

Has anxiety, overconfidence and gambling affected the retail investor's trading activity in India?

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Abstract

Keywords

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retail investors.

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G3, G4, M5.

The primary focus of the study was to identify the impact of Anxiety, Overconfidence, and gambling on retail investors in India. Data were collected through a questionnaire Survey using convenience sampling and distributed across the country. The collected samples were evaluated using the Mann-Whitney test and the Kruskal-Wallis test. The findings indicated that most of the respondents are overconfident on their investment in the equity market in addition to having less prone to gambling, and anxiety. It was also found that the male respondents were more overconfident than the female respondents. Majority of the respondents are new investors having started investing during the Covid-19 pandemic or in the last three years. Future researchers could investigate the reason behind finding no effect of gambling and anxiety in investors during the Covid-19 era.

1. Introduction

Retail investors' investments gained massive attention during the covid-19 pandemic. The number of resources, the size of investment they make, the accessibility to research, and the ability to procure professional advice are how retail investors differ from Institutional investors (Bhattacharya et al., 2012). Typically, they use fundamental analysis, technical analysis, and judgment in investment analysis. Decision tools are frequently used to support investment decisions. Presumably, the information structure

of the market and market variables have a systematic impact on retail investors' investment choices and market outcomes (Paisarn, W., Chancharat, N., & Chancharat, S., 2021). Investor market behavior theories explain the capital market's various activities using psychological decision-making principles (Jagongo & Mutswenje, 2014). Multiple studies have shown that investors are not always rational, neither markets are always efficient, and that prices diverge dramatically from underlying values (Tekçe, Yılmaz, & Bildik, 2016).

In the 1980s, behavioral economics officially rose to its prominence. Limits to arbitrage, which contends that sensible traders may find it difficult to undo the damage done by the irrational traders, and psychological factors influencing the capital market activities can be expected (Barberis & Thaler, 2003). Experimental psychology has primarily contributed to behavioral finance. It combines concepts from classical economics, finance, and psychological theories and attempts to offer fresh perspectives on conventional financial theories (Huang, Shieh, & Kao, 2016).

Since retail investors' financial attitudes must be considered, it is crucial to assess their attitudes (Grable and Lytton; 1998), together with their financial practices and expertise (Joo and Grable, 2004), which may impact the financial security of the investors (Falahati et al., 2012). Many researchers are found to be interested in understanding the financial attitudes of retail investors, especially after the covid-19 pandemic. Hence, this study focuses on understanding the impact of financial attitudes like anxiety, overconfidence, and gambling on retail investors' investment decisions. Investors might become overconfident and make poor investment decisions like excessive trading due to the free, open source and easily available information that reinforce their beliefs about investing (Barber, and Odean 2001, 2002, Graham et. al., 2009). Such actions would result in less thoughtful investment decisions (Park, J., Konana, P., & Gu, B., 2010). In particular, it has been suggested that investment avoidance behavior may be motivated by financial stress. Gambetti, and Giusberti (2012), for instance, noted that investment avoidance behavior might be motivated by financial anxiety. These traits, in a way, may impact the investors' financial decisions. Along with these two financial attitudes, this research also covers the impact of gambling on these investors. The decision to choose these three financial attitudes was primarily based on the research done by Manish Talwar et al. (2021). Hence, the objective of this study is to address the following research questions; have anxiety, overconfidence, and gambling affected the retail investors' trading activities? Additionally, the

authors have tried to find if demographic attributes like age, educational qualification, gender, and annual income of family influenced the different financial attitudes of retail investors.

The reminder of the paper is structured as follows: Section 2- Review of literature, Section 3- Data Collection and Analysis, Section 4- Results and Discussion, and Section 5- Conclusion and future scope of study.

2. Review of Literature

This section describes the critical information gathered by reviewing various articles for this research.

A study conducted by Manish Talwar et al. (2021) has concluded that most financial markets fell precipitously due to the panic that followed the COVID-19 outbreak, with some falling by as much as 10% in a single day. Vishnoi and Mookerjee, 2020; Zhang et al., (2020) found that all variables have a positive relationship, with trading activities and Interest being the most powerful impact, followed by deliberative thinking. The variables considered in their study were financial anxiety, Optimism, Financial security, Deliberative thinking, Interest in financial issues, and need for precautionary savings. While Anthony Bellofatto et al. (2018) studied the association between personal financial literacy, as stated by investors, and trading behavior. They observed that investors with better financial literacy invest smarter irrespective of the socio-demographic variables. The variables considered were personal financial literacy, socio-demographic variables, and retail investors' behavior.

Wilaiporn Paisarn et al. (2021) found that behavior bias influences investors' decisions. Investors frequently exhibit biases, with men more likely than women. Overconfident, experienced investors are found to be less likely to hold stocks, and investors aging 45 years and above hold more diversified portfolios. Demographic factors significantly influence the

classification and differentiation of retail investors. Age, gender, experience with investing, trading behavior-holding period, and portfolio made up the study's variables. In his research, M. Kannadhasan (2015) found that because demographic factors distinguish and classify retail investors, practitioners should consider using them in the future. The variables used in the study were gender, age, marital status, occupation, education, and income. Six demographic factors were examined, and four were found to be helpful. The author advises future research to determine whether other variables, such as sensation seeking, personality type, herding, overconfidence, race, expectations, financial literacy, family background, culture, and birth order, affect investors.

Shalini Talwar et al. (2021) discovered that the majority of biases observed at the onset of the pandemic persist with its advancement, which was not manifested exclusively under the panic created by the crisis. Instead, they are imprinted in the minds of millennial investors. The variables used in the study were overconfidence and self attribution, over optimism, hindsight, representativeness, anchoring, loss aversion, mental accounting, herding on the trading activity, and recommendation Intentions. They also found that herding, hindsight, overconfidence, self attribution representativeness, and anchoring influence trading activity and recommendation intentions. Loss aversion and mental accounting only influences recommendation intention. They further suggested extending their research by including the influence of gender and other demographic variables of behavioral biases of millennials, like moods and cognitive dissonance. PH, H. Rishad (2020) observed that if investors exhibit bearish behavior about the market generates more returns, their increased optimism leads them to invest even more as a result of speculative activity. The authors also discovered a connection between investor sentiment, market volatility, and macroeconomic variables. Investors believe the market is inefficient, according to the research. The findings show that there is room for arbitration in the Indian market,

refuting the theory of efficient market volatility in India.

Gurbaxani A and Gupte R. (2021) found that during covid-19, retail investor behavior found a significant correlation between personal income and the steps taken to stop the spread of COVID19 (like lockdowns and restrictions). The selected variables for study were the type of scheme, mutual fund units, the level of investor uncertainty, the source of data on unit market value, the investor's perspective on factors affecting mutual fund investment, the level of contentment concerning various motivating factors, understanding of mutual fund plans, the type of plan they holds, understanding of risk category, and issues faced by mutual fund investors. These preventative measures have directly impacted the behavior of saving and investing. Investors today appear less willing to take risks and favor relatively safe investment options that provide moderate returns with low risk.

Anxiety: Kiruba, A. Vasantha, V. (2021) claims through his study that during the COVID-19 epidemic, investors' decisions were influenced by the behavioral response to fear, risk perception, herding, and vaccine updates. It also reveals that investors' risk aversion and worry over market volatility have little effect on their behavior.

Gambling: Ruben Cox et al. (2018) surveyed Dutch retail investors, and discovered that 4.4% of them fall under the category of financial market compulsive gamblers. Another 3.6 percent of individuals meet the criteria for problem gambling, a milder form of gambling disorder. Investors with compulsive gambling symptoms trade stocks frequently, engage in day trading and invest in derivatives and leveraged products, all of which indicate an aggressive and speculative trading style.

Overconfidence: H. Kent Baker et al. (2018) found that overconfidence and self-attribution, the disposition effect, anchoring bias, representativeness, mental accounting, emotional biases, and herding were discovered among Indian investors. Furthermore, financial literacy is

positively connected to mental accounting bias, negatively related to the disposition effect and herding bias, and not significantly related to overconfidence and emotional biases. Age, occupation, and investment experience are the most important demographic characteristics related to the behavioral biases of individual investors in the sample. Regarding gender, males are more self-assured about their stock market knowledge than women.

It is found that numerous studies were conducted to examine how the factors selected for this study affects retail investors. Further, Manish Talwar et al. (2021) was found to address the impact of anxiety on retail investors but ignored the factors like overconfidence and gambling on retail investors, especially on investors who started investing during the COVID 19. Therefore, this research fills the void by choosing factors as mentioned.

3. Research Methodology

The Primary data for the research have been collected using a survey- based questionnaire. The questions were prepared by referring to the base papers; Manish Talwar, et.al. (2021), Ruben Cox, et.al (2018), and H. Kent Baker, et.al (2018).

A questionnaire was prepared with the variables: demographic profile, anxiety, overconfidence and gambling. A pilot study was conducted to determine the reliability of the questionnaire on 30 samples. Cronbach Alpha test is used to determine the reliability of the Questionnaire. Based on the reliability test output, the Questionnaire was reframed. Therefore, the authors have removed one question under anxiety, overconfidence, and gambling as they were showing less reliability value (less than .7). When the items having less reliability values were excluded from the Questionnaire, all variables' reliability values increased (more than .7).

The final Questionnaire was framed, and a total of 281 samples were collected. The Questionnaire was distributed through various social media handles like LinkedIn, Facebook, and Instagram, and in person. Time spent for data collection was from March to July, 2022.

Kolmogorov-Smirnov Test was conducted to check the normality of the samples. Mann-Whitney was used to analyze the relationship between gender and the main variables. Kruskal-Wallis was used to understand the effect on the variables with age, educational qualification, and family income. A clear conclusion was only identified in the case of gender and age, which were further analyzed from the test results.

4. Data Analysis

The Cronbach alpha value is used for reliability on the finalized questionnaire and it was therefore observed as follows:

I: Demographic Profile, Manish Talwar, et.al. (2021):

1. Gender
2. Age
3. The annual income of the family
4. Highest education qualification you have
5. Have you ever made an investment
6. If yes, how long have you been investing?
7. What kind of investment will you prefer?
8. What influenced your decision to invest?
9. How long is your preferred duration of investment?
10. In the last 24 months, how much amount have you invested?
11. Did you change your investment strategies after covid-19?
12. If yes, what was the major change you made?
13. If you hold shares of a company, what would you do if the share price decline?

II: Main variables (Table 2):

14.Anxiety (Cronbach Alpha= 0.766), Manish Talwar, et.al. (2021)

15.Overconfidence (Cronbach Alpha=0.685), Ruben Cox, et.al (2018)

16.Gambling (Cronbach Alpha= 0.757), H. Kent Baker, et.al (2018)

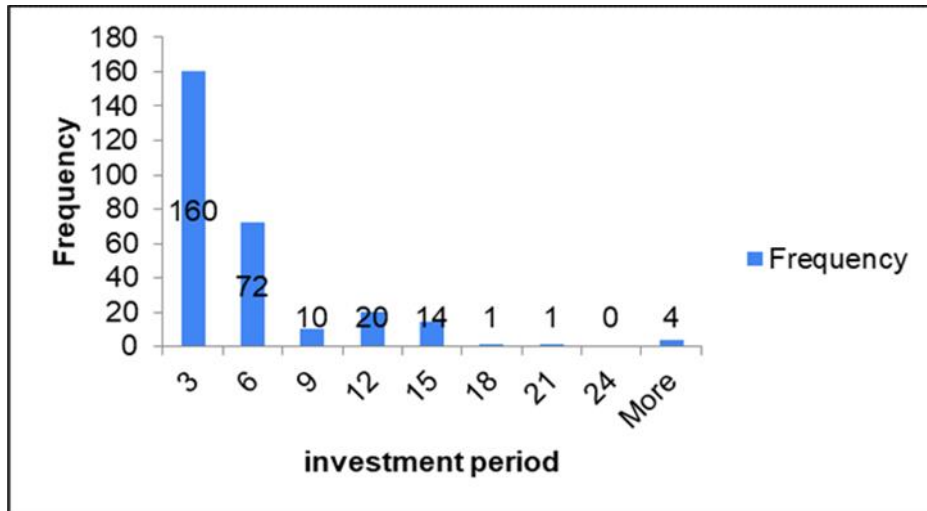
Kolmogorov-Smirnov Test (Table 1) shows that none of the variables are normally distributed.

Table 1: Test for Normality

Variables	Kolmogorov-Smirnov	Shapiro-Wilk
Gambling	0	0
Anxiety	0	0
Overconfidence	0	0

Source: Primary data

Figure 1: How long have you been Investing?



Source: Primary data

Out of the 281 respondents (Figure 1) collected, it is found that the majority (160 respondents) of them started investing in the last 3 years and only

few (around 4 respondents) have been investing for more than 24 years.

Table 2: Mann-Whitney Test (Gender vs Variables)

Questions	Asymp. Sig. (2-tailed)
You trade financial products with larger amounts of money to maintain the excitement	0.875
You trade more in order to win back your previous losses.	0.504
You become irritated when trying to reduce or quit trading financial products.	0.637
You tried to reduce trading financial products, or to quit altogether, but you could not	0.209
I feel that difficulties are piling up so I cannot overcome them	0.699
I worry too much over something that doesn't matter	0.182
I take disappointments so keenly that I can't put them out of my mind	0.461
I feel that on average my investment performs better than the stock market	0.395
I believe that my investment will return a profit.	0.041
My past profitable investments were mainly due to my specific investment skill	0.036

Source: Primary data

Table 3: Mann-Whitney Test (Gender vs Overconfidence)

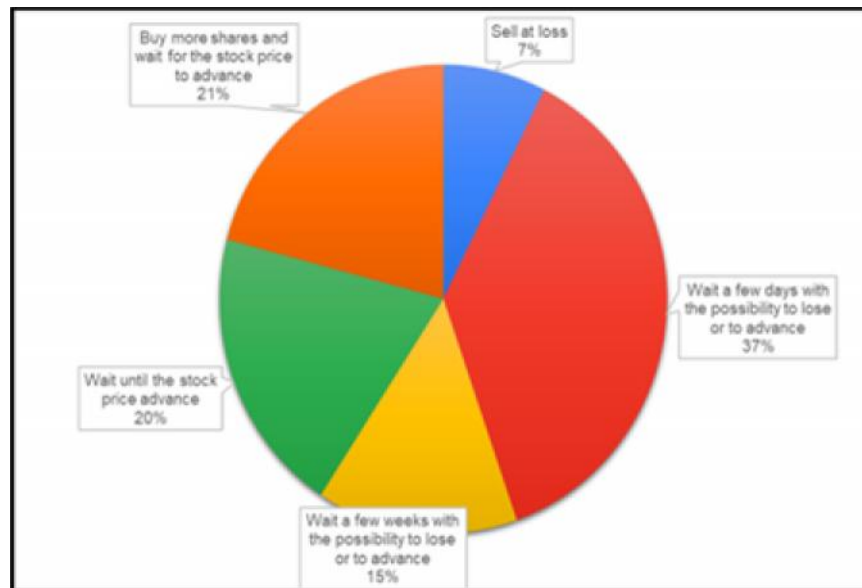
Questions	Gender	Mean Rank
I feel that on average my investment performs better than the stock market	Male	143.81
	Female	136.22
I believe that my investment will return a profit.	Male	134.84
	Female	151.49
My past profitable investments were mainly due to my specific investment skill	Male	133.93
	Female	153.03

Source: Primary data

From the Mann-Whitney (Table 2&3) test on gender and variables it is observed that the null hypothesis (No significant difference between the given group.) is rejected only in case of overconfidence as the sigma value for the questions of the variable is less than 0.05. As the

mean rank for the male are higher it can be interpreted that in the sample the male respondents are more overconfident about their stock returning a higher return whereas anxiety and gambling impact the same way irrespective of the gender.

Figure 2: If you hold shares of a company, what would you do if the share price decline?



Source: Primary data

Kruskal-Wallis test gives out an interesting observation as the age, education and annual income of the respondents are influenced by anxiety, and gambling financial behaviors when investing. Whereas irrespective of the demographic variables; overconfidence has the

same effect on the respondents as the sigma value for these are more than 0.05. People with postgraduate degrees have disagreed that they are anxious and are doing gambling. Majority of the respondents projected to wait for a week before selling a stock with declining prices (Figure 2).

Table 4: Kruskal-Wallis Test (Age vs Variables)

Questions	Asymp. Sig. (2-tailed)
You trade financial products with larger amounts of money to maintain the excitement	0
You trade more in order to win back your previous losses.	0
You become irritated when trying to reduce or quit trading financial products.	0
You tried to reduce trading financial products, or to quit altogether, but you could not	0
I feel that difficulties are piling up so I cannot overcome them	0
I worry too much over something that doesn't matter	0
I take disappointments so keenly that I can't put them out of my mind	0
I feel that on average my investment performs better than the stock market	0
I believe that my investment will return a profit.	0.136
My past profitable investments were mainly due to my specific investment skill	0.076

Source: Primary data

Table 5: Kruskal-Wallis Test (Age vs Gambling and Anexity)

	Age	Mean Rank
Anxiety	20-30	113.75
	30-40	104.73
	40-50	184.39
	50-60	175.32
	More than 60	175.94
Gambling	20-30	116.54
	30-40	102.69
	40-50	175.25
	50-60	189.23
	More than 60	163.84

Source: Primary data

With the above Tables (Table 4, Table 5), it has found that the respondents who are in the age bracket above 40 years (40-50, 50-60 and more than 60 years old) feels they are less likely to get anxiety when investing. It is the opposite for the respondents who are in the age group between 30-40 years. Similarly, this trend is observed in the case of gambling.

5. Conclusion and Limitation

Analyzing the investment behavior of the retail investors is taken as a focus of this study and a series of tests were conducted on the data collected through primary data. It is observed that the respondents are overconfident about their

investments, irrespective of different demographic factors. Around 69 percent of the respondents have invested in FD and 50 percent in equity. The lesser risk and assured return of the Fixed Deposit could explain the overconfidence of the respondent. It may be the reason why anxiety is showing no effect on the retail investor's behavior. Due to which respondents have also shown the characteristics of being able to wait before short selling during the falling asset prices. Another exciting factor is that majority of the respondents(56 percent) started investing within the last three years, and around 79 percent responded that they did not change their

investment strategy during the covid-19 pandemic. It may be due to having more time in hand due to social boundaries followed during Covid-19 pandemic time. Such investment strategy furthermore supports overconfidence factor. It is also observed that Male respondents are more confident about their investment than female respondents.

Future researchers could investigate the reason behind finding no effect of gambling and anxiety in investors during the Covid-19 era and if it was the same with investors who have invested for more than 3 years.

Author's Contribution:

Retail investor is a topic that has garnered attention especially in this digital era where trading can be done with a tip of one's fingertip. Recent papers of Manish Talwar et. al. (2021) on Anxiety in addition to Ruben Cox et. al. (2018) work on Overconfidence, and H. Kent Baker et. al. (2018) on Gambling have discussed part of the topic that are addressed in this paper. The authors believe that retail investors are motivated to trade by more than one of those mentioned factors. Coincidentally, the respondents in this study are accidentally found to be new in trading and the study result revealed that they are overconfident especially the male respondents comparing to the female respondents but both are found to be less prone to gambling and anxiety. It may be due to majority of them being new investors having started investing during the Covid-19 pandemic time or in the last three years and has all the time due to Covid induced lockdown and social boundaries followed. Future researchers could investigate the reason behind finding no effect of gambling and anxiety in investors during the Covid-19 era and if it was the same with investors who have invested for more than 3 years.

Conflict of Interest:

There is no conflict of interest.

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