A Study on Human Behavior Impacts Investment Losses and the Role of Options Trading

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Abstract*: This research paper explores the intricate relationship between human behavior and investment losses, with a particular focus on the role of options trading in shaping investor decisions and outcomes. By employing a comprehensive analysis of historical data and behavioral economics theories, this study sheds light on the psychological biases and emotional factors that often lead investors to make suboptimal choices, resulting in significant financial losses. It also investigates how options trading, with its unique risk management strategies and speculative opportunities, affects investor behavior and the potential mitigation of losses. The findings of this research provide valuable insights for investors, financial advisors, and policymakers, offering a deeper understanding of how human behavior influences investment outcomes and how options trading can be utilized as a tool to manage risk and optimize investment portfolios.*

Keywords: Options Trading, Risk Management, Investor Decisions, Investment Behavior, Losses

I. INTRODUCTION

In the world of finance, understanding how human behavior impacts investment outcomes is of paramount importance. People often invest with high hopes of making money, but sometimes, their own behaviors and emotions can lead to significant losses. One facet of investment that has gained prominence is options trading. Options provide a unique way to speculate on the price movements of stocks, indices, or commodities. However, the dynamic and complex nature of options trading makes it especially susceptible to the influence of human behavior. This research delves into the interplay between human psychology, investment losses, and options trading, aiming to shed light on the reasons behind these losses and how they can be avoided.

How People Make Losses in Option Trading and How to Avoid Them:

When it comes to option trading, one common way people incur losses is through impulsive decisions driven by fear and greed. The allure of high potential returns can sometimes blind investors to the risks involved. They might engage in excessive speculation, purchasing options without a clear strategy, and often with insufficient knowledge. In their rush to size profit opportunities, they might neglect risk management.

To avoid losses in option trading, it's crucial to start with education. Understanding the intricacies of options, such as calls and puts, and their associated risks is paramount. Developing a well-thought-out trading plan that includes entry and exit points can help mitigate impulsivity. Additionally, employing stop-loss orders can limit potential losses and protect your investments. Furthermore, diversifying your portfolio can spread risk and reduce the impact of a single bad trade.

Finally, managing emotions is essential. Fear and greed are powerful motivators, but they can also be destructive. Staying disciplined and not letting emotions drive trading decisions is a key component of successful options trading. By keeping a level head, staying informed, and sticking to a well-structured plan, individuals can significantly reduce the likelihood of experiencing substantial losses in the world of options trading.

II. REVIEW OF LITERATURE

Prof. Shalini H.S. , Dr. R. Duraipandian (2014), elaborated financial engineering is one of the basic of our financial system, which is the life blood of efficient and responsive capital and derivative markets. Financial engineering is

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defined as: design, development, implementation, tools and innovative financial mechanisms, and drafting for creative solutions to the funding problems. In order to consider it successful, it should lead either to reduce transaction costs or to provide improved service lead in sum to fill the special needs of all participants in the financial system. In this context though option trading strategies help the investors in order to manage their price risk they are not efficient in reducing the cost because buying option contracts involves premium, in which if the option is not exercised then the holder will incur purchase cost.

Shivprasad S P, Geetha E., (2022), discussed that compared payoffs of option hedging strategies and identified mean differences between the groups are equal or not equal. The study results found that the payoff of the covered call strategy has significant mean differences with covered put and collar strategies, whereas the payoff of the synthetic long call strategy has no statistically significant mean differences with other strategies. Hence, the study establishes a benchmark to help retail investors choose a better hedging strategy and employ it in their trading, specific to the market condition.

III. RESEARCH METHODOLOGY

The present study is exploratory in nature and uses technique of secondary research for the same. Thus, the study use primarily based on secondary data collected from various sources viz. books, journals and internet.

A. Common Reasons for Losses in Option Trading:

People can incur losses in option trading due to various factors and behaviors. Here are some common ways in which individuals can make losses in option trading:

Lack of Knowledge and Understanding: Insufficient knowledge about options and how they work is a primary reason for losses. Without a clear understanding of the mechanics and risks involved, traders may make uninformed decisions.

Speculative Trading: Some individuals engage in options trading with a speculative mind-set, hoping to make quick profits. They may purchase options without a well-thought-out strategy or sufficient research, which can result in losses.

Overleveraging: Options provide leverage, which can amplify gains but also magnify losses. Overleveraging occurs when traders take excessively large positions relative to their account size. When the market moves against them, the losses can be substantial.

Failure to Use Risk Management Strategies: Not implementing risk management tools, such as stop-loss orders or hedging strategies, can leave traders vulnerable to significant losses when a trade goes south.

Ignoring Market Analysis: Successful options trading often requires a solid understanding of technical and fundamental analysis. Neglecting market analysis can lead to poor trade decisions and losses.

Emotional Trading: Emotions like fear and greed can cloud judgment and lead to impulsive trading decisions. Emotional traders may exit profitable positions too early or hold onto losing trades in the hope of a turnaround.

Lack of Diversification: Putting all of one's resources into a single options trade or a small group of trades can be risky. A single adverse move in the underlying asset can result in substantial losses. Diversification is key to spreading risk.

Neglecting Time Decay: Options have a time component called "time decay." Holding onto options for too long without considering this factor can erode their value, leading to losses even if the underlying asset remains stable.

Ignoring Volatility: Volatility can significantly impact options prices. Failing to account for or understand volatility can lead to unexpected losses.

Chasing High-Risk Strategies: Some traders are attracted to high-risk, high-reward strategies such as naked options or complex spreads. While these strategies have their place, they can lead to substantial losses if not managed properly.

To avoid losses in option trading, it's essential to educate oneself about options, develop a clear trading strategy, implement risk management measures, and exercise discipline. Additionally, staying informed about market conditions and keeping emotions in check are crucial for long-term success in options trading.

B. Zerodha Report

At Zerodha, normally on the end of day positions

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~80% of all open buy option positions are in a loss.
~25% of all open short option positions are in a loss.
Highlighting how significantly more losses are incurred by option buyers as compared to those writing options due to higher leverage or risk. The reason for this is also because most people shorting options, either naked or part of a strategy, typically normally think of it as a longer-term trade. In contrast, most people who end up holding buy option positions are typically those who entered the trade for intraday but decided to keep it overnight to avoid booking a loss.

C. SEBI Report

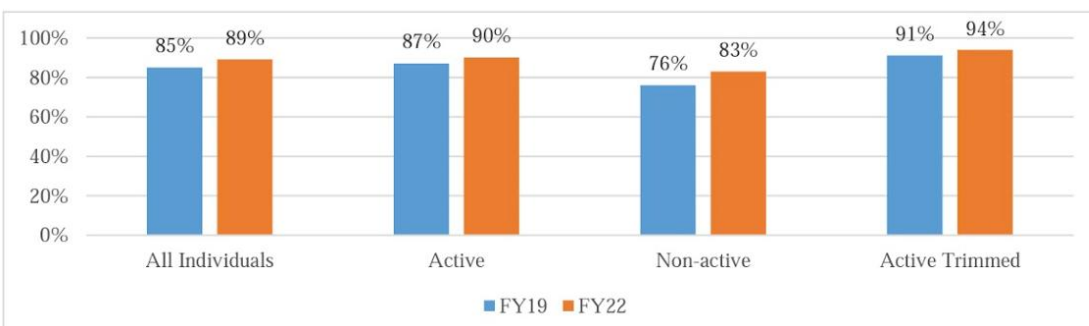
SEBI today published a report analysing profit and loss of individual traders dealing in the equity futures and options segment. The report analyses P&L of individual investors for the FY19 and FY22 periods. The periods of study have been selected keeping in view the influx of individual investors in the last three years, so as to comparatively analyse the trends before and after Covid-19 outbreak.
Some key highlights from the report;

Table A.1.1: Individual Traders' Participation in Equity F&O Segment

	All Individual Traders		Active Individual Traders		Non-active Individual Traders		Active Trimmed Individual Traders	
	FY19	FY22	FY19	FY22	FY19	FY22	FY19	FY22
Total number of individual traders (sample)	7,06,757	45,24,841	6,17,652	39,76,419	89,105	5,48,422	5,55,886	35,78,777
% of total	100%	100%	87%	88%	13%	12%	79%	79%
% of Loss makers during the year	85%	89%	87%	90%	76%	83%	91%	94%
% of Profit makers during the year	15%	11%	13%	10%	24%	17%	9%	6%

Note:
Active Individual traders: Individual traders who traded in equity F&O segment more than 5 times in a year
Active Trimmed distribution excludes outliers from the group of active individual traders i.e. trimming of top 5 and bottom 5 percentile from the P&L distribution of all active individual traders.

Chart A.1.1: Percentage of Loss Makers



Total number of unique individual traders who traded in equity F&O segment was 45.2 lakhs during FY22, up from 7.1 lakhs during FY19. An increase of over 500% in FY22 as compared to FY19, of which 88% were active traders.
89% individual traders (i.e. 9 out of 10 individual traders) in equity F&O segment incurred losses during FY22, up from 87% in FY19.
The percentage went up to 90% for active traders and further to 94% on excluding the outliers from active individual traders' group during FY22.

Table A.2.1: Summary Statistics of P&L of Individual Traders in Equity F&O Segment

	All Individual Traders		Active Individual Traders		Non-active Individual Traders	
	FY19	FY22	FY19	FY22	FY19	FY22
Average P&L	-1,26,909	-82,536	-1,44,194	-93,357	-7,096	-4,075
Median P&L	-21,644	-15,872	-30,577	-21,769	-1,117	-663
25 percentile P&L	-96,557	-66,373	-1,17,602	-80,221	-4,786	-2,909
% of individual traders made loss	85%	89%	87%	90%	76%	83%
% of individual traders made profit	15%	11%	13%	10%	24%	17%
Average profit made by profit makers	1,46,791	1,51,997	1,81,919	1,86,399	10,927	6,221
Average loss made by loss makers	-1,73,646	-1,11,216	-1,94,020	-1,24,528	-12,730	-6,217
Average net trading profit made by profit makers	1,75,332	1,78,702	2,17,674	2,19,308	11,570	6,641
Average net trading loss made by loss makers	-1,38,958	-90,512	-1,55,019	-1,01,260	-12,098	-5,737

Note: All Values are in Rs.

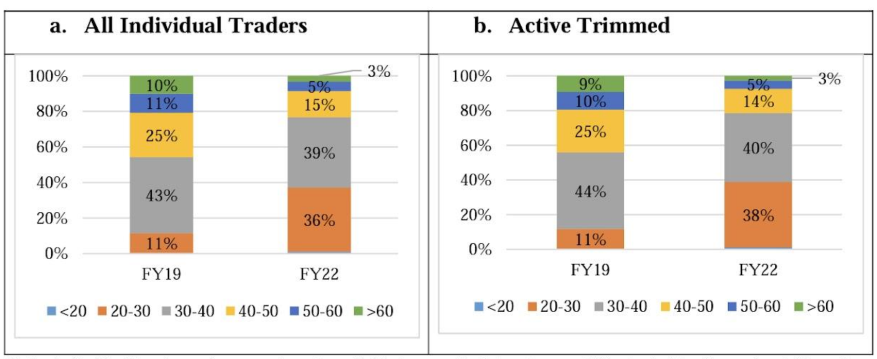
Individual traders in equity F&O segment incurred an average P&L of (-) Rs. 82,500 during FY22, down from average P&L of (-) Rs. 1.3 lakhs during FY19.

89% of the individual traders in equity F&O segment incurred losses, with an average loss by loss makers of Rs. 1.1 lakh during FY22.

Whereas, 90% of the active traders incurred losses with an average loss by loss makers at Rs. 1.25 lakh during the same period.

During FY22, 11% of individual traders in equity F&O segment made profit with an average profit of Rs. 1.5 lakhs. The percentage of profit makers declined marginally to 10% for active traders, though the average profit made by them went up to Rs. 1.9 lakh

Chart A.3.1.1: Age-group wise Client Participation



Note: Individual traders whose age is not available in sample dataset are not illustrated in above chart. Therefore, sum total of age-group wise percentage share may not add to 100 in some cases.

During FY22, individual traders belonging to age group 30-40 years had the highest share in participation (39%) across all age groups.

For younger individual traders (20-30 years), the percentage share of participation went up significantly from 11% during FY19 to 36% during FY22.

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Table A.3.1.1: Average P&L across age groups

Age groups	Average P&L	Average profit made by profit makers	Average loss realized by loss makers	Average P&L	Average profit made by profit makers	Average loss realized by loss makers
	FY19			FY22		
All Individual Traders						
<20	-4,11,964	11,26,282	-10,42,881	-9,257	4,91,825	-65,780
20-30	-59,835	60,453	-77,387	-48,741	58,283	-58,735
30-40	-95,261	85,819	-1,21,342	-93,702	1,07,378	-1,16,821
40-50	-1,50,382	1,62,157	-2,06,138	-1,21,895	2,06,558	-1,72,651
50-60	-2,08,134	1,81,194	-2,90,151	-1,20,892	2,99,920	-2,08,661
>60	-1,79,994	2,51,569	-2,88,478	-1,10,214	3,75,255	-2,44,970
Active Trimmed Distribution						
<20	-1,26,541	10,604	-1,46,716	-27,161	2,882	-28,864
20-30	-49,575	6,944	-55,278	-40,799	3,019	-43,266
30-40	-73,753	7,790	-81,197	-62,994	3,415	-66,780
40-50	-94,367	8,856	-1,04,778	-73,001	3,721	-77,795
50-60	-99,937	9,198	-1,12,310	-75,322	3,834	-81,301
>60	-1,02,662	9,593	-1,17,712	-82,397	4,124	-89,806

Note: Values are in Rs.

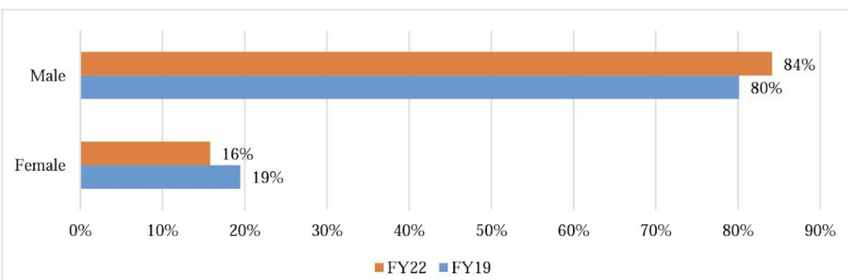
The share in profit by profit makers belonging to age group 20-40 years went up to 71% for active trimmed cohort as compared to 38% for all individual traders.

The individual traders belonging to age group 30-40 years accounted for the highest share (39%) in profit earned by all profit makers in FY22 (active trimmed).

The average profit earned by profit makers belonging to the youngest age group (with below 1% share in participation) was highest as compared to all other age groups during both FY19 and FY22.

During FY22, the average loss made by loss makers was significantly low for the younger group (<30 years) of individual traders, whereas for senior citizens, it was highest.

Chart A.3.2.1: Gender wise Client Participation (All Individual Traders)



The trading by individual traders in equity F&O segment were dominated by males (>80%) during both the years. The percentage share for male individual traders went up to 84% during FY22 from 80% in FY19.

Table A.3.2.1: Average P&L across gender group

Age groups	Average P&L	Average profit made by profit makers	Average loss realized by loss makers	Average P&L	Average profit made by profit makers	Average loss realized by loss makers
	FY19			FY22		
All Individual Traders						
Female	-1,24,186	1,62,524	-1,86,809	-79,480	1,88,196	-1,29,421
Male	-1,25,631	1,30,590	-1,66,330	-83,651	1,32,834	-1,07,594
Active Trimmed Distribution						
Female	-88,058	9,116	-99,882	-62,634	3,707	-67,673
Male	-79,863	8,107	-88,317	-55,688	3,284	-59,002

Note: Values are in Rs.

The average profit earned by female profit makers as well as average loss incurred by female loss makers were more than their male counterparts for both FY19 and FY22.

D. Strategies for Minimizing Losses in Option Trading:

To minimize or avoid losses in option trading, individuals should adopt a structured and disciplined approach. Here are some strategies and steps to help mitigate losses in option trading:

1. Education and Knowledge: Start by gaining a solid understanding of options and how they work. Invest time in learning about the various types of options, strategies, and the associated risks. Consider taking courses or reading books on options trading.
2. Clear Trading Plan: Develop a well-thought-out trading plan that includes entry and exit points, risk tolerance, and a strategy for each trade. Stick to your plan and avoid making impulsive decisions.
3. Risk Management: Implement risk management strategies to protect your capital. This may include setting stop-loss orders to limit potential losses, position sizing (not risking too much on a single trade), and using protective options strategies like spreads.
4. Diversification: Avoid putting all your capital into a single options trade or a small group of trades. Diversifying your options positions across various assets or strategies can help spread risk.
5. Technical and Fundamental Analysis: Use technical and fundamental analysis to make informed trading decisions. Analysing the underlying asset's performance, trends, and news can aid in predicting price movements.
6. Options Greeks: Understand and utilize options Greeks (Delta, Gamma, Theta, and Vega) to assess how options will react to changes in price, time, and volatility. This knowledge can help you make more informed choices.
7. Time Decay Awareness: Be conscious of time decay (Theta) and its effect on options. Avoid holding options for too long, especially if they are out of the money and rapidly losing value due to time decay.
8. Emotion Control: Keep emotions like fear and greed in check. Emotional trading decisions can lead to impulsive actions and losses. Stick to your trading plan and remain disciplined.
9. Continuous Learning: Stay up to date with the latest market developments and continuously improve your knowledge and skills in options trading. Learning from past mistakes is essential for growth.
10. Paper Trading: If you're new to options trading or trying out a new strategy, consider paper trading or using a demo account to practice without risking real capital.
11. Consulting Professionals: If you're unsure about your options trading decisions, consider consulting a financial advisor or an options expert who can provide guidance and advice.
12. Trade within Your Means: Only trade with funds you can afford to lose. Avoid using money earmarked for essential expenses or savings.

Remember that losses are a part of trading, and even experienced traders face setbacks. The key is to minimize losses, manage risk, and aim for consistency in your trading approach. Options trading can be a valuable tool for portfolio diversification and speculation, but it should be undertaken with caution and a solid understanding of the associated risks and strategies.

IV. FINDINGS

The findings of the research paper on "A Study on Human Behavior Impacts Investment Losses and the Role of Options Trading" indicate that human behavior significantly influences investment outcomes in options trading. Psychological biases, impulsive decision-making, and emotional trading are common contributors to losses in this domain. Insufficient knowledge and neglect of risk management also play a crucial role. However, the research underscores that losses can be mitigated through investor education, disciplined risk management, emotional control, and well-defined trading strategies. Learning from past mistakes and adapting trading approaches are key steps toward successful options trading. The study highlights the importance of a structured and informed approach to minimize losses and optimize investment outcomes in options trading.

V. SUGGESTIONS

A research paper exploring the profound influence of human behavior on investment losses within the context of options trading offers a significant opportunity to unravel the intricate web of psychological biases and emotions that lead investors to make costly mistakes. Investigating the interplay between financial decision-making, emotional responses, and the specific dynamics of options trading, this study could provide valuable insights for both seasoned and novice investors. By examining real-world data and behavioral economics theories, the paper can offer practical strategies to mitigate investment losses in the volatile realm of options trading, emphasizing risk management, education, and disciplined decision-making. This research has the potential to guide investors, financial advisors, and policymakers in developing strategies to optimize investment outcomes, reduce losses, and foster greater stability in financial markets.

VI. CONCLUSION

This research has provided valuable insights into the intricate relationship between human behavior, investment losses, and the role of options trading. It is evident that psychological biases, impulsive decision-making, and emotional responses play a significant role in shaping investor outcomes. Furthermore, options trading, with its unique risk management strategies and speculative potential, offers both opportunities and challenges. The key takeaway from this study is that through education, disciplined trading plans, risk management, and emotional control, investors can navigate the complex landscape of options trading with a greater potential for success. By understanding the influence of human behavior and adopting sound trading practices, investors can work towards minimizing losses and optimizing their investment portfolios in the dynamic world of financial markets.

REFERENCES

[1]. Smith, J. D. (2023). A Study on Human Behavior Impacts Investment Losses and the Role of Options Trading.
[2]. Prof. Shalini H.S. , Dr. R. Duraipandian (2014), Analysis of Option Trading Strategies as an Effective Financial Engineering Tool, The International Journal Of Engineering And Science (IJES), ISSN (e): 2319 – 1813 ISSN (p): 2319 – 1805.
[3]. Shivprasad S P, Geetha E., (2022), Are Options Trading Strategies Really Effective for Hedging in the Indian Derivatives Market?, Cogent Economics & Finance, Volume 10, Issue 1 (2022).
[4]. https://zerodha.com/z-connect/nudge/option-buying-the-riskiest-trade-out-there#:~:text=~80%25%20of%20all%20open%20buy,to%20higher%20leverage%20or%20risk.
[5]. https://tradingqna.com/t/highlights-from-sebis-report-analysing-p-l-of-individual-traders-in-equity-f-o-segment/142592/1