platforms typically offer multi-channel support mechanisms, including chat-based assistance, email communication, ticketing systems, and knowledge bases comprising FAQs and help articles. The availability of immediate assistance is particularly important during trading hours, when

unresolved issues may have financial consequences. Users tend to evaluate support quality based not only on resolution outcomes but also on clarity of communication and perceived empathy.

Speed of issue resolution is a critical determinant of trust. Prompt and transparent handling of complaints reassures users that the platform is reliable and accountable. Conversely, delayed or generic responses can exacerbate frustration and lead users to question the platform's professionalism. Research indicates that dissatisfaction with customer support is one of the most common reasons users switch between competing digital platforms, even when core functionality is similar (Gefen et al., 2003).

7.5 Satisfaction, Retention, and Long-Term Engagement

User satisfaction functions as a key predictor of retention and long-term engagement in mobile investment applications. Positive experiences characterised by stable performance, intuitive design, and effective support encourage users to repeatedly engage with the platform and integrate it into their financial routines. Bhattacherjee's (2001) expectation-confirmation theory suggests that when actual performance meets or exceeds user expectations, continued usage intentions strengthen.

Conversely, dissatisfaction resulting from technical failures, opaque pricing structures, or unresolved grievances increases the likelihood of platform switching. In fintech markets, switching costs are relatively low, allowing users to migrate easily between platforms. As a result, retention depends heavily on consistent delivery of value and trust reinforcement.

Educational features embedded within mobile investment applications further contribute to retention by enhancing user competence and reducing reliance on external information sources. Research shows that financially literate users are more confident and less prone to disengagement during periods of market volatility (Lusardi & Mitchell, 2014). Transparent pricing models also play a critical role in fostering loyalty, as clarity regarding fees reduces perceptions of exploitation and unfairness.

Overall, satisfaction and retention reflect the cumulative impact of functional quality, emotional experience, trust, and perceived value. In mobile investment applications, these outcomes are not incidental but central to platform sustainability and competitive advantage.

CHAPTER 8: FINANCIAL LITERACY AND EDUCATIONAL FEATURES

8.1 Importance of Financial Literacy

Financial literacy plays a critical role in shaping investor behaviour, decision-making quality, and long-term financial outcomes. For first-time investors, limited understanding of market fundamentals such as risk–return trade-offs, diversification, and product characteristics often leads to suboptimal investment decisions. Empirical research consistently shows that individuals with low financial literacy are more prone to making errors, overestimating returns, and underestimating risk, thereby increasing their vulnerability to financial losses (Lusardi & Mitchell, 2014).

In the context of mobile trading applications, the accessibility of markets has outpaced the financial preparedness of many users. While apps simplify execution, they do not inherently ensure comprehension of underlying financial concepts. This gap between access and understanding can result in impulsive trading, excessive risk-taking, and reliance on heuristics rather than informed analysis (Gennaioli et al., 2018). As a result, financial literacy becomes a crucial moderating factor that determines whether app-based investing leads to empowerment or exposure.

Improved financial literacy has been shown to enhance investor confidence and promote more deliberate decision-making. Individuals who understand basic financial principles are better equipped to evaluate information, resist behavioural biases, and align investments with long-term goals (OECD, 2020). In this

sense, education is not merely supportive but foundational to responsible participation in capital markets, particularly for first-time investors entering through digital platforms.

8.2 In-App Learning Tools

Mobile investment applications increasingly incorporate in-app learning tools to address gaps in user knowledge and support informed decision-making. These tools include educational modules explaining core concepts such as stocks, mutual funds, systematic investment plans (SIPs), and asset allocation. By embedding learning resources within the investment environment, platforms reduce the need for users to seek information from external and potentially unreliable sources (Klapper et al., 2015).

Short-form videos, articles, and explainers are commonly used to cater to users with limited attention spans and varying levels of prior knowledge. Research indicates that microlearning formats are particularly effective in improving comprehension and retention among novice learners, especially when content is contextual and application-oriented (Hug, 2005). Interactive tools such as calculators, quizzes, and scenario-based examples further enhance engagement by allowing users to actively explore financial concepts rather than passively consume information.

Tutorials that explain investment workflows and product mechanics play a crucial role in demystifying complex financial instruments. By breaking down processes into manageable steps, these tools reduce cognitive overload and increase user willingness to engage with market-linked products. In-app education thus functions as both a confidence-building mechanism and a behavioural guide, shaping how users interact with investment platforms over time.

8.3 Simplification of Investment Products

Simplification of investment products is a defining feature of mobile trading applications, particularly those targeting first-time investors. Complex financial instruments are often presented through visual explanations, risk labels, and simplified summaries that translate technical information into accessible language. Behavioural research suggests that simplifying information presentation improves comprehension and reduces decision paralysis, especially in high-stakes contexts such as investing (Thaler & Sunstein, 2008).

Step-by-step workflows for placing orders guide users through investment decisions while minimising the likelihood of errors. These structured flows help users understand each stage of the transaction process, reinforcing learning through repeated exposure. Simplified portfolio views that aggregate holdings, returns, and asset allocation into a single dashboard further enhance transparency and control. Clear categorisation of products based on risk level, investment horizon, or asset class supports informed choice and reduces confusion. However, while simplification improves accessibility, it also carries the risk of oversimplification, where users may underestimate underlying complexities. This highlights the importance of balancing clarity with adequate disclosure, ensuring that ease of use does not come at the cost of informed consent (Gennaioli et al., 2018).

8.4 Design and Psychological Comfort

The design of mobile investment applications plays a significant role in shaping users' psychological comfort and emotional responses. Minimalistic user interfaces reduce visual clutter and cognitive load, making it easier for beginners to process information and execute decisions. Studies in human–computer interaction indicate that clean design and intuitive layouts improve usability and reduce anxiety in complex digital tasks (Norman, 2013).

Friendly colour schemes, intuitive icons, and consistent visual hierarchies contribute to a sense of familiarity and ease. Avoidance of technical jargon further enhances inclusivity by ensuring that users

with limited financial background can engage without feeling intimidated. Visual cues such as confirmations, warnings, and progress indicators help users avoid mistakes and reinforce learning through feedback mechanisms.

Psychological comfort is particularly important for first-time investors, who may experience anxiety related to financial risk and uncertainty. By creating a supportive and non-threatening interface, mobile investment apps can reduce emotional barriers to participation and encourage users to explore educational features at their own pace. This design-led approach aligns with behavioural insights that emphasise the role of choice architecture in guiding decision-making (Thaler & Sunstein, 2008).

8.5 Educational Influence on Participation and Retention

Educational features embedded within mobile investment applications have a direct influence on user participation, satisfaction, and retention. Research suggests that users who engage with learning tools demonstrate higher confidence levels and are more likely to adopt long-term investment strategies rather than short-term speculative behaviour (Lusardi & Mitchell, 2014). Education thus acts as a stabilising force, moderating emotional reactions during periods of market volatility. Learning-oriented features also contribute to user retention by enhancing perceived value beyond transactional functionality. When users feel that a platform supports their financial growth, they are more likely to remain loyal and continue using the app over time (Bhattacherjee, 2001). Educational tools encourage systematic investing practices such as SIPs by reinforcing the benefits of discipline, consistency, and long-term planning.

Moreover, improved financial literacy reduces susceptibility to behavioural biases such as overconfidence and herd behaviour, leading to more rational decision-making. By equipping users with knowledge and contextual understanding, mobile investment applications can foster more sustainable participation in capital markets. This highlights the critical role of education in ensuring that the democratization of investing through digital platforms translates into meaningful and responsible financial inclusion.

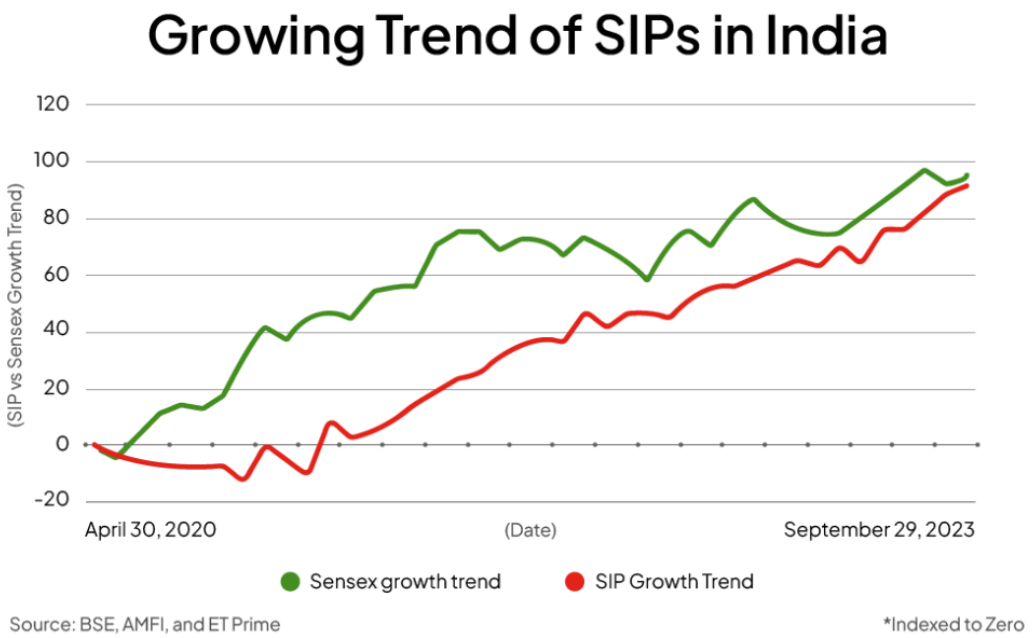

Figure 3: Growth trend of systematic investment plans (SIPs) in India relative to Sensex performance (2020–2023). Source: BSE; Association of Mutual Funds in India (AMFI); ET Prime.

CHAPTER 9: COMPARATIVE ANALYSIS – GROWW AND ZERODHA

9.1 Onboarding Experience

The onboarding experience represents the first point of interaction between a user and a mobile investment application and plays a critical role in shaping initial perceptions and adoption decisions. For first-time investors, the speed and clarity of account opening processes significantly influence confidence and willingness to proceed. Both Groww and Zerodha utilise Aadhaar-based electronic Know Your Customer (e-KYC) mechanisms, enabling digital verification and paperless onboarding. However, differences emerge in how these processes are structured and communicated to users.

Groww places strong emphasis on reducing friction during onboarding by minimising the number of steps required to open an account. The platform provides guided explanations at each stage of the process, using simple language and visual cues to clarify requirements. This approach lowers cognitive effort and reduces uncertainty for users unfamiliar with financial documentation, making the onboarding experience particularly accessible for first-time investors (Vivek & Kumar, 2023).

Zerodha's onboarding process is similarly efficient in terms of completion time but is comparatively more utilitarian in its design. While the platform offers clear instructions, it assumes a basic level of user familiarity with financial terminology and processes. As a result, Zerodha's onboarding may feel less intuitive to complete beginners, although it remains highly effective for users who value speed and functional clarity over hand-holding. Overall, Groww appears to prioritise psychological comfort and ease of entry, while Zerodha focuses on operational efficiency and standardisation.

9.2 Pricing Model

Pricing structure is a crucial determinant of platform selection for young and first-time investors, who are often highly sensitive to transaction costs. Zerodha pioneered the discount brokerage model in India by introducing a flat-fee structure for equity intraday and derivatives trading, along with zero brokerage on equity delivery. This pricing innovation fundamentally altered cost perceptions in the Indian brokerage industry and contributed to widespread adoption of app-based investing (Vishwambhar, 2023).

Groww follows a similar low-cost model, offering zero brokerage on equity delivery and competitive pricing for other segments. However, Groww's pricing communication is often perceived as more transparent by beginners, as cost explanations are presented in simpler language and integrated into transaction workflows. This clarity reduces the likelihood of cost-related confusion, which is particularly important for inexperienced users (Rukmini et al., 2025).

Neither platform relies heavily on hidden charges, and both disclose optional costs related to advanced services or premium features. However, Zerodha's flat-fee model is better suited to active traders who prioritise predictability in costs, while Groww's presentation of pricing information may be more reassuring for young investors with limited exposure to brokerage fee structures. Thus, while both platforms are affordable, their pricing models align with different user preferences and experience levels.

9.3 Platform Features

The breadth and sophistication of platform features significantly influence user experience and long-term engagement. Zerodha is widely recognised for its advanced trading capabilities, including comprehensive charting tools, multiple technical indicators, and detailed market depth information. The platform also offers application programming interfaces (APIs) that enable algorithmic trading, making it attractive to experienced investors and technically inclined users (Zerodha, 2024).

Groww, in contrast, adopts a more streamlined approach to feature design. While it provides essential charting tools and order types, it avoids overwhelming users with excessive technical complexity. Groww

places greater emphasis on mutual fund investing, long-term equity holdings, and simplified portfolio tracking, aligning with the needs of beginner investors who prioritise clarity over advanced analytics (Rukmini et al., 2025).

Both platforms support multiple order types and provide reliable execution systems. However, Zerodha's feature set is broader and deeper, catering to users who seek granular control and analytical depth. Groww's feature design reflects a conscious trade-off between capability and usability, positioning the platform as an entry-friendly environment rather than a high-frequency trading tool.

9.4 Educational Ecosystem for First-Time Investors

Educational support constitutes a critical differentiator between Groww and Zerodha, particularly in the context of first-time investor development. Zerodha's Varsity platform is widely regarded as one of the most comprehensive free financial education resources in India. It offers structured modules covering topics ranging from basic market concepts to advanced derivatives and risk management, enabling users to develop deep conceptual understanding over time (Zerodha Varsity, 2024).

Groww's educational ecosystem, often referred to as Groww Academy, adopts a different pedagogical approach. Instead of extensive theoretical depth, Groww focuses on short-form content such as videos, articles, and explainers designed to introduce concepts quickly and contextually. This approach reduces intimidation and supports incremental learning, which may be more effective for users at the very beginning of their investment journey (Khan et al., 2023).

The contrast between depth and simplicity is evident across both platforms. Zerodha supports long-term skill development and independent analysis, while Groww prioritises accessibility and immediate comprehension. Both approaches contribute to financial literacy, but they cater to different learning preferences and stages of investor maturity.

9.5 Suitability for First-Time Investors

Assessing suitability for first-time investors requires evaluating not only functionality but also emotional and psychological factors such as fear of entry, confidence, and perceived complexity. Groww's design philosophy emphasises reducing intimidation through clean interfaces, simplified language, and guided workflows. This approach effectively lowers psychological barriers and encourages hesitant users to take their first steps into investing (Vivek & Kumar, 2023).

Zerodha, while highly respected for its credibility and technical robustness, may appear more complex to absolute beginners due to its extensive feature set and assumption of baseline financial knowledge. However, for users willing to invest time in learning, Zerodha offers superior tools for skill development and long-term engagement. Its educational resources and advanced features support a transition from beginner to informed investor.

In comparative terms, Groww is more effective at reducing fear of entry and facilitating initial participation, whereas Zerodha excels in supporting skill development and sustained learning. Rather than serving as substitutes, the platforms represent different stages of the investor lifecycle. Groww functions as an entry gateway, while Zerodha supports deeper engagement and progression within capital markets.

CHAPTER 10: CONCLUSION AND FUTURE RESEARCH

This study examined how mobile investment applications such as Groww and Zerodha have influenced the entry, engagement, and behaviour of first-time investors in the Indian stock market. The findings indicate that mobile trading apps have played a significant role in encouraging retail participation by reducing entry barriers through ease of use, affordability, and digital onboarding. Interface design,

simplified workflows, and integrated payment and KYC systems have made investing more accessible to younger and inexperienced users. At the same time, educational features and learning ecosystems embedded within these platforms contribute meaningfully to user confidence, satisfaction, and retention. However, the study also highlights that app design elements, notifications, and behavioural nudges can influence trading frequency, risk-taking, and emotional decision-making, particularly among users with limited financial literacy. These findings suggest that while mobile investment apps have democratized access to capital markets, their impact on investor outcomes depends critically on the balance between convenience, education, and responsible design.

From an implications perspective, first-time investors must recognise the importance of developing financial understanding alongside app usage in order to avoid impulsive and emotionally driven decisions and to cultivate long-term investing habits. For platform developers, the findings underscore the need to strengthen educational tools, enhance risk disclosures, and design psychologically safe interfaces that support informed decision-making without oversimplifying financial products. Policymakers and regulators, particularly SEBI, have a role to play in expanding digital financial literacy initiatives, standardising app-based risk communication, and addressing emerging concerns related to influencer-driven investment promotion. Future research can extend this study by examining the long-term behavioural outcomes of app-based investing, exploring the role of artificial intelligence in personalised investor guidance, conducting cross-country comparisons of mobile trading ecosystems, and analysing how emerging fintech innovations reshape investor behaviour over time.

REFERENCES

1. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319–340. https://doi.org/10.2307/249008
2. Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly, 27*(3), 425–478. https://doi.org/10.2307/30036540
3. Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science, 46*(2), 186–204. https://doi.org/10.1287/mnsc.46.2.186.11926
4. Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing, 64*(1), 12–40. https://doi.org/10.1016/S0022-4359(88)80012-8
5. DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of information systems success: A ten-year update. *Journal of Management Information Systems, 19*(4), 9–30. https://doi.org/10.1080/07421222.2003.11045748
6. Bhattacherjee, A. (2001). Understanding information systems continuance: An expectation-confirmation model. *MIS Quarterly, 25*(3), 351–370. https://doi.org/10.2307/3250921
7. Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Perspectives, 28*(3), 5–44. https://doi.org/10.1257/jep.28.3.5
8. Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica, 47*(2), 263–292. https://doi.org/10.2307/1914185
9. Barber, B. M., & Odean, T. (2000). Trading is hazardous to your wealth: The common stock investment performance of individual investors. *Journal of Finance, 55*(2), 773–806. https://doi.org/10.1111/0022-1082.00226

10. Barber, B. M., & Odean, T. (2001). Boys will be boys: Gender, overconfidence, and common stock investment. *Quarterly Journal of Economics, 116*(1), 261–292. https://doi.org/10.1162/003355301556400
11. Banerjee, A. V. (1992). A simple model of herd behavior. *Quarterly Journal of Economics, 107*(3), 797–817. https://doi.org/10.2307/2118364
12. Thaler, R. H., & Sunstein, C. R. (2008). *Nudge: Improving decisions about health, wealth, and happiness*. Yale University Press. https://doi.org/10.2307/j.ctt1nq4rg
13. Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: An integrated model. *MIS Quarterly, 27*(1), 51–90. https://doi.org/10.2307/30036519
14. Pavlou, P. A. (2003). Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model. *International Journal of Electronic Commerce, 7*(3), 101–134. https://doi.org/10.1080/10864415.2003.11044275
15. Kim, D. J., Ferrin, D. L., & Rao, H. R. (2008). A trust-based consumer decision-making model in electronic commerce. *International Journal of Information Management, 28*(6), 544–564. https://doi.org/10.1016/j.ijinfomgt.2008.01.001
16. Hamari, J., Koivisto, J., & Sarsa, H. (2014). Does gamification work? A literature review of empirical studies. *Computers in Human Behavior, 36*, 419–431. https://doi.org/10.1016/j.chb.2014.04.006
17. Statman, M. (2014). Behavioral finance: Finance with normal people. *Journal of Behavioral and Experimental Finance, 1*, 1–6. https://doi.org/10.1016/j.jbef.2014.03.001
18. Gennaioli, N., Shiller, R. J., & Vishny, R. (2018). *A crisis of beliefs: Investor psychology and financial fragility*. Princeton University Press. https://doi.org/10.1515/9780691188830
19. Norman, D. A. (2013). *The design of everyday things* (Revised and expanded ed.). Basic Books. https://doi.org/10.1201/b17097
20. Hu, N., Zhang, J., & Pavlou, P. A. (2017). Overcoming the J-shaped distribution of product reviews. *Decision Support Systems, 95*, 65–78. https://doi.org/10.1016/j.dss.2017.05.006