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# Summoning the digital investor: Fintech apps and the shaping of everyday financial subjectivities

Gordon Kuo Siong Tan 

Humanities, Arts, and Social Sciences, Singapore University of Technology and Design, Singapore  
Email: kuosiong\_tan@sutd.edu.sg

## Abstract

With fintech investment apps providing convenience and round-the-clock access to financial markets on the go, investors are becoming more active in managing their financial lives through smartphones and other mobile devices. However, fintech investing's role in the financialization of everyday life remains unclear. Combining insights from Foucauldian governmentality and Science and Technology Studies (STS), this article positions fintech brokerage apps as both neoliberal tools in governing investor conduct and as *agencements* in reconfiguring financial subjectivities. Based on a survey and interviews with lay investors in Singapore, the findings reveal that fintech investors use app-based brokerages as a tool to invest conveniently and at low cost. However, users themselves may resist the financial subjectivities promoted by fintech investing, driven by skepticism towards gamified and other algorithmic app features. They are also motivated by feelings of uncertainty towards fledgling fintech startups and difficulties in their interactions with the app user interface. To mitigate uncertainty, investors adopt various tactics to protect their portfolios.

**Keywords:** financialization; fintech; gamification; investment apps; subjectivity

## Introduction

Fintech investing apps promise to deliver financial services that are more accessible and affordable to the masses. By offering round-the-clock, on-the-go market access, they encourage investors to manage their finances through smartphones and other mobile devices. In line with the continuing financialization of daily life (Martin, 2002), these apps enroll more people into financial markets, help them build wealth, and support the pursuit of financial freedom.

The interconnected processes of reintermediation, consolidation, and capitalization of fintech (Langley and Leyshon, 2021) reshape retail monetary and financial relations. A growing number of studies have examined these relations quantitatively, such as the impact of investing apps on trading behavior (Freibauer et al., 2024). Other studies have documented the effect of interface design on investment practices (Chaudhry and Kulkarni, 2021) and highlighted new forms of investor subject formation through app-based investing (Chua, 2024). These studies focus on examining the outcomes of app usage in terms of investment behaviors and trading performance, underscoring the power that trading apps wield over their users. Similarly, the news media have emphasized greater risk-taking by lay investors on app-based investing platforms. News coverage echoes this

concern, portraying lay investors as taking greater risks on app-based platforms and warning of gamified interfaces that lure individuals into excessive risk-taking (Popper, 2021). Collectively, the scholarship and media reports suggest that investing apps exert a dominant influence on users' financial subjectivities, sometimes with adverse consequences.

The financialization of everyday life (FoEL) has been the subject of research demonstrating that individuals undergo a transformation from passive to proactive financial subjects who are proficient in rational and calculative thought. This transformation is facilitated by increased engagements with finance and financial markets, as well as exposure to financial and speculative logics. Current scholarship has explored the role of fintech in furthering everyday financialization, examining different financial platforms ranging from buy-now-pay-later (BNPL) operators (Threadgold et al., 2024) to high-cost, short-term credit (Ash et al., 2018). With regards to investing, even though the mechanisms of financialization have highlighted the interplay between algorithms and established financial models, in keeping roboadvisor users passive and disciplined (Tan, 2020), key questions surrounding the role of fintech in shaping investing behaviors and attitudes remain unanswered. What financial subjectivities are promoted by fintech investing apps? How are these subjectivities shaped by fintech investors'<sup>1</sup> interactions with these apps and by the broader fintech landscape?

Bringing together two theoretical approaches in the financialization literature, namely Foucauldian-inspired work and Science and Technology Studies (STS), this article situates fintech apps as financial devices in governing conduct and in shaping rational and calculative agents (Tan, 2020). Foucauldian analysis has shown how individuals are encouraged to adopt financialized subjectivities as part of greater self-governance, while an STS approach has highlighted the role of material devices and *agencements* in enabling people to behave in rational and calculative ways (Pellandini-Simányi, 2021). Combining these two financialization approaches offers a richer interpretation of how fintech apps help to produce variegated financial subjectivities that go beyond the further financialization of lay investors by highlighting the role of non-human actors in constructing financialized subjects. This point is emphasized by Lai (2017: 914), who stresses the importance of 'opening up the range of possibilities for variegated subjectivities rather than just financialized or non-financialized subjects'.

Furthermore, work on financial subjectification has relied largely on discursive analysis of policy or media content (Lai and Tan, 2015; Maman and Rosenhek, 2020) rather than on examining the financial subjects themselves. This article's findings are derived from a survey and interviews with lay investors in Singapore. By observing how people's everyday use of financial products can lead to changes in subjectivities (Pellandini-Simányi, Hammer, and Vargha, 2015), this article adds to studies on the FoEL by interrogating the role of fintech investing as it impacts retail investors. It explores practices surrounding lay investors' use of fintech investing apps to understand how their interactions with investment platforms may produce multiple, negotiated subjectivities. Unpacking these negotiated financial subjectivities highlights the complexities of financial subject formation by emphasizing the possibility of user resistance against the adoption of financialized subjectivities (Lai, 2017; Montgomerie and Tepe-Belfrage, 2019).

By studying how investors engage with fintech brokerage apps, this article contributes to research that examines FoEL directly from the perspective of financial subjects themselves. This study focuses on the interaction between lay investors and fintech investing apps. It demonstrates how these apps not only encourage investors to be more active with their investments, which is a neoliberal way to govern behavior, but also create feelings of uncertainty that are crucial in forming financial subjectivity. This study highlights the role of the user interface and app experience as key factors in shaping financial subjectivities. It is not the aim of this article to identify specific design practices

that promote key financial subjectivities. However, the findings show how everyday investing practices may be reconfigured by both deliberate design considerations in the user interface and by the way in which users respond to these design techniques. This underscores the importance of interface design as an overlooked driver of financial subjectivities in terms of how the interface guides users to act in ways that stimulate increased engagement with the app.

This article positions fintech investing apps as an important material market device (Muniesa, Millo, and Callon, 2007) that not only enrolls individuals into both domestic and foreign financial markets but also fosters financial subjectivities as users engage with these apps. While Chua (2024) has interrogated the variegated subjectivities produced by fintech investing apps as reflected by investors' constrained agency within those apps, this article argues further that these app-mediated investor subjectivities may be resisted by the users themselves. Such resistance is driven by skepticism towards gamified and other algorithmic app features, and by users' feelings of uncertainty towards fledgling tech startups and their interactions with the app interface. To mitigate uncertainty, investors adopt various tactics to protect their portfolios. Thus, this article departs from studies that have largely adopted a deterministic approach, which privileges the control that algorithms have over their users (Ash et al., 2018; Graham, 2018; Hayes, 2021) while neglecting to consider how users may retain agency over their engagements with fintech apps. In particular, this study's findings on uncertainty contribute to a richer understanding of the affective dimensions that shape investor subjectivities, as shown by Chua (2024) and Lai (2017) in their emphasis on the logics of care and intimacy that drive investment decisions. To the extent that such feelings of care and intimacy represent positive affect that inform investment practices, this article emphasizes how negative affect, i.e., uncertainty, can also shape financial subjectivities. The findings illuminate the agency of users in governing their own interactions with investing apps, as seen through certain behaviors and practices that challenge the disciplined, rational, and calculative dispositions that are typically associated with neoliberal investors. Together, the results highlight the variegated financial subjectivities and behaviors that arise from users' everyday engagements with investing apps, including the different ways users resist digital nudges designed to encourage more active investment.

### **Investor subjects and financial subjectivities**

The term 'financialization of everyday life' (FoEL) has been used by scholars to examine a cultural shift involving the adoption of financialized subjectivities in daily life (Pellandini-Simányi, 2021). These subjectivities are expressed in multiple aspects, such as openness to financial risk (Fligstein and Goldstein, 2015; Lai, 2017), an entrepreneurial drive to seek investment opportunities (Fligstein and Goldstein, 2015; Martin, 2002), greater self-responsibilization for securing one's financial welfare (Lai, 2017), and the perception that financial decision-making is easy and enjoyable (Martin, 2002). The study of financialized subjects has been significantly influenced by a Foucauldian governmentality approach (Lai, 2017; Pellandini-Simányi, 2021), showing how everyday investor subjects are constructed through governance mechanisms such as institutions and discourses. This method has demonstrated how discourses and technological devices (such as credit scoring) promote self-governing subjects by encouraging individuals to become responsible and calculative. It is employed to investigate both the processes that underlie financialization and their impact on everyday life, as well as the reshaping of financial subjectivities.

A Foucauldian analysis of the financialization of the everyday concentrates on understanding how discursive practices under neoliberal regimes encourage people to adopt financialized subjectivities. The ideal financial subject secures his or her financial

future and enhances personal financial well-being by embracing risk and uncertainty as opportunities to be capitalized upon (Langley, 2020). In explaining how entrepreneurial, risk-taking, and responsible financial subjects are formed, these techniques of governmentality have focused on institutional practices, discourses, and technologies, such as credit-scoring systems, popular finance, and financial literacy programs, and new financial products (see Pellandini-Simányi, 2021 for a review).

In contrast, STS studies on financialization concentrate on how markets and economic agents are assembled through a combination of human and non-human actors, including technologies, models, theories, and material devices. Emphasis is placed on the role of non-human actors in enabling calculative and rational behaviors, whereby ‘prostheses’ or material devices perform calculative and rationalizing functions on behalf of users (Callon, 1998). Financial subjectivities arise through these sociotechnical arrangements, or *agencements*, which are enabled by these material things. *Agencement* refers to combinations of heterogeneous elements ordered such that they work together for a certain time (Müller, 2015). Studies have looked at how material market devices function as *agencements* that bring forth financialized agents without requiring the subjects themselves to be rational and calculative (Cochoy, Deville, and McFall 2017; McFall, 2014). This article uses *agencement* to emphasize the capacity of individuals to act on their own will and provide meaning to their actions (Çalışkan and Callon, 2010), as illustrated by the various ways in which users exercise control over their engagements with their investing apps. The emphasis on user agency enables us to examine the various methods by which financial subjectivities are formed and to consider the heterogeneous outcomes of economic action.

### ***Technology’s role in fostering financial subjectivities***

In addition to the emphasis on financial products as market devices and the discourses surrounding consumer finance, the interaction between product consumption and everyday life also leads to changes in financial subjectivities. This study demonstrates these changes. This section reviews studies that explore how financial subjectivities are shaped by the consumption of app-based finance. In line with neoliberal notions of financial self-responsibilization, individuals use fintech brokerages to engage in ‘futuring’ practices (Hanckel and Hendry, 2024). These practices are aimed at navigating life’s uncertainties and working towards an imagined, desired future well-being (Hanckel and Hendry, 2024). Such engagements with fintech-based investing reflect a fundamental shift in everyday subjectivity, conjuring up an image of the entrepreneurial and calculative investor who actively participates in financial markets. They seek investment returns to bolster wealth accumulation and to achieve financial freedom and security.

Studies have explored deviations from market imaginations of *homo economicus* by showing how financial subjectivities are not exclusively dominated by rational and calculative processes. Rather, these shifts are marked by a mix of rational, embodied, and emotional elements, such as the experience of anxiety over indebtedness that motivates action (Deville, 2014). This suggests that financial subjectivities may be reconfigured by affective components that are produced during interactions with the financial system, such as those mediated by fintech apps. Research has also shown that subjects do not wholly internalize top-down forms of neoliberal, idealized financial subjectivities, thus connoting the possibility of resisting such imposed subjectivities. Indeed, investors can either adapt these subjectivities to their broader circumstances that may also include non-financial logics (Pellandini-Simányi, Hammer, and Vargha, 2015), or they may conform to, diverge from, or subvert them outright (Coppock, 2013). Thus, financial subject formation is complex, bound up with emotions and relationships that affect the resulting subjectivities (Lai, 2017). More recently, Agunsoye (2021) has further revealed

the variegated and contested nature of financial subject formation by highlighting the complex entanglements between norms of conduct and counter-conduct that produce differential subject positions. Simply put, financial practices and behaviors are not only influenced by neoliberal logics; they may operate through financial devices and embodied experiences, such as intimacies, moralities (Lai, 2017), and other affective elements.

The role of financial platforms and their purposeful design in shaping financial subjectivity has been well studied. For instance, Graham (2018: 1) argues that platforms configure ‘users within particular discourses, practices, and subjectivities’, actively shaping and promoting subjectivities in ways that encourage users to engage in self-governing behaviors that align with the platform’s goals. In particular, attention has been drawn to the role of the app-based user interface (UI) in influencing financial subjectivities and governing user behaviors. For instance, Langley et al. (2019: 43) argue that the purposeful interface design of payday loan platforms makes borrowers treat their loans as money rather than as debt, where successful loan approval is ‘only a few clicks or swipes away’. Similarly, Ash et al. (2018) demonstrate how the user interface manages ‘friction’ productively to nudge users into taking on more high-cost, short-term debt. The role of algorithms in reconfiguring financial subjectivities has also been examined. For example, Hayes (2021) argues that robo-advisors subject investors to objective rationality that is offered by algorithmically managed trading. As a tool of governmentality, Hayes (2021) shows how robo-advisors deploy corrective strategies through the interface to keep users disciplined and actively foster passivity in investors. Elsewhere, Chua (2024) uses the concept of the selectively self-directed investor to capture investing practices that are influenced by a mix of both rationality and calculation, as well as algorithmically driven design. While these studies have highlighted the crucial role of the interface in mediating financial subjectivities, greater attention should be paid to how users perceive app features and how such perceptions in turn shape their financial behaviors (Chua, 2024).

Recent work has spotlighted how new platform mechanisms, such as gamification, in which the blurring of the boundary between work and play and finance from fun, has produced new financial subjectivities (Goggin, 2012). This focus on gamification within finance echoes Tiessen’s (2015) claims that app-based finance will be characterized by a more playful, gamified, and competitive ethos that is promoted through the digital user interface. Such gamification to make finance more ‘playful’ involves applying sociotechnical knowledge such as behavioral psychology, user experience (UX), and UI design, which are increasingly important to fintech intermediation (Lai and Langley, 2024). Studies have shown how game design techniques and elements have been applied to financial services to make them more engaging, motivating, and enjoyable. With Lai and Langley (2024) highlighting that such ‘playful finance’ relies on capturing users’ engagement and attention, recent work has illuminated the mechanisms that reconfigure subjectivities via increased engagement. For instance, Hoyng (2024) finds that users of fintech investing apps cultivate financial subjectivities that normalize intuitive speculation under playful environments that seek to increase user engagement with the app. Through the app environment, the boundaries between rationality and affect are blurred by purposefully deployed design practices, which generate hype for certain financial securities through social elements like in-app community discussions. However, these studies assume a deterministic approach in examining the impact of platforms on user subjectivities that excludes the possibility of users resisting certain platform practices. Because digital power is exercised and negotiated between users and platform operators through the user interface, it is necessary to examine how financial subjectivities are co-produced through platforms that value user agency.

## Methodology

Singapore has established itself as a leading fintech hub in Asia through a combination of strategic government initiatives and a robust regulatory framework. With over 700 registered fintech companies and a high consumer adoption rate, Singapore enjoys a vibrant fintech ecosystem that consists of both startups and established financial institutions. In addition to programs like the FinTech Regulatory Sandbox, which aim to accelerate innovation, initiatives to promote the digitalization of the finance sector have led to retail consumers embracing fintech solutions. Coupled with the government's strong push for citizens to integrate technology into their everyday lives (Ministry of Digital Development and Information, n.d.), trading apps are viewed as helping to further democratize access to investing. A recent survey indicated that trading apps were the most popular type of fintech app in Singapore, where the adoption of investing apps grew 16-fold between 2018 and 2023, and 36% of Singaporeans reported using digital investment apps (Singapore Business Review, 2024).

Given the strong interest in fintech investing by citizens and sustained state support, this article examines individual investors' practices regarding the use of fintech brokerage apps. Survey responses were collected from 1,000 participants with the help of an external market research firm. The survey involved questions regarding their investing practices and the platforms that they use to invest. Drawn from a demographically representative sample covering a range of age groups from 18 to more than 55 years old, respondents consisted of 48% males and 52% females. A significant majority (91%) had attained at least post-secondary education. The participants were asked questions related to investing, such as the length of their investing experience, whether they use fintech to invest, and their perceptions and practices surrounding fintech usage.

Eighteen follow-up semi-structured interviews<sup>2</sup> were conducted via Zoom to further explore user perceptions of fintech investing apps and how users interact with various fintech-based features as part of their investing practices. The interviews were designed to gain more in-depth insight into users' perceptions of fintech apps (compared to traditional brokerage platforms), their motivations for using fintech to invest, the practices formed around fintech usage, and how they make financial decisions and acquire investing knowledge. Interviewees were mostly working adults in their 20s to 60s, comprising 10 males and 8 females. This allowed different attitudes and behaviors at various life stages to be captured. Their investing experience ranged from three years to more than thirty years. Each interview lasted around an hour on average, and the audio was captured to facilitate transcription. The interview transcripts were then analyzed to identify key themes relating to financial subjectivities. The findings are not representative of all investors and their investing attitudes and practices. However, the findings help to explain the role of fintech in shaping financial subjectivities and the different ways in which such subjectivities are expressed.

## Constructing Singaporean fintech subjectivities

The Singaporean state views retail investing as crucial to developing the country as a global financial powerhouse. The state has actively engaged citizens to support the growth of the finance sector through greater retail participation in the financial markets, using concepts of 'financial citizenship' to frame investing as part of citizenship obligations (Lai and Tan, 2015). Facing the challenge of a relatively lackluster domestic capital market, fintech investing is considered an attractive option to promote greater accessibility and involvement in the local financial market due to lower costs of investing through fintech platforms. State-led financialization is further observed in the government-driven push for further platformization of the financial industry to stimulate innovation and



competition. Besides numerous fintech-based investing outfits consisting of a mix of app-based brokerages (Tiger Brokers, MooMoo, WeBull, etc.) and robo-advisors (StashAway, Syfe, Endowus, etc.), traditional brokerages and banks have also introduced their own fintech investing offerings.

Singapore's active enrollment of citizens mirrors similar financialization dynamics in other countries. For instance, in China, the state has become an important actor not only in facilitating financialization but also in controlling how financialization processes unfold. By actively managing key market infrastructures, such as securities exchanges, the Chinese state mobilizes financialization forces to achieve broader economic goals and to promote a conducive trading environment for retail investors (Petry, 2020). Responding to greater market volatility from active state intervention, Chinese investors have adopted a resilient outlook and adapted their investment strategies that capitalize on such volatility (Dal Maso, 2023).

### **Overview of survey results**

A total of 360 respondents (52% male, 48% female), representing 36% of the survey sample, identified as using fintech platforms for investing. This finding is surprising given the wide availability of fintech investing options in Singapore's well-developed financial hub and an extremely high smartphone adoption rate of 95% in 2023 (Statista, 2023). However, it should be noted that fintech brokerage firms have a relatively short operating history in Singapore, with many having been established around or shortly before the Covid-19 pandemic. Fintech users tend to be younger, with 79% aged 44 years or below, reflecting general observations that fintech solutions are more appealing to younger demographics.

### **More user control**

Sixty-four percent of survey respondents reported feeling greater control over their investments when using fintech. This perceived control is framed in highly instrumental terms. The top three benefits of using fintech to invest are convenient access (62%), lower investing costs (56%), and time savings (46%). These factors also came up during the interviews, where interviewees often highlighted these affordances of fintech investing. The emphasis on qualities of speed, convenience, efficiency, and cost in fintech usage is consistent with the traits of the rational and calculative investor – one who actively searches for new product information and compares differing options (Lai, 2017) to make an informed financial decision. In particular, cost is a critical factor that leads users to adopt fintech investing. Compared to other online or bank-based brokerages, fintech brokerages generally offer lower trading costs by charging lower commissions and platform fees (Dayani, 2024). As Interviewee 1 shared, 'my driver for using [fintech platform X] is trading costs. Because when you buy, whether it's US stocks or Singapore stocks, on a per-trade basis, the fee is definitely much lower'.

### **Self-directed portfolio engagements**

Such feelings of control are further reflected in fintech users' self-directed management of their portfolios without using traditional intermediaries like a human broker. Before stock trading moved to self-managed trading platforms, brokers were required to place trades. However, fintech investing solutions allow investors to trade and monitor their portfolios virtually anytime and anywhere using the brokerage apps on their smartphone. Biometric functions like fingerprint or face-enabled logins have greatly simplified login procedures to access their portfolios. This ease of access has prompted 56% of respondents to share

that they logged in to check their fintech portfolio returns more regularly compared to traditional investing services, with 29% checking once a day and 13% checking more than once a day. Logging in to check on their portfolios has become a quotidian task for some, akin to how social media users have been habituated to logging in and checking their social media feeds regularly. In this sense, monitoring one's investments has assumed a regular rhythm that is integrated into one's lifestyle, conditioned by the opening and closing hours of different financial markets across time zones, as Interviewee 1 described: 'I minimally would take a peek at my stocks once in the day Singapore working hours, where Singapore market is open. I will also take a look just before I sleep, just to check out my U.S. stocks'.

Such frequent checking of portfolios is done rapidly. This is especially so if there are no market changes that require them to take action, as opined by Interviewee 1: 'Usually I just log in for a peek. So two, three minutes. If [there are] no very adverse or favorable huge moves that I need to action on, I would just close the app'. With people generally spending more time on their phones, it is perhaps not surprising that this practice of frequently checking in on their portfolios without trading has become a habit among fintech users. This sentiment was captured by Interviewee 2, who explained that 'it's like nothing to do then [I will] open and see'. Fintech users may have become accustomed to logging in just to see their portfolio even when they know they are not going to trade, compelled by an urge that may be 'very hard to resist to just have a peek' (Interviewee 3). Such reflections suggest that users are aware of their emotional vulnerability and are creating plans to implement a higher degree of discipline in portfolio management. It is consistent with Chua's (2024) finding that investors purposefully limit their exposure to their trading apps as a remedy for emotional reactions to their portfolios. Still, interviewees remained uncertain about truly separating their emotions from investing, as 'it sounds good on paper . . . but it's not going to result in a guaranteed return whatsoever' (Interviewee 5). A corollary of greater control and increased portfolio engagement is more frequent trading on investing apps. The ease of making low-cost trades on highly accessible investing apps may lead to investors missing out on long-term gains. Research has consistently demonstrated that individual investors trade too much and to their disadvantage (Barber and Odean, 2000), especially when they trade stocks with high volatility (Fong, 2014).

Market devices organize and shape the capacities of economic agents to engage with and participate in markets (MacKenzie, 2009). Computer screens that facilitate financial trading direct user attention towards digital interfaces under immersive experiences that actively shape investor identities (Knorr Cetina and Bruegger, 2002). For investing apps, market data visualization like candlestick charts and real-time price updates are presented on sophisticated-looking interfaces. These interfaces feature dark professional-looking dashboards, customizable widgets, and advanced order types that were once exclusive to institutional traders. These design elements mimic professional trading interfaces, thus creating the illusion of skill (Kahneman, 2011) and control over complex financial markets, where users feel as though they possess professional trading capabilities that let them exercise greater control over their portfolios.

The dynamic moving price charts and figures on the investing app interface have conditioned users to assume the disposition of professional traders. The heightened accessibility provided by fintech investing apps has turned some users into investors who expect immediacy in their trading actions, demanding fast and precise execution of their transactions. With swift and decisive action making a key difference between a loss and a profit, this urges fintech users to behave like expert traders who can react skillfully and capitalize on dynamic price movements. This highlights the importance of user-friendly app interfaces, as a streamlined design makes it easier and faster for investors to trade and lock in a good price, which can boost their potential returns.



It cuts down the time for you to turn around. I mean it's like sometimes a certain market, I feel really, is quite fast moving. So, if you miss out by five minutes, you may not get the price that you want. (Interviewee 4)

Despite increased engagement with their investments, many interview subjects claimed that their trading activities were aligned with their overall trading strategy and risk tolerance. Before buying a new stock, they would do their due diligence by conducting additional research, such as understanding the business model and going through company financial reports. They stressed that having a good grasp of the company's fundamentals was important in guiding their investment decision. Rather than dabbling in hot stocks or hyped-up industries, interviewees highlighted that low trade commissions allowed them to execute their investment strategy more effectively compared to the old days of using brokers and paying higher fees. However, this presents a paradox when viewed against the earlier finding of more frequent trading. Perhaps some investors may be reacting to the emotional responses provoked by a well-designed interface, in which design elements such as price alert notifications and popular trending stocks trigger affective trading behaviors that are characterized by 'intense feelings of opportunity and loss' (Chua, 2024), which override the rational decision-making that interviewees claimed to be doing.

Some interview participants reflected critically on the ease of buying and selling through their investing apps, noting that this convenience can undermine due diligence and proper research. They suggested that such ease of use may encourage trading behaviors driven by ludic impulses, rather than careful consideration. For instance, Interviewee 5 reflected that 'if it's very much fun to buy and all that, then after a while you will also be like, okay, maybe I should think about it a bit more'. This insight suggests that users may not be in full control of their investment decisions. A user-friendly app serves to exert control over users by making it easy to trade, which, when coupled with the gamified components built into the interface, nudge investors to make impulsive trades. Taken together, these findings chip away at the disciplined and rational investor subject imagined under neoliberal markets. Although fintech investors are not entirely undisciplined and unbridled in their investing practices, they may deviate from logical and calculative scripts when influenced by app affordances. This contrasts with the highly aggressive, risk-embracing speculators frequently depicted in reports that emphasize the dangers fintech brokerages pose to retail investors (Popper, 2021).

### **Working around fintech brokerage apps**

So far, we have shown how investors perceive greater control over their portfolios using fintech apps, which facilitate lower barriers to investing by offering low-cost trades, convenient market access, and a user-friendly interface that promotes increased engagement. We have also demonstrated how these features may foster new subjectivities, such as overtrading and emotionally driven actions that challenge idealized tropes of the rational and calculative investor. In this section, we illustrate the ways in which users resist these subjectivities by asserting control over their interactions with investing apps, to highlight the tension between investors and their apps.

#### ***App alerts and gamified features***

To increase user engagement, app developers have used the tactic of pushing alerts and notifications to users, which prompt them to discover new stocks and sectors to invest in or learn about trending shares that other users are discussing. Indeed, 46% of survey

participants indicating that they reacted more regularly to notifications and alerts on their fintech apps as compared to traditional brokerages. However, with notifications from numerous other smartphone apps that compete for their attention, some users perceive the non-essential notifications as ‘noise’ that distracts them from important information updates. Interviewee 1 likened the fintech app alerts to ‘the stock market equivalent of your click-baiting on social media or dubious online news’. Rather than engaging with every single notification, some fintech users have learned to resist the behavioral nudges by fintech brokerages to entice users to spend more time on the app. Interviewees cope with the alerts from their brokerage apps in different ways. Some review the notifications quickly and swipe away the irrelevant ones, while others have customized their app preferences to deliver only essential account or trade-related alerts.

Younger interviewees associated the use of various in-app features with gamification tactics that target younger investors. According to Interviewee 6: ‘just bright colors and when you enter any of their interfaces, there will be many pop-ups that appear to actually highlight to you certain things that they try to entice you with’. These younger respondents perceived these gamified features as mechanisms to increase platform engagement and capture user attention, aiming to stimulate trading activity that contributes to the platform’s bottom line. They also noted similarities between these features and those found in social media platforms. Recent critical discourse highlighting the various gamification tactics of Big Tech to monetize their users under the attention economy has captured the public’s attention and attracted greater regulatory scrutiny. This may have contributed to increased awareness and recognition of such gamification elements in investing apps, particularly among younger investors, who are generally more well-acquainted with social media platforms that employ similar gamified strategies. Thus, investors’ ability to reassert control over their app interactions is informed by similar phenomenon occurring outside financial markets. It also shows that, despite the growing dominance of digital platforms (Gawer, 2021), there remain opportunities for users to reclaim some agency from their apps.

The reclaiming of agency can be traced to interviewees’ perception of these gamification techniques as marketing gimmicks. Some even argued that gamification elements were distracting users from focusing on investing and weakening the user-friendliness of the app interface by making the screen more cluttered, which may not be conducive to the ‘fostering of knowledgeable and competent investors’ (Interviewee 1). While acknowledging that gamification strategies could make investing enjoyable and interesting for novice investors, interviewees questioned how trading discounts and earning virtual badges as rewards would help maintain investor interest and teach them long-term investing best practices. This raises the question of whether financial gamification can be beneficial to investors or whether it simply serves the firm’s interest in keeping users engaged (and trading), which ultimately improves their profits.

### **Social and AI features**

Fintech brokerages promote investing as a social activity, using community-based features to get users to share and discuss their trading tips and strategies. Interviewees expressed skepticism about the veracity of investment information shared within the community, which they felt are mostly based on promoting self-interest by building hype around certain stocks and industries. Even as they acknowledged that it may be informative to learn about the trading insights of other investors, especially regarding new stocks and industries that they may be unaware of, most interviewees claimed that they would not buy based on those opinions but rather take the information ‘with a pinch of salt’ (Interviewee 7). They did not find it useful to discuss trading advice or individual stocks with the community, stressing the importance of making sense of what other investors are

saying in relation to one's own trading strategy. Adopting the framing of a rational investor, they cautioned against blindly following the advice of others and 'trading on a whim or on a herd mentality' (Interviewee 1). Once again, interviewees stressed the importance of doing their research, such as reading the company's annual report, to better evaluate a firm's investment potential. Interviewee 8 reinforced this point: 'do your homework, do your own due diligence and research before putting your money in'.

Following the recent surge in interest around artificial intelligence (AI), fintech brokerages have also integrated AI offerings into their apps. For instance, AI chatbots within fintech apps now offer investing insights, impart financial knowledge, and perform stock analysis on behalf of users. These AI-centric features are aimed at helping investors to make better and more informed financial decisions. Even though some interviewees expressed excitement at the use of AI to develop useful investing functions, like analyzing a particular stock so that the investor does not 'need to go hunting everywhere for the information' (Interviewee 9), they were ambivalent about such new technology.

A main concern involves the lack of transparency regarding the reliability of advice provided on the investing apps. Some interviewees questioned the veracity of articles on fintech apps that provide investment ideas or recommendations, expressing uncertainty about whether these were written by real investment professionals or by AI. Once again, the interviewees emphasized the importance of undertaking personal research to guide their investment decisions, rather than delegating it to the machine. This emphasis on self-directed due diligence conveys a strong sense of personal responsibility for managing one's investments. The findings evoke the rational fintech investor in action, in which fintech users attempt to cut through the 'noise' of in-app features such as community-based trading advice and gamified elements. The interviews show that fintech users utilize these platforms to make low-cost trades that are aligned with their trading strategy and risk preferences. Such investment practices are backed by a good understanding of different investment prospects that are derived through personal research, where investors are highly disciplined and focused on achieving financial security through their investments. This finding is intriguing not because investors have once again employed the characteristics of the responsible investor to shape their perception of financial advice generated by investment communities or AI. Rather, it is the uncertainty surrounding the information's provenance, which affects the degree of trust that is attributed to it. This adds nuance to understanding how investors conduct their personal financial research and underscores the need for fintech investing apps to be upfront about the reliability of the information sources presented on their apps and how the output is assembled.

Similar to the self-directed investors documented by Chua (2024: 13), our interviewees showed awareness of the opaque algorithms and 'subtly manipulative interfaces' that nudge users towards certain behaviors that benefit the fintech brokerage. Rather than passively accepting the design-based influence of their trading apps, this result indicates that fintech investors are critical of certain app features and work around features that do not serve their interests. However, such countermeasures may not always work, as indicated by the earlier finding of overtrading and possibly emotionally driven trades triggered by the user interface. Indeed, the emotional and logical aspects of trading may be hard to disentangle. This is especially so for investing apps where their interfaces may be explicitly designed to provoke emotional responses and stimulate engagement. As Interviewee 14 acknowledged, 'the emotion runs strongly for me, because every bit is like hard-earned money'. Overall, this section's findings highlight discontinuities between the rational and self-interested investor (*homo economicus*) and the fundamentally playful human who is driven by pleasure (*homo ludens*) (Callon, 2007; Huizinga, 1950). Financial gamification discourse has tried to reconcile these two aspects by framing human nature as something that can be guided toward rational financial behavior through gamified elements (van der Heide and Želinský, 2021). However, this article shows the limits of

gamification in both stimulating investor engagement with investing apps and nurturing responsible financial subjects. More importantly, the findings suggest that some investors discount the value of gamified elements in helping them to be more knowledgeable investors who can achieve their investment goals.

### **The uncertainties of fintech investing**

The previous section documented the different ways in which fintech investors resist the new subjectivities imposed on them by their apps. This section explores how lay investors perceive themselves as having greater control over their investments through fintech's affordances of cheaper trading fees and convenient access to multiple financial markets. However, such control is marked by uncertainty due to difficulties interacting with small screens, the looming threat of financial scams, and limited assurance from regulatory licensing.

#### ***Small, cluttered screens***

As noted earlier, fintech brokerages have deployed UX and UI design to introduce features like gamification, distinguishing themselves from traditional brokerages. They pack numerous functions into apps that users access on the relatively small interface of smartphone screens. In contrast to the earlier finding on user-friendliness, some respondents felt that some fintech apps have become less user-friendly because of their cluttered and clunky interface, which make navigating around and executing key functions more uncertain. Interviewees shared that sometimes they had to go through a few clicks and taps to perform a task, or spend more time searching and navigating through several screens to get to the desired 'page'. Interface improvements may cause commonly used functions to be moved elsewhere, whereby uncertainty is reintroduced because users have to spend more time finding out where these functions are so that they can perform desired tasks again, as experienced by Interviewee 7: 'it's definitely difficult to find because they have many features, some I'm not aware of. So, when the need arises, I have to Google or use the help center to figure out where to navigate'.

The constrained visual view presented on a relatively small screen that constitutes the fintech investing experience means that the small buttons and text may increase the possibility of making mistakes during trading:

There's a plus sign and minus sign; you can just punch the plus sign and the zero will add on. There were two or three cases where I pressed the wrong button and another additional zero went in. So, my trades increased by ten-fold. (Interviewee 4)

Fear of making mistakes led some interviewees to adopt a more cautious approach when interacting with their investing apps. In addition to worrying that a transaction might not go through as intended, interviewees expressed anxiety about making mistakes such as entering incorrect trading information. As a result, they reported becoming more careful when performing transactions, such as double-checking the information before confirming the trade. This heightened vigilance was more pronounced for investors who had made mistakes before that resulted in a 'scary experience with pressing the wrong button' (Interviewee 10).

The above accounts show that user interface design reshapes investor identity in conflicting ways. As previously discussed, the high information density of the sleek and professional app screen creates a heightened sense of expertise and control, allowing investors to see themselves as sophisticated market participants. However, this feature-

dense app interface may also undermine this self-perception. Users simultaneously feel empowered by having professional tools at their fingertips yet may be overwhelmed by their inability to locate the desired function swiftly, or to fully utilize and execute various functions with precision like professional traders. As the interviewees' experiences showed, the risk of pressing the wrong button and inadvertent swipes creates a perpetual state of vigilance and self-doubt where users question whether they possess the dexterity, speed, and attention to detail required for 'serious' trading. The potential for costly errors introduces an element of involuntary gambling into what investors perceive as rational decision-making. Each interaction carries the risk of making a serious financial mistake, creating a background anxiety that becomes normalized as part of the investing experience. This ambient risk blurs the line between intentional strategy and accidental outcomes, leading users to reconcile their perceived self-image as competent investors with evidence of their practical limitations as constrained by the app interface.

When investors executed the wrong trades, such as buying instead of selling, entering incorrect quantities, or selecting unintended order types, they assumed full responsibility rather than blaming it on the interface design. This shows that users view fintech investing apps as merely a tool in which financial outcomes ultimately depend on the user. As Interviewee 9 put it, 'if you know that you don't know this thing, and then you want to do it, then you have to be responsible because you are an adult'. Reflecting a strong sense of self-responsibilization, users believe they are fully accountable for the outcomes arising from their engagements within the app. Behaviors such as taking excessive risk or not doing sufficient research are perceived as personal failings, with some interviewees using a moral lens to judge 'undesirable' investing behaviors, equating these actions to gambling rather than to sound investing:

If you choose to buy, then it's your responsibility. If your money is gone, then who else can you blame? If you are just going into the market because of one piece of news, you want to gain big, right? Then that's gambling to me. It's not investing. (Interviewee 9)

This strong sense of personal accountability shapes a peculiar investor consciousness where users internalize self-inflicted mistakes as personal failures of competence rather than recognizing them as outcomes of complex (cluttered) interface design. The resulting sentiment combines frustration with self-blame, creating a scenario where investors constantly second-guess their actions while paradoxically increasing their engagement to 'master' the interface so that they can maintain their feeling of competence as 'skillful' investors.

### ***Protecting portfolios from financial scams***

Fintech investors are also worried by financial scams that threaten their investments. Given that their investments can be easily accessed on mobile devices and are linked to their bank accounts, this has resulted in greater concerns about investment portfolios being compromised by malicious actors. These fears are exacerbated by the worsening scam situation in Singapore that has become more technologically sophisticated, with the growing number of cases and record-high amounts of financial losses (Sun, 2024). Some of these scams trick users into installing malicious software that hacks into their phones and financial (typically banking) apps and then siphon money to overseas accounts.

The growing threat of financial scams has created much anxiety among fintech investors about the security of their investments. There is a growing sense of uncertainty and helplessness about potentially falling victim to these scams, as explained by Interviewee 3: 'there's too much financial related scams out there already . . . I think you

can never really protect yourself'. This pervasive uncertainty creates a 'risk society' condition (Beck, 1992) specifically within digital finance, where the very tools promising control simultaneously generate new, often invisible vulnerabilities. This creates a subjectivity characterized by perpetual vigilance that never resolves into genuine safety, reflecting a feeling of constant uncertainty around the security of their investments that remains unresolved.

With technological developments enabling people to easily perform financial activities in public settings, such as on public transit and during social gatherings, this has reshaped our relationships with public space and with our mobile devices (Tiessen, 2015). Interestingly, the convenience and accessibility of fintech investing has translated into greater anxiety about their portfolios, where investors try to keep managing their investments a *private* affair while in *public* space. Some interviewees shared that they exercise greater care and caution when checking their portfolios in a public or crowded setting (such as on the train or bus) for fear of unknowingly revealing sensitive financial information to others. Some strategies to prevent their portfolio information and investment actions from being seen by others include holding their phone close to them, so others cannot see their screen. Investors also use the 'conceal' function that masks portfolio value and returns with asterisks. When asked why they employed these practices, interviewees responded that they were trying to reduce the risk of becoming a scam victim:

On the train, I would just make sure that I keep my phone angled towards my side if I'm looking at my investments or banking apps. I mean now there are many scams. So, you don't know who is going to hack into your app, right? (Interviewee 5)

The various tactics employed by fintech users highlight the spatiality of personal portfolio management, where investors maintain a critical distance from others' prying eyes while remaining close to their investments both in the proximal and financial sense. These spatial practices reveal the production of new 'representational spaces' Lefebvre (1991) in which financial anxiety materializes through embodied performances of concealment and protection. The 'conceal' function serves as a technological affordance that acknowledges the fundamental vulnerability of digitized finance while offering only symbolic protection. The spatial practice of checking one's portfolio in public involving the hunched posture, the strategic positioning of the smartphone, and the vigilant glance for intrusive observers constitutes 'tactics' (Certeau, 1984) that are employed within spaces controlled by others. These embodied tactics reflect uncertainty, where investors can never fully know whether their protective measures are effective or merely performative. This uncertainty transforms the investor's relationship not only with public space and digital interfaces but with their own financial identity, creating an investor subjectivity that is defined in part by continuous, unresolvable risk management under conditions of fundamental unknowability.

### **Regulatory licensing is not a guarantee**

Besides worrying about their investments being targeted by financial scams through cyber-attacks and hacking, interviewees were also concerned about the highly risky nature of fintech firms. Interviewee 3 recounted a story about a supposedly legitimate new forex trading platform that went bust overnight, where 'the whole thing went boom . . . just shut down and then the investors' money got stuck inside, and they haven't been able to return the investors their money'. Therefore, respondents emphasized that they would only use fintech brokerages that are licensed to operate in Singapore. Regulatory licensing gives them more confidence that fintech brokerages are not fly-by-night operations, and it is



safe to invest with them. However, such increased confidence conflicted with growing ambivalence towards fintech investment companies. Although all fintech outfits operating in Singapore are regulated and licensed by the state's financial regulators, i.e. the Monetary Authority of Singapore (MAS), many interviewees remained skeptical towards their legitimacy. Citing high-profile collapses such as the now-defunct cryptocurrency exchange FTX (which was licensed by the MAS), interviewees stated that merely meeting regulatory licensing requirements only gives them some assurance that the firm will not shut down. As Interviewee 11 shared: 'for me, I would think that accreditation is like a 50/50 thing because . . . even MAS licensed companies may shut down too'.

Such uncertainty persists even though fintech brokerages clearly state that investors' monies are held in custodian accounts that are managed by reputable financial institutions. Interestingly, some interviewees did not know about this custodian feature, which raises questions about how well investors understand the operations of their fintech brokerages. Indeed, 35% of survey respondents chose a rating of 5–6, and 47% rated between 7 and 8 (with 10 representing complete trust) when asked about their trust in fintech providers to manage their investments in the long term. This weaker trust may be partly attributed to fintech investing as a novel phenomenon, marked by the relatively short operating record of fintech brokerages.

Different strategies are used to cope with such uncertainty. Some interviewees shared that they opened fintech investing accounts to take advantage of different promotions among fintech brokerages, such as higher promotional interest rates or free shares for new account registrations. After receiving the promotional benefit, they would move their funds out of the fintech brokerage immediately and continue with a traditional brokerage. As explained by Interviewee 12: 'I just went for the promotion you know at one stage . . . just to take advantage, but it's only for short term, I took it out straight away after the promotion ended'. Thus, some users view fintech investing as a short-term tool to grow their wealth rather than as a platform to manage their investments over the long run. The ease of setting up a fintech investing account and linking bank accounts has facilitated such 'money growing' strategies, while making it harder for investing apps to retain customers and build loyalty in this era of platform finance.

Some interviewees shared that they only invested a small portion of their money in fintech outfits to test them out. As Interviewee 12 explained: 'Many of these fintech platforms are relatively new . . . they don't have a long record, so that makes you worried about putting too much of your money there and whether they'll go belly up the next day'. Similarly, other interviewees disclosed that they spread their investments across different fintech investing apps rather than using one dominant fintech service. These two practices show that similar to how investors are encouraged to build resilient portfolios by diversifying across various asset classes, fintech users apply these same diversification techniques. They engage in risk management practices that spread their risk across various fintech providers. It could also be that users are uncertain as to which platform meets their needs in terms of exposure to different stock markets, product offerings, and usability, among other considerations, leading them to adopt a 'trial and error' approach where they experiment with different investing apps before choosing a preferred one. Such investing behaviors reflect rationality and calculation that are being employed to reduce uncertainty.

This uncertainty surrounding fintech investing outfits has led to 64% of survey participants indicating that they prefer to invest with higher-cost traditional brokerages. This behavior seems irrational when viewed through the lens of the idealized neoliberal investor, who is entrepreneurial and calculative. Such investors are expected to be sensitive to trading costs and seek new products and platforms that can boost their portfolio returns. However, several interviewees viewed the higher fees as being commensurate with the greater assurance offered by non-fintech brokerages. Others

justified their preference for bank-based brokerages by pointing out the more tightly regulated and established nature of banks, as expressed by Interviewee 6: ‘the bank will not run away, but the fintech might fold overnight’. Clearly, in deciding to go with non-fintech-based brokerages, investors had undertaken rational calculation in weighing the costs and benefits of each option. They view the security and safeguarding of their investment monies as the overriding factor in determining their choice of brokerage. This finding shows that the decision-making process of investors is more complex than simply being defined by investing fees and convenience. There is a trade-off between the low-cost and high accessibility of fintech investing apps and the stronger perceived reputation and reliability of traditional brokerages, together with the general uncertainty towards fintech investing that users must contend with.

## Conclusion

If I don’t understand something, then I would not have the confidence to invest in it.  
(Interviewee 6)

The sentiment expressed above on the importance of doing one’s own research during investing captures the rational and calculative subjectivities of the fintech investor as imagined under neoliberal markets. This article has sought to understand how fintech investing apps have further shaped these subjectivities. The findings show that investors frame their fintech engagements instrumentally, perceiving fintech apps as a useful tool that allows them to invest in a low-cost, convenient, and accessible manner. Functioning as material market devices, this article details the changing financial subjectivities that emerge with investing apps, which include users checking their apps and trading more frequently, and behaving like professional traders. These reconfigured subjectivities are facilitated by the apps’ affordances as offered through different features on the user interface, which are specifically designed to increase user engagement and improve the fintech brokerage’s bottom line.

This article has contributed to a more nuanced understanding of financial subjectivities by arguing that investors themselves may resist these subjectivities, thus revealing the contested nature of investor subject formation. The results show how uncertainty at various points can disrupt the rational and calculated ways of thinking and acting when it comes to investing through fintech. These points include the user interface, the financial regulatory environment, and increased vulnerability to financial scams. This uncertainty stems from users’ awareness and distrust of gamification techniques and opaque algorithmic mechanisms embedded within investment apps, their ambivalence toward the limited track records of fintech brokerages, and an increasingly cluttered user interface. Rather than passively accepting these subject positions, investors actively negotiate such subjectivities by developing workarounds to minimize uncertainty and regain a sense of control over their investments. This underscores the agency that users retain over their interactions with investing apps. Far from being controlled by these apps, users recognize and develop counterstrategies against features that ultimately serve the fintech companies’ interests, such as by ignoring ‘nudges’ from their apps.

The reconfigured financial subjectivities demonstrated in this article highlight the importance of developing financial literacy programs that are sensitive to changing investor subjectivities in the context of growing fintech use. Proper investor education that addresses the role of investing apps in promoting certain financial subjectivities, which may be detrimental to one’s financial interests, is crucial to help retail investors recognize and understand the benefits and pitfalls of fintech investing. Highlighting

potential risks such as crowdsourced financial advice and gamified elements, which may lead some users to downplay the financial consequences of speculating and excessive risk-taking, is important to protect investors and foster healthy investing habits.

This study was conducted among Singaporean retail investors, and thus the findings may not be generalizable to investors from other countries. Despite this, the findings speak to the importance of adopting a cultural economic approach in studying the financialization of the everyday. Such an approach contributes empirically rich insights into the ways the further financialization of users unfolds under fintech. By surveying fintech users directly to better understand their various engagements with app-based finance, future research can examine how financial subjectivities may be reconfigured through the usage of fintech apps in other domains, such as in banking and insurance. This can help to further interrogate financialization in a growing technological milieu, where the increasingly digital mediation of financial services is achieving ‘what money has always ‘desired’ – ubiquity, immateriality, infinite accessibility and instantaneity’ (Tiessen, 2015: 869).

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## Notes

1. In this article, fintech investors refer to lay investors who use fintech platforms to manage their investments, not to investors of fintech startups.
2. Out of the 18 interviewees, two had no experience with using fintech investing apps. In these two cases, the interview focused more on why they preferred to use traditional brokerages rather than fintech-based ones.

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