

Gamification in Retail Investing: Opportunities and Risks

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Abstract

The fast increase in the number of digital trading platforms has significantly changed the situation with retail investing in India, and gamification has become one of the notable tactics aimed at investing in India. Rewards, leaderboard, notifications, interactive interfaces and other features are becoming common in brokerage applications to make participation and trading active. This paper will examine the opportunities and threats of gamification in retail investing and specifically discuss the aspects of investor engagement, decision behaviour, financial literacy, and risk-taking behaviour. The study will use descriptive analysis, ANOVA and chi square test to examine the effects of gamified investment platforms based on primary data collected on 340 retail investors in Tamil Nadu through a structured questionnaire. The findings show that younger and less affluent investors are more sensitive to gamification features and hence, increased frequency of participation and increased risk tolerance. However, the results also indicate that gamification fails to enhance significantly in the long-term achievement of financial goals and financial literacy that is profound. Besides, psychological elements, such as overconfidence, risk perception, and emotional reactions, also remain a source of impact on investment choice in gamified environments. To summarize, gamification is an effective way to enhance engagement and short-term participation, but the responsible design approach and investing practices should be introduced to prevent the overrisking process and ensure sustainable financial prosperity.

Keywords: Gamification; Retail Investing; Investor Behavior; Risk Tolerance; Emotional Intelligence; Financial Decision-Making

1. Introduction

Developing countries such as India, China and Japan are providing various trading platforms for many manufacturing companies, services industries, from all over the world. Many Indians are the famous buyers and sellers in international market, thus have created competitive situation in all the field to understand their customers to fulfil their needs, also to attract their new customers, to continuously increase their sales and profit of the organization, in this regard, as we know very well BSE such a very old stock exchange in Asia, India holds great strength in any of industries, sectors, that attract investments from both FII and DII, in recent days retail investors have started to participate in stock market actively, user friendly applications, digital platforms, easy methods of exchanging transactions boosting up their active participation, in this context in India, we have nearly 140 stock broking services, among 118 are having actively participating clients. Majorly these broking services provide a platform to invest in all kind of financial investment products which are approved under BSE and NSE, these stock broking services are being surveillance by SEBI. As it mentioned earlier, nearly 6.5% of population actively participating in stock market, this stock broking company's growth purely depends on trade volume, no. of trades is being done by the investors each day. In view of employees are being forced to induce, emphasis, counsel their customers to participate in market, to complete their day-to-day target, sometimes, that pressure commits many loses to investors, on the other side Many investors are ideally having their fund in their account for long days, due to lack of market knowledge, and risk aversion made them keep idle, in these

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situation, digital platforms are highly bridging the gap between broking company's target and investors awareness. In India more than 400 million people are actively using smartphones. Majorly many stock broking services have released their own application, gateway to accessing any of financial product digitally, user friendly features, options, making the buying and selling of scripts very easily, also daily market updates, notifications provide some insights to the investors about the current scenario in stock market. Considering that the issues of financial well-being are becoming more and more concerned, and the popularity of smartphones and mobile game apps are growing, the scientists have already undertaken the research on the use of gamification principles in the financial sector. Although the principles of gamification have already found application in creating mobile apps based on consumer finances, like Acorn, Digits, and Stash, scholarly investigations have just started to investigate which attributes a game contains or does not contain, like game features or incentives, are best suited to motivate people to save, and whether the use of such financial gaming applications can positively influence the financial well-being. Specifically, in what ways financial expertise, which may be related to financial decision-making or financial application proficiency, influences the motivation of consumers to use these apps and thus save more money is not clear. The paper will review the literature on the topic of financial well-being and the role of consumer expertise in terms of experience with mobile financial applications, outline the existing literature on game-based learning and/or finance, and deliver the results of our study on how mobile banking and money-saving applications can change financial well-being and preferences to the game-based features. The paper ends with the discussion of the future research that may expand the scope of this work and investigate the intervention of gamification to enhance the financial well-being and to enhance the motivation to save (Bayuk & Altobello, 2019).

2. Literature Review

The state that addition of badges, leader boards, and rewards in a game can influence the user interaction and cooperation with financial targets. All these characteristics ensure that financial management is interesting and enjoyable, which leads to better financial behavior and a higher retention rate(Chen et al., 2024). revealed that the use of education-based games and simulations in financial applications can aid in understanding intricate financial concepts is easier. These skills will not only help enhance skills related to finance, but also assist in making well-informed elapsed investment choices(Wong et al., 2022). The ability of gamification to reach intrinsic motivations and positive reinforcements was analysed in terms of the presence of features of this method, including progress tracking and level of achievement. The findings demonstrate that the hypothesis that the involvement of intrinsic factors can help to achieve long-term engagement and active financial planning was the right one. It also shows the analysis of how personalized difficulties and prompt feedback have contributed to the engagement and satisfaction. These examples in the industry show the effectiveness with which gamification can be employed in the different financial settings. Even though gamification proves to be very efficient in terms of usage in financial mobile applications, questions of addiction, behavioural patterns, and risk-taking still remain. These challenges can be handled in such a manner that it results in responsible app usage, for both developers and users(Pe et al., 2023).Gamified investment systems in retail investing have a great impact on investor emotional reactions and decision-making in times of uncertainty. The review evaluates the role of emotional intelligence in helping investors to control their emotions and risk management and minimize behavioral biases like overconfidence and loss aversion in gamified settings. It reveals the potential and the dangers of gamification and lays emphasis on the practice of responsible investing which is based on an emotionally intelligent interaction(Pathinettampadiyan & Thavaraj, 2025). It proposes that gamification in financial applications is considerably effective in meeting users, leaving scope for development in motivating the neutral ones as well as dealing with the complaints of those dissatisfied ones(Joshi, 2024). Impact of Risk Perception, Overconfidence Bias and Loss Aversion on Investment Decision-Making Manoj Kumar Chaudhary found that this research emphasizes and validate that investment behaviour is largely influenced by psychological processes like risk perception, overconfidence, and loss aversion(Chaudhary, 2025).

3. Methodology

Techniques Investors in Tamil Nadu are polled as part of the study's questionnaire survey procedure. A sample size of 340 respondents was obtained from the administration of 500 questionnaires, with a response rate of 68%. Non-probability convenience sampling was used as the sample technique, and a descriptive study design was chosen.

Objectives of the study

- To analyse which groups aged, for instance, based on income level and investment experience, are the most influenced by gamification
- To assess how gamified elements influence investors' financial decision on investment choices
- To explore whether gamification can help increase the frequency of investors engagement in financial platforms

- To explain whether gamified investment platforms improve investors' knowledge to evaluate and select the investment options.
- To check whether gamified investment features help to accelerate the risk tolerance level and risk-taking behaviour of investors
- To assess the effectiveness of gamified investment strategies to achieve the financial goals of investors to improve their financial outcome.

3.1. Purpose of the study

The study is essential to understanding how gamification affects investing behavior. It's crucial to recognize new gamification trends that appeal to and impact this group. To properly customize investing methods and gamification tactics, it is essential to comprehend their investment behavior. Furthermore, this study sheds light on whether gamified investing alters investors' risk tolerance and risk-taking behavior, as well as if it enhances their financial literacy and aids in reaching their financial objectives.

3.2. Hypothesis

- **Hypothesis 1:** Young investors who also under lower income being influenced by gamified features than experienced investors who are earn higher income.
- **Hypothesis 2:** Gamified applications and its elements play a major role in investors decision making process, also increase the frequency of informed investment choices.
- **Hypothesis 3:** Gamification features improve the investors' frequency of participation and contribution with financial platforms
- **Hypothesis 4:** Gamified investment platforms increase and educate the investors on the area of financial concepts, market volatility, financial literacy than traditional platform users
- **Hypothesis 5:** Gamified investment features encourage to increase the risk tolerance, risk taking behaviour among investors.
- **Hypothesis 6:** Gamified investment strategies are more effective and successful in helping to achieve the investors long term financial goals to ensure consistency in financial outcomes.

3.3. Data Analysis and Interpretation

3.3.1. Demographic Details

Table 1 Analysis of Age and Gender

	Age-Category	<25	26-35	36-45	<45	Total
Gender	Male	3%	25%	21%	7%	56%
	Female	1%	26%	15%	2%	44%
	Total	4%	51%	36%	9%	100%

Table 2 Cluster analysis of Occupation and Income

Annual Income	<2 lakhs	2-5	5-10	<20 Lakhs	Total
Student	3%				3%
Self-employed	0%	5%	11%	07%	23
Private Services	1%	3%	9%	10%	23%
Professional	0%	0%	2%	20%	22%
Homemaker	9%	2%	0%	0%	11%
Government	0%	3%	7%	8%	18%
Total	13%	13%	29%	45%	100%

Table 3 Education Level

Education	Level	Male	Female	Total
	Below 12 th	5%	7%	12%
	UG Degree	25%	38%	63%
	PG and Above	12%	13%	25%
	Total	47%	58%	100%

3.4. Hypothesis Results

Table 4 Hypothesis Results

Hypothesis	Statistical Test	p-value	Df	Outcome
Young investors who also under lower income being influenced by gamified features than experienced investors who are earn higher income.	Two-way ANOVA	0.03	0.05	Lower-level income earn young investors are being influenced by gamified features
Gamified applications and its elements play a major role in investors decision making process, also increase the frequency of informed investment choices.	Chi square	0.153	0.05	Investors decision making process and their investment selection is not influenced by gamified features
Gamification features improve the investors' frequency of participation and contribution with financial platforms	One way Anova	0.00	0.05	Gamification features significantly improve the investors' participation and contribution frequency with financial platforms.
Gamified investment platforms increase and educate the investors on the area of financial concepts, market volatility, financial literacy than traditional platform users	Chi square	0.07	0.05	Investors are unable to improve their financial literacy, Market volatility, risk understanding in gamified features.
Gamified investment features encourage to increase the risk tolerance, risk taking behaviour among investors	Chi square	0.00	0.05	Gamified investment features significantly increase the level of risk tolerance, and significant risk-taking behaviour among investors.
Gamified investment strategies are more effective and successful in helping to achieve the investors long term financial goals to ensure consistency in financial outcomes.	Chi square	0.41	0.05	Gamified investment strategies are not helping to achieve investors long term financial goals and aren't ensure considerable returns for long terms.

4. Findings and Implications

4.1. Gamification and Investor Engagement

In this research study researcher found that young investors (Below age of 35) who are earn low level(Below 10 lacs) are being influenced by the gamification features, also they are actively participating in the trade their usage hours of application also has increased as we found in the study of **Rajsee J. (2024, suggesting** that effective gamification features and online platforms increased the frequency of investors participation and interactions.

4.2. Driving Force and Risk Management

In this research, significantly gamification features act as a driving force of investors active participation and also increasing the trading hours, at the same time significantly investors have increased their risk tolerance level, also ready to learn and manage risk at the maximum level to safeguard their investments, even they are ready to accept hedging option to managing their risk.

4.3. Effective Financial Decision Making and Financial Knowledge

This statistical reports show that online platforms, gamified elements giving a notification of various information, news, data about market, economy, political news. Through that investors are able to improve their market knowledge, product knowledge, trading strategies, techniques to manage their risk and to improve trading discipline to avoid uncertainties, unnecessary losses.

4.4. Comparison with Traditional Investment plans and Strategies

This study shows that gamified investment strategies do not support achieving investors' long-term financial goals and commitments. Participation and involvement alone may not be helpful to achieve financial goals in the future, even in the previous study (Baker et al., 2019). Clearly stated that traditional investment plans and strategies focus on fundamental and technical knowledge of market and investments are highly needed to all the investors who want to play safely in the long run. Gamification can attracts the users, but without depth financial knowledge, effective investment strategies, portfolio management, may lead to take high risk.

5. Conclusion

It is concluded that gamification options, features increase the engagement and risk tolerance level of investors, also helping to know various kinds of investments options and give offers to some of the scripts to engage them for a long time. After the discussion with the young investors, researcher has found that financial literary, planning, financial decision-making skill, hedging knowledge, are very essential to stay back in the market, here gamified investment strategies, never care about future financial goal of the investors. Financial discipline, financial knowledge, market knowledge, regulation procedures, are have given a prioritise in the past period and traditional investment plans. If the investor wants to make a success on any kind of, investment, has to undergone and have a clear understanding of Market knowledge and financial decision-making skills, to stay back in the market, which is always referred by traditional investment strategies.

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