International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 10 Issue: 04 | April - 2026 SJIF Rating: 8.659 ISSN: 2582-3930

Investor Sentiment and Its Impact on Equity and Index Option Trading Strategies: A Study on the Role of Market Psychology in Financial Decision – Making

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ABSTRACT

This study examines the influence of investor sentiment on equity and index option trading strategies and its role in financial decision-making. Investor sentiment represents the collective psychological outlook, expectations, and emotional responses of investors toward financial markets. While traditional financial theories assume that investors behave rationally, behavioral finance suggests that psychological biases such as fear, greed, herd behavior, and overconfidence frequently influence investment decisions. These behavioral factors can significantly impact market movements, trading strategies, and derivative pricing.

The primary objective of this research is to analyze how investor sentiment affects trading behavior in equity and index options markets. The study focuses on identifying how traders respond to sentiment indicators such as market volatility, social media influence, and psychological biases while making trading decisions. Primary data for the study was collected through a structured questionnaire distributed among investors and traders with varying levels of financial knowledge and market experience.

The responses were analyzed using percentage analysis and descriptive interpretation to understand behavioral patterns in trading strategies. The findings indicate that investor sentiment plays a significant role in shaping option trading behavior, particularly during periods of high volatility and market uncertainty. Many traders adjust their strategies based on sentiment indicators such as the Volatility Index (VIX), put-call ratios, and market news. The study highlights the importance of integrating behavioral finance insights with traditional financial analysis to improve trading strategies and risk management.

INTRODUCTION

Financial markets are influenced not only by economic fundamentals but also by investor psychology. Traditional financial theories assume that investors behave rationally and that markets efficiently reflect available information. However, real-world market behavior often shows that emotions, perceptions, and expectations play an important role in investment decisions. This psychological influence on financial markets is commonly referred to as investor sentiment.

Investor sentiment represents the overall optimism or pessimism of investors toward financial markets. Changes in sentiment can affect trading behavior, demand and supply of securities, and market volatility. Behavioral finance explains that investors are often influenced by psychological biases such as overconfidence, herd behavior, and loss aversion, which may lead to irrational decision-making and temporary mispricing of financial assets.

Derivative markets, particularly equity and index options, are highly sensitive to changes in investor sentiment. Because options are leveraged instruments and depend on expectations about future price movements and volatility, trading activity in these markets often reflects the psychological outlook of investors. Understanding the relationship between

investor sentiment and option trading strategies is therefore important for analyzing market behavior and improving trading decisions.

REVIEW OF LITERATURE

Previous research in behavioral finance has extensively examined the role of investor sentiment in influencing financial markets.

Author(s) & Year	Key Findings / Focus	Relevance to Study	Identified Research Gap
Kahneman & Tversky (1979)	Introduced Prospect Theory, explaining that investors exhibit loss aversion where losses have a stronger psychological impact than gains.	Helps explain how psychological biases influence investor decision-making in financial markets.	Behavioral Bias Gap: Traditional financial theories assume rational investors and ignore psychological influences on trading decisions.
Shiller (2000)	Examined speculative bubbles and highlighted how investor confidence and media narratives can drive asset prices beyond intrinsic value.	Demonstrates how collective sentiment and herd behavior affect market movements and pricing.	Sentiment Measurement Gap: Limited tools to measure and predict sentiment-driven market bubbles.
Baker & Wurgler (2006)	Developed an Investor Sentiment Index using indicators such as trading volume, market volatility, and IPO activity.	Provides a framework for measuring investor sentiment and its impact on market returns.	Market Efficiency Gap: High sentiment may cause asset mispricing and deviation from fundamental values.
Brown & Cliff (2005)	Found that investor sentiment has significant short-term predictive power for stock market volatility and returns.	Supports the idea that emotional reactions of investors affect short-term trading strategies.	Short-Term Behavior Gap: Limited understanding of how sentiment affects derivative trading strategies such as options.
Whaley (2000)	Identified the Volatility Index (VIX) as a "fear gauge" reflecting investor expectations of future market volatility.	Highlights the importance of VIX as a sentiment indicator used by traders in option markets.	Indicator Utilization Gap: Limited research linking VIX sentiment indicators with behavioral trading strategies in derivative markets.

RESEARCH OBJECTIVES

1. To examine the relationship between investor sentiment and trading behavior in equity and index options markets.
2. To analyze how investor sentiment influences trading strategies among investors and traders.
3. To study whether extreme market sentiment conditions lead to option mispricing and increased market volatility.

RESEARCH METHODOLOGY

The present study examines the relationship between investor sentiment and trading strategies in equity and index options markets. The research is based on primary data collected through a structured questionnaire distributed among investors and traders. The survey aimed to understand how psychological factors, sentiment indicators, and market volatility influence trading decisions in derivative markets. A total of 50 respondents participated in the study and were selected using a convenience sampling method. The collected responses were analyzed using percentage analysis and descriptive interpretation.

The study focuses on three important dimensions related to investor sentiment and trading behavior:

a. Investor Sentiment in Trading Decisions: This dimension examines how investors consider market sentiment while making trading decisions in equity and index options markets. It includes the role of psychological factors such as fear, greed, herd behavior, and overconfidence that influence trading strategies and risk-taking behavior.

b. Market Volatility and Sentiment Indicators: The second dimension analyzes how investors respond to sentiment indicators such as the Volatility Index (VIX), put-call ratios, and market news. These indicators are widely used by traders to interpret market expectations and adjust trading strategies during periods of uncertainty and volatility.

c. Behavioral Biases and Option Trading Strategies: The third dimension evaluates the impact of behavioral biases on option trading behavior. Psychological biases such as loss aversion, fear of missing out (FOMO), and herd behavior can influence the selection of trading strategies, including call and put option positions during different market conditions.

LIMITATIONS OF THE STUDY

● The study is limited to a relatively small sample size of 50 respondents, which may not fully represent the behavior and perspectives of the entire population of investors and traders.

● The research relies on self-reported responses collected through a questionnaire, which may involve subjective opinions or response bias from participants.

● The study mainly focuses on behavioral and sentiment-based indicators and does not incorporate extensive real-time market data such as trading volume, option pricing models, or historical volatility.

HYPOTHESIS

- **Hypothesis I (H_{01}):**

Investor sentiment and market sentiment indicators have no significant influence on trading strategies in equity and index option markets.

- **Hypothesis II (H_{02}):**

Psychological biases such as fear, greed, herd behavior, and fear of missing out (FOMO) do not significantly influence investors' trading behavior in derivative markets.

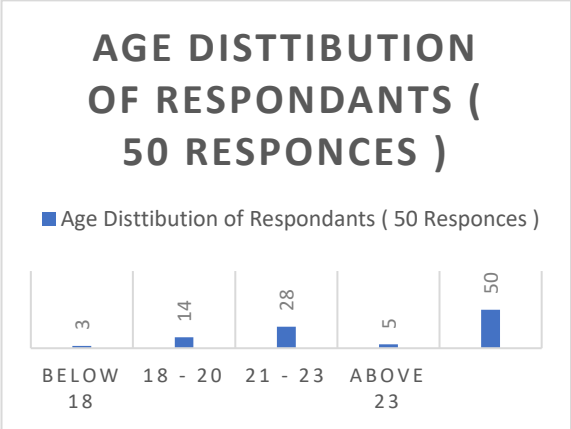
DATA ANALYSIS AND INTERPRETATION

Table 1: Demographic Profile of Respondents

This table categorizes the **50 participants by Age and Gender** to establish the demographic profile of the survey respondents.

Category	Classification	Frequency (f)	Percentage (%)
Age	Below 18	3	6%
	18 – 20	14	28%
	21 – 23	28	56%
	Above 23	5	10%
Gender	Male	36	72%
	Female	14	28%

Category	Classification	Frequency (f)	Percentage (%)
	Total	50	100%



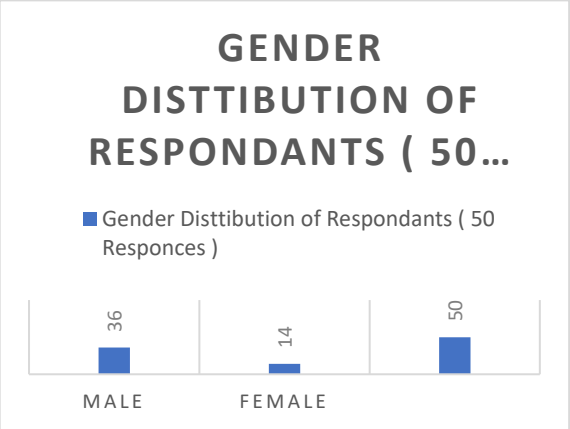
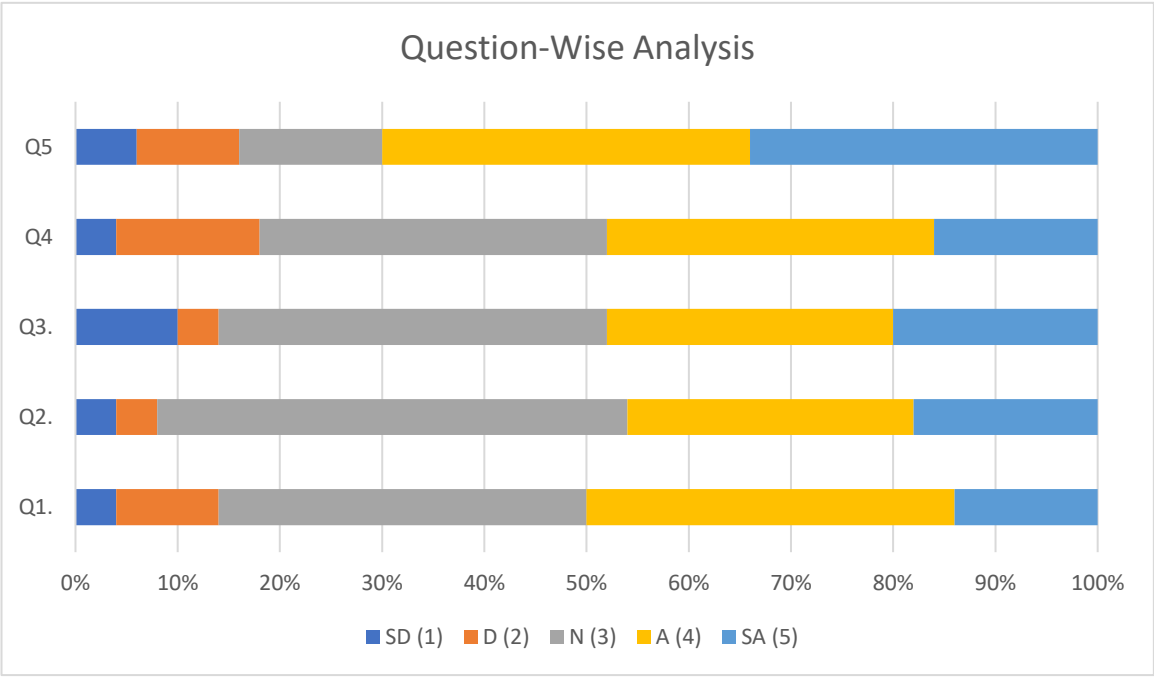


Table 2: Question-Wise Analysis (Frequency Distribution)

This table provides the raw data for core research findings based on the **5-point Likert scale (50 respondents).**

Question Statement	SA (5)	A (4)	N (3)	D (2)	SD (1)	Total (N)	Mean Score
Q1: Do traders consider market sentiment before entering option trades?	7	18	18	5	2	50	3.40
Q2: Does the Volatility Index (VIX) influence option trading strategies?	9	14	23	2	2	50	3.88
Q3: Do traders use the Put-Call Ratio to predict market direction?	10	14	19	2	5	50	3.76
Q4: Do investors experience FOMO while trading options?	8	16	17	7	2	50	3.62
Q5: Does financial knowledge improve option trading decisions?	17	18	7	5	3	50	3.82



HYPOTHESIS TESTING:

Calculation for Hypothesis 1 (H1)

Statement: "Investor sentiment and market sentiment indicators have no significant influence on trading strategies in equity and index option markets."

A. Weighted Mean Calculation

Scale	Weight (W)	Frequency (F)	Total Score (W*F)
Strongly Disagree	1	2	2
Disagree	2	6	12
Neutral	3	18	54
Agree	4	15	60
Strongly Agree	5	9	45
Total		50	173

Mean Score = ΣfW / N

= 173 / 50 = 3.46

B. Chi-Square Test for (H1)

Null Hypothesis (H_0): Responses are evenly distributed (Investor sentiment has no significant influence on trading strategies).

Expected Value (E) = 50 / 2 = 25

Category	Observed (O)	Expected (E)	$(O - E)^2 / E$
Disagree / Strongly Disagree	8	25	11.56
Neutral / Agree / Strongly Agree	42	25	11.56
Total	50		$\chi^2 = 23.12$

Decision

Since **23.12 > 3.84 (Critical Value at 5% significance level), H_1 is ACCEPTED**.

Calculation for Hypothesis 2 (H1)

Statement: "Psychological biases such as fear, greed, herd behavior, and fear of missing out (FOMO) do not significantly influence investors' trading behavior in derivative markets."

A. Weighted Mean Calculation

Scale	Weight (W)	Frequency (F)	Total Score (W*F)
Never	1	2	2
Occasionally	2	7	14
Sometimes	3	17	51
Often	4	16	64

Always	5	8	40
Total		50	171

Mean Score = ΣfW / N

= 171 / 50 = 3.42

B. Chi-Square Test for (H2)

Null Hypothesis (H_0): Psychological biases such as fear, greed, herd behavior, and fear of missing out (FOMO) do not significantly influence investors' trading behavior in derivative markets.

Expected Value (E) = 50 / 2 = **25**

Category	**Observed (O)**	**Expected (E)**	**$(O - E)^2 / E$**
Never / Occasionally	9	25	10.24
Sometimes / Often / Always	41	25	10.24
Total	50		$\chi^2 = 20.48$

Decision

Since **20.48 > 3.84 (Critical Value at 5% significance level), H_1 is ACCEPTED**.

Final Consolidated Results Table

Hypothesis	**Calculated Mean**	**χ^2 Value**	**Result**
H1 – Investor Sentiment Influence on Trading Strategies	3.46	23.12	ACCEPTED
H2 – Psychological Bias Influence on Trading Behaviour	3.42	20.48	ACCEPTED

CONCLUSION

● Financial markets are influenced not only by economic fundamentals but also by psychological factors that shape investor behavior and trading decisions.

● The findings of the study indicate that investor sentiment plays an important role in equity and index option trading strategies, particularly during periods of market uncertainty and volatility.

● A significant number of respondents reported that they consider market sentiment indicators such as the Volatility Index (VIX), put-call ratios, and market news before making trading decisions.

● The analysis also shows that behavioral biases such as fear, greed, herd behavior, and fear of missing out (FOMO) influence investors' trading behavior in derivative markets.

● The hypothesis testing results further confirm that both investor sentiment indicators and psychological biases have a statistically significant impact on trading strategies in equity and index option markets.

● Many traders rely on a combination of technical indicators and sentiment analysis to interpret market expectations and manage trading risks effectively.

● The study highlights the importance of behavioral finance in understanding market movements, as investor psychology can sometimes lead to irrational trading decisions and temporary mispricing of options.

● Therefore, integrating behavioral insights with traditional financial analysis can help investors make more informed trading decisions and improve risk management in derivative markets.

Future Scope of the Study

● Future studies can expand the research by increasing the sample size and including a broader range of participants, such as institutional investors, professional traders, and portfolio managers.

● Researchers can conduct comparative studies between retail investors and institutional investors to better understand differences in sentiment-driven trading behavior.

● Further research may analyze the relationship between investor sentiment indicators and actual market data, including option pricing, trading volume, and historical volatility.

● The impact of social media sentiment and financial news analytics on trading strategies can also be explored using advanced data analysis techniques.

● Future studies may investigate the role of algorithmic trading and artificial intelligence in sentiment-based trading strategies in modern financial markets.

● Researchers may also conduct longitudinal studies to examine how investor sentiment changes across different market cycles, such as bull markets, bear markets, and financial crises.

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