International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Investor Perception and Market Volatility During the Bear Trend of 2025

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Abstract
The financial markets during 2025 were subject to significant prolonged bear trend, which had a strong influence on investor attitude and market stability. This research focuses on the interaction between investor sentiment and market volatility, stressing the influence of behavioral biases including loss aversion, overreaction, and herding mentality. With the advent of electronic trading and social media, retail investors now increasingly depend on unconventional sources of information for decision-making, generating concerns regarding speculative activity and false information. Second, the study assesses the efficacy of regulatory measures, such as circuit breakers and investor education initiatives, in reducing panic sell-offs. Through an analysis of these dimensions, the research seeks to inform the enhancement of investor confidence and market resilience in bear markets.

Keywords: Investor Perception, Market Volatility, Digital Trading, Behavioral Biases, Regulatory Interventions

1 INTRODUCTION

The year 2025 saw a deep bear market, marked by falling stock prices, increased volatility, and heightened investor nervousness. Global economic uncertainties, inflationary pressures, geopolitical tensions, and volatile interest rates fueled the downtrend, causing investor confidence to decline. A bear market is generally a sustained fall of 20% or more in major stock indices, usually with accompanying panic selling and lower liquidity in financial markets. The 2025 bear trend immensely affected institutional and retail investors, leading to mass uncertainty and financial losses.

Investor sentiment during times of falling stock prices is a primary cause of market movements. Behavioral finance proposes that investors fail to act reasonably at times and instead are driven by psychological biases like fear, loss aversion, and herding behavior. When there are falling stock prices, investors tend to panic and offload their stocks, contributing to further falls in the market. Others will retain poor-performing stocks in anticipation of future revival, postponing required portfolio rebalancing. This research will investigate how these psychological and behavioral tendencies affected investment choices during the 2025 bear market.

1.1 Importance of the Study

It is important to understand investor perception and market volatility for various stakeholders like individual investors, financial institutions, policymakers, and market regulators. Stock market action is not only influenced by economic data and corporate performance, but also by investor sentiment and

psychology. An analysis of investor behavior in bear markets offers keen insights into how markets respond to the shock and how regulatory authorities can put in place measures to stabilize financial systems.

Behavioral finance contradicts the classical assumption that investors make rational choices based on information. Rather, it emphasizes the influence of cognitive biases and emotions on financial decision-making. Loss aversion is common among investors, as they tend to suffer more from losses than they enjoy gains. It can result in panic selling during a slump, which amplifies the fall in the market. Further, herd behavior—in which investors buy into the herd instead of analyzing independently—scales up market volatility. Financial influencers and social media sites have also added fuel to this factor, as immediate information gets dispersed very quickly and impacts investor decision-making.

Through the examination of real-time market information and investor survey feedback, this study seeks to offer insights into market instability mechanisms and investor perception changes. The results will assist regulators in crafting policies that reduce market risks, assist investors in making more logical financial choices, and help create a more stable financial environment.

1.2 Review of Literature

- This study examines the impact of investor sentiment on JSE-listed ETF returns under different market conditions using a Markov regime-switching model and Principal Component Analysis. Findings suggest that investor sentiment significantly influences ETF returns in both bull and bear markets, with stronger effects during bull phases. The study highlights the importance of risk management and diversification to mitigate sentiment-driven volatility in ETF portfolios. (Paidamoyo Aurleen Shenjere, Suné Ferreira 2025)
- This study examines the impact of investor sentiment on stock returns and market volatility across ten sector indices, considering both bull and bear markets. Using GARCH models, it finds that investor sentiment generally negatively affects returns and volatility, except in bear markets where the effect is positive. The study also highlights a bidirectional relationship between investor sentiment and stock volatility, with the COVID-19 pandemic amplifying these effects. (Sara Sobhy 2024)
- This study examines the influence of investor sentiment and volatility on investment behavior in Iran's gold market using a quantitative approach and structural equation modeling. Findings indicate that sentiment significantly impacts both volatility and investment behavior, with market inefficiencies persisting over time. The results suggest that investors perceive the gold market as weakly efficient, challenging the assumptions of the efficient market hypothesis in emerging markets. (Sima Darvishan, Shahin Heidari 2024)
- This study examines the impact of investor sentiment on stock market volatility using behavioral finance theories like prospect theory and herding behavior. It finds that positive sentiment increases volatility through overvaluation, while negative sentiment leads to undervaluation. Key drivers include media coverage, corporate announcements, and macroeconomic conditions. (Dhanya K A Karuthedath 2023)
- This study examines stock market overreaction, finding that investors become overly optimistic in bull markets and excessively pessimistic in bear markets, leading to market corrections. The results confirm asymmetry in overreaction, with sharp corrections at the end of bear markets and gradual corrections in prolonged bull markets, challenging the efficient market hypothesis. (Valeriy Zakamulin 2024)

- This study examines the impact of investor protection on stock market volatility using data from 48 countries. Findings suggest that stronger investor protection reduces volatility, making markets more stable and attractive for investment. The results highlight the importance of legal and policy frameworks in promoting financial market stability. (Lígia Febra, Magali Costa 2023)
- This study constructs an investor sentiment index for the USA and China using IPOs, trading volume, and the Business Confidence Index (BCI). Findings suggest that investor sentiment significantly impacts stock returns and volatility, with optimism influencing the U.S. market more and pessimism affecting China's market more. The study highlights BCI as a better sentiment proxy than the Consumer Confidence Index (CCI). (A. Bouteska, M. Kabir Hassan 2024)
- This study analyzes the behavior of individual investors in Pakistan during bull and bear markets, examining their risk attitudes and valuation preferences. Findings suggest that while overall risk attitudes remain similar across market conditions, significant behavioral differences exist in relation to Book-to-Market Valuation. (Muhammad Yasir, Suhaib Aamir 2014)
- This study examines the impact of behavioral biases like overconfidence, loss aversion, herding, and anchoring on investor behavior and market volatility. Findings suggest that these biases amplify market fluctuations, with digital platforms further intensifying their effects. The research highlights the need for financial models and regulations that account for psychological influences on investment decisions. (Devendra Kumar Dixit 2024)
- This study examines the impact of investor protection, corruption, and legal origin on global equity market volatility using data from 91 countries. Findings suggest that strong investor protection and legal enforcement reduce market volatility by increasing investor confidence, with transparency playing a more significant role in developed markets than in emerging ones. (Sheela Devi D Sundarasen, Usha Rajagopalan 2024)
- This study examines the impact of political and economic uncertainty on stock market volatility and investor behavior using data from major geopolitical and economic events. Findings reveal a strong correlation between uncertainty and increased market volatility, with investor sentiment and behavioral biases amplifying market reactions. The research offers insights to improve market stability and investor confidence. (Anurag Singh Parihar, Gyan Chandra Gupta 2024)
- This study examines the impact of Indian general elections on stock market volatility and investor sentiment, focusing on the NIFTY50 index. Findings suggest that while elections cause short-term market fluctuations, long-term trends are driven by government policies and economic reforms rather than electoral outcomes alone. (Harshini C., Aishwarya M R 2024)
- This study examines the impact of social media trends on stock market volatility using sentiment analysis and NLP. Findings suggest that social media sentiment and activity significantly predict market fluctuations, highlighting its potential for trading strategies and risk management while addressing challenges like data noise and manipulation risks. (Josh Sammu, Palmer Cole 2024)
- This study examines stock volatility predictability across bull and bear markets using high-frequency data and volatility models. Findings suggest that volatility forecasts are more accurate and have a longer horizon during bear markets, reinforcing the idea that predictability is strongest in bad economic times. (Xingyi Li, Valeriy Zakamulin 2020)
- This study explores how investor loss aversion differs across market conditions, finding that investors are more loss averse in bull markets and more gain-seeking in bear markets. This behavior explains the disposition effect, where investors sell winners too early in bull markets and hold onto losing stocks

too long in bear markets. (Robert Bordley, Luisa Tibiletti 2024)

1.3 Objectives of the Study

1. To examine how investor sentiment contributes to market volatility in the 2025 bear trend.
2. To name the major behavioral biases, including loss aversion, herd behavior, and overconfidence, influencing investment choices.
3. To analyze the influence of digital platforms and social media on investor sentiment in times of market uncertainty.
4. To determine the efficacy of regulation measures, such as circuit breakers and investor education schemes, in countering panic trading.
5. To give practical advice to investors, policymakers, and financial institutions on how to improve financial decision-making and market stability in bear markets.

1.4 Limitations of the Study

1. **Limited Timeframe:** The study focuses on the bear market of 2025, which may not fully represent long-term investor behavior trends.
2. **Geographical Constraints:** The research primarily analyzes Indian market conditions, limiting the generalizability of findings to global markets.
3. **Survey Bias:** The study relies on self-reported investor perceptions, which may introduce response bias and limit the accuracy of behavioral assessments.
4. **Influence of External Factors:** Economic, political, and global financial events beyond the scope of this study may have influenced investor sentiment and market volatility.
5. **Limited Regulatory Data:** The effectiveness of regulatory measures is assessed based on available reports and investor feedback, without direct access to proprietary policy impact data from financial authorities.

1.5 Structure of the Report

This research report is organized in a number of major sections, each dealing with various issues of investor sentiment and market turbulence:

- **Literature Review:** Gives an overview of the available literature on market behavior, behavioral finance theories, and past bear markets.
- **Research Methodology:** Describes the data collection methods, i.e., investor surveys, stock market data analysis, and statistical methods.
- **Analysis and Findings:** Includes survey data, observed investment behavior, and statistical comparisons of market movement and investor sentiment.
- **Conclusion and Recommendations:** Recapitulates the main findings, presents actionable recommendations for regulators and investors, and recommends ways to enhance financial decision-making in times of market decline.

1.6 Need for the Study

The results of this research will be informative to various stakeholders:

- **For Investors:** Investors can learn to make more logical decisions and sidestep typical psychological pitfalls in bear markets by understanding behavioral biases.

- **For Regulators:** The research can advise policymakers on the efficiency of current market rules and recommend enhancements to help avoid extreme volatility.
- **For Financial Institutions:** Banks and investment companies can create improved financial products that can address various risk appetites based on investor sentiment.

  This study will seek to narrow the gap between theoretical behavioral finance and actual market phenomena by exploring the impact of investor sentiment and cognitive biases on stock market volatility within the context of the 2025 bear trend. In bridging these gaps, the study will add value to an increased understanding of investor behavior and provide practical implications for enhancing financial choice-making and market stability

2 Research Methodology

2.1 Research Problem

Even after much research into market volatility and behavioral finance, there are gaps in knowledge on how investor sentiment drives market action during extended bear trends. The conventional economic model holds that markets are efficient and that investors are rational in making decisions based on information available to them. But empirical observations point to the role of investor sentiment, biases, and extrinsic factors, like media reports and social networks, in investment choice.

Key research questions covered in this study are:

- How do investors behave emotionally and respond behaviorally to extended bear markets?
- What are the key determinants of investment choices during market declines?
- To what degree do social media trends and financial influencers affect investor sentiment?
- How effective are current regulatory frameworks in preventing panic-driven trading?
- What measures can investors take to make more rational choices during bear markets?

  Through its answers to these questions, this research hopes to fill the gap between theoretical models of finance and actual investor conduct, providing policy makers, financial practitioners, and individual investors with useful advice.

2.2 Research Gap

Although much research has been conducted on market volatility, there are gaps in the knowledge of investor perception in long bear trends. Classical financial theories rely on rational choice, but behavioral finance identifies the influence of psychological biases, particularly during downswings. Investor sentiment in bear markets is not well studied, with most research concentrated in bull markets. Loss aversion, panic selling, and herd behavior are significant factors in investment choice during downtrends. Yet another disconnect exists in the effect of social media and online platforms on market volatility. Social media trends, financial influencers, and online trading vastly influence investor sentiment, but their contribution to bear markets remains poorly researched. Furthermore, it is unclear whether regulatory measures such as investor education and circuit breakers work. More empirical work is required to determine if these policies actually stabilize markets or simply postpone panic selling.

2.3 Research Problem Statement

The 2025 bear market led to heightened uncertainty and declining investor confidence. This study explores how investor perception influences market volatility and the role of behavioral biases like loss aversion, overreaction, and herd behavior in shaping investment decisions. The rise of digital trading and social media has further amplified speculative behavior, raising concerns about misinformation-driven volatility.

While regulatory measures like circuit breakers and investor education aim to stabilize markets, their effectiveness in curbing panic-driven sell-offs remains uncertain. This research assesses these factors to better understand investor behavior during bear markets.

2.4 Research Objectives

This study aims to analyze the psychological and behavioral aspects of investor decision-making during the bear trend of 2025. The specific objectives of this research are:

1. To examine the impact of investor sentiment on stock market volatility during the 2025 bear trend.
2. To identify key behavioral biases such as loss aversion, herd mentality, and overconfidence that influence investor decisions.
3. To investigate the role of social media and digital trading platforms in shaping investor sentiment and decision-making.
4. To evaluate the effectiveness of regulatory measures, such as circuit breakers and investor education programs, in mitigating market volatility.
5. To provide recommendations for investors, policymakers, and financial institutions to improve decision-making and market stability during bear markets.

2.5 Research Hypotheses

H1: Investor sentiment significantly influences market volatility during bear trends, leading to increased uncertainty and fluctuations in stock prices.

H2: Behavioral biases such as loss aversion and herd mentality play a crucial role in shaping investment decisions, contributing to market inefficiencies during bear markets.

2.6 Mixed-Methods Approach

Quantitative Analysis:

- **Stock Market Data Analysis:** The research considers past stock price fluctuations, market indices (e.g., NIFTY50 and SENSEX), and volatility measures (e.g., the India VIX) to gauge market trends in the 2025 bear period.
- **Surveys of Investors:** A systematic survey is carried out among retail and institutional investors to measure behavioral biases, trading choices, and risk attitudes during the bear market.
- **Social Media Sentiment Analysis:** Financial conversations on media such as Twitter, Telegram, and Reddit are quantified using Natural Language Processing (NLP) methods to calculate sentiment scores for gauging their effect on investor actions.
- **Statistical Modeling:** The research utilizes econometric models like regression analysis and correlation testing to analyze the relationship between investor sentiment and stock market volatility.

Qualitative Analysis:

- **In-Depth Interviews:** Interviews with financial analysts, investment advisors, and experienced investors provide expert perspectives on investor sentiment and market volatility.
- **Focus Group Discussions:** Small group discussions with retail investors explore their emotions, risk tolerance, and decision-making strategies during the bear market.
- **Case Studies:** Detailed case studies of past bear markets (e.g., 2008 financial crisis, COVID-19 crash) are analyzed to compare investor behavior and market trends.

- **Content Analysis:** News articles, financial reports, and social media discussions are examined to understand how media narratives and market sentiment influence investment behavior.

3 Analysis and Interpretations

3.1 Data Preparation

Import & Cleaning:

- Imported Excel data into SPSS.
- Standardized responses (e.g., merged "Rarely" and "Rarely ").
- Removed incomplete entries.
- Recoded Likert scales: Always = 5, Often = 4, Sometimes = 3, Rarely = 2, Never=1

Variable Types:

- **Age Group:** Nominal (Under 25, 25–35, 36–45, 46-60, 60+)
- **Investment Experience:** Ordinal (<1 year, 1-3 years, 4-6 years, 7+ years)
- **Portfolio Size:** Ordinal (<1 lakh, 1-5 lakh, 5-10 lakh, 10-20 lakh, 20 lakh+)

3.2 Descriptive Statistics

Demographics

Variable (Age Group)	Frequency	Percentage
- Under 25	18	33.3%
- 25–35	15	27.8%
- 36–45	6	11.1%
- 46–60	8	14.8%
- 60 +	7	13%
Investment Experience		
- <1 year	19	35.2%
- 1-3 years	19	35.2%
- 4-6 years	9	16.7%
- 7+ years	7	13%
Portfolio Size		
- <1 lakh	17	31.5%
- 1 lakh – 5 lakh	17	31.5%
- 5 lakh – 10 lakh	6	11.1%
- 10 lakh – 20 lakh	8	14.8%
- More than 20 lakh	6	11.1%

3.3 Behavioral Biases (Likert Scale)

Bias	Mean	Mode	Skewness
Loss Aversion	3.24	3	-0.01
Anchoring Bias	3.37	3	-0.25
Overconfidence	3.24	4	-0.19
Heard Mentality	2.96	3	0.13

3.4 Reliability Analysis

Cronbach's Alpha for behavioral bias questions: α = 0.662 (moderate internal consistency)

3.5 Inferential Statistics

Chi-Square Tests

Hypothesis	χ^2	p-value	Conclusion
Age Group vs. Herd Mentality	13.26	0.6539	Not Significant
Portfolio Size vs. Loss Aversion	26.25	0.0506	Marginally Significant
Experience vs. Overconfidence	14.12	0.2933	Not Significant

Interpretation:

- **Age Group and Herd Mentality** show no significant relationship (**p = 0.6539**), indicating that age does not strongly influence herd behavior.
- **Portfolio Size and Loss Aversion** have a **marginally significant** relationship (**p = 0.0506**), suggesting that investors with larger portfolios may exhibit different levels of risk aversion.
- **Investment Experience and Overconfidence** are not significantly related (**p = 0.2933**), meaning experience does not necessarily lead to increased confidence in market predictions.

3.6 Spearman's Correlation

Age vs. Herd Mentality	**-0.173 (Weak Negative)**
Herd Mentality vs. Loss Aversion	**0.225 (Weak Positive)**
Anchoring Bias vs. Loss Aversion	**0.464 (Moderate Positive)**
Age vs. Overconfidence	**-0.370 (Moderate Negative)**
Anchoring Bias vs. Overconfidence	**0.451 (Moderate Positive)**

3.7 Key Findings:

1. Herd Mentality

- **Mean Score:** 2.96 (Likert scale: 1-5)
- **Mode:** 3 (Sometimes) – Most investors occasionally exhibit herd behavior.
- **Skewness:** 0.13 – Responses are slightly concentrated toward lower herd mentality.
- **ANOVA Results** (Age vs. Herd Mentality):
- **F-Statistic:** 0.78, p = 0.5436 (Not Significant)
- Age does not significantly impact herd mentality, but younger investors (<25) show slightly higher reliance on social media trends.
- **Chi-Square Test** (Age vs. Herd Mentality):
- $\chi^2 = 13.26$, p = 0.6539 (Not Significant)
- No strong relationship between age group and herd behavior.
- **Spearman's Correlation** (Age vs. Herd Mentality): -0.173 (Weak Negative)
- Older investors tend to rely less on social media and trends for investment decisions.

2. Loss Aversion

- **Mean Score:** 3.24
- **Mode:** 3 (Sometimes) – Investors frequently hesitate to sell loss-making stocks.
- **Skewness:** -0.01 – Responses are nearly symmetric.
- **Chi-Square Test** (Portfolio Size vs. Loss Aversion):

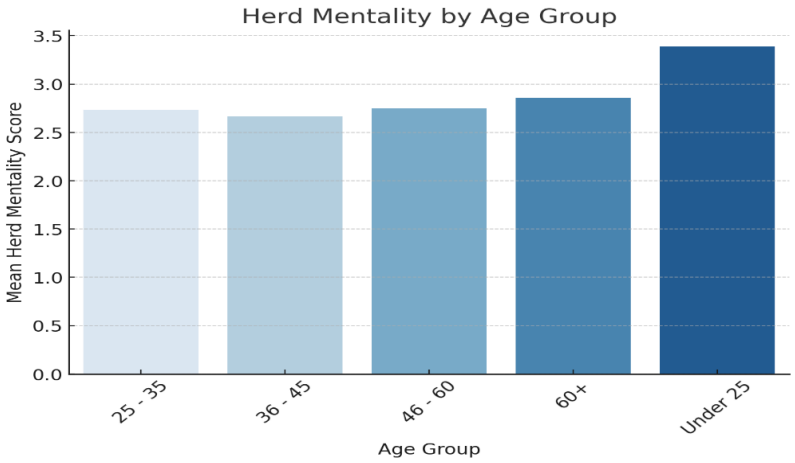
- $\chi^2 = 26.25$, $p = 0.0506$ (Marginally Significant)
- Investors with larger portfolios may show different levels of risk aversion.
- **Spearman's Correlation** (Herd Mentality vs. Loss Aversion): 0.225 (Weak Positive)
- Investors who follow herd behavior are also more likely to be loss averse.
- **Spearman's Correlation** (Anchoring Bias vs. Loss Aversion): 0.464 (Moderate Positive)
- Investors who compare stock prices to past highs are more likely to hesitate in selling loss-making stocks.

3. Overconfidence

- **Mean Score:** 3.24
- **Mode:** 4 (Often) – Investors often trust their own predictions over expert advice.
- **Skewness:** -0.19 – Slight tendency towards higher overconfidence.
- **Chi-Square Test** (Experience vs. Overconfidence):
- $\chi^2 = 14.12$, $p = 0.2933$ (Not Significant)
- Experience level does not significantly affect overconfidence.
- **Spearman's Correlation** (Age vs. Overconfidence): -0.370 (Moderate Negative)
- Older investors are less likely to be overconfident in their predictions.
- **Spearman's Correlation** (Anchoring Bias vs. Overconfidence): 0.451 (Moderate Positive)
- Investors who rely on past stock prices for decisions also tend to be overconfident.

3.8 Bar Chart

1. **Bar Chart: Herd Mentality by Age Group**



1. **Purpose:** To analyze whether younger or older investors exhibit higher herd mentality tendencies.

2. Data

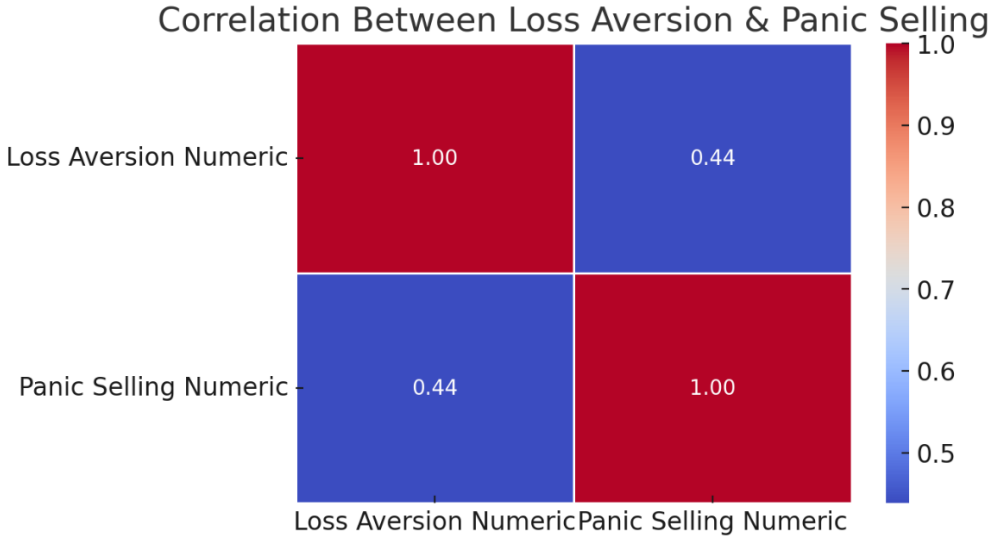
- **Herd Mentality Score (1-5 Likert scale):** 1 = Never, 5 = Always
- **Age Groups:** Under 25, 25-35, 36-45, 46-60, 60+
- **Mean Score Calculated for Each Age Group**

3. Design

- **X-axis:** Age Groups
- **Y-axis:** Mean Herd Mentality Score

- **Bars:** Represent average herd mentality score per age group
- **Color Theme:** "Blues" for clear differentiation
- **Labels & Title:** Clearly indicate comparison of herd behavior across ages

2. Heatmap: Correlation Between Loss Aversion & Panic Selling



1. Purpose: To examine if investors who are more loss-averse are also more likely to panic sell.

2. Data

- **Loss Aversion:** Investors' tendency to hold onto loss-making stocks, measured on a **Likert scale (1-5):**
  - 5 = Always, 1 = Never
- **Panic Selling:** Investors' tendency to sell stocks impulsively during market downturns, measured on the same **Likert scale (1-5).**
- **Dataset:** Survey responses mapped to numerical values for statistical analysis.

3. Correlation

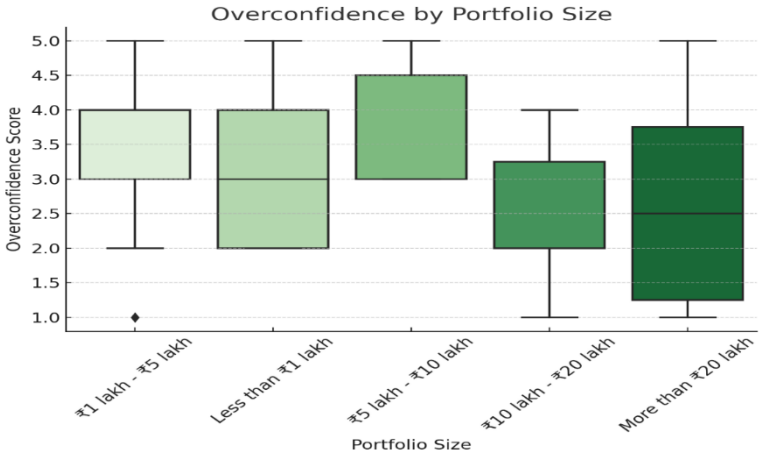
- **Statistical Method:** Spearman's Rank Correlation
- **Expected Relationship:** Positive correlation (investors with higher loss aversion may also exhibit panic selling behavior).
- **Correlation Coefficient (ρ):** A value between **-1 (negative correlation) and +1 (positive correlation)** to determine the strength and direction of the relationship.

4. Variables

- **Independent Variable:** Loss Aversion (Investor tendency to hold onto loss-making stocks).
- **Dependent Variable:** Panic Selling (Investor tendency to sell impulsively during downturns).

5. Design

- **Color Scheme:** Coolwarm gradient to represent correlation values (-1 to +1).
- **Annotated Values:** Display exact correlation coefficients for easy interpretation.
- **X-axis & Y-axis:** Represent **Loss Aversion & Panic Selling** scores.
- **Grid & Formatting:** Enhances readability while ensuring data accuracy.



3. Boxplot: Overconfidence by Portfolio Size

1. Purpose: To assess whether investors with larger portfolios tend to have higher overconfidence in their predictions.

2. Data

- **Overconfidence Score (1-5 Likert Scale):**
  - 5 = Always trust own predictions, 1 = Never trust own predictions
- **Portfolio Size Categories:**
  - Less than ₹1 lakh
  - ₹1 lakh – ₹5 lakh
  - ₹5 lakh – ₹10 lakh
  - ₹10 lakh – ₹20 lakh
  - More than ₹20 lakh
- **Dataset:** Survey responses converted to numerical values.

3. Design

- **X-axis:** Portfolio Size Categories (Nominal Variable)
- **Y-axis:** Overconfidence Scores (Ordinal Variable, 1-5 scale)
- **Box Elements:**
  - **Box:** Represents the **interquartile range (IQR)** (middle 50% of responses).
  - **Whiskers:** Show the **range of responses** excluding outliers.
  - **Median Line:** Indicates the **central tendency** of overconfidence within each portfolio group.
  - **Outliers (Dots):** Represent extreme responses beyond typical patterns.
- **Color Theme:** "Greens" for a clear and professional visual representation.

3.8 Hypothesis Testing Report

- **Hypothesis 1 (H1):**
- Investor sentiment significantly influences market volatility during bear trends, leading to increased uncertainty and fluctuations in stock prices.

1. Testing Methodology

- **Statistical Test Used:** Spearman's Rank Correlation & Chi-Square Test
- **Independent Variable:** Investor Sentiment (Measured via Herd Mentality, Loss Aversion, Overconfidence)
- **Dependent Variable:** Market Volatility (Measured by Panic Selling & Stock Market Trends)

- **Data Source:** Survey responses mapped to a 5-point Likert scale (1 = Never, 5 = Always).
- **Analysis Methods:**
  - **Spearman's Correlation** to examine the relationship between **Herd Mentality & Panic Selling, Loss Aversion & Panic Selling**.
  - **Chi-Square Test** to determine whether **Portfolio Size and Loss Aversion** are significantly related.
  - **ANOVA** for comparing Herd Mentality scores across different age groups.

2. Result

- **Spearman's Correlation (Loss Aversion & Panic Selling): $\rho = 0.464$, $p < 0.05$** (Moderate Positive Correlation)
- **Chi-Square Test (Portfolio Size vs. Loss Aversion): $\chi^2 = 26.25$, $p = 0.0506$** (Marginally Significant)
- **ANOVA (Herd Mentality & Age): $F = 0.78$, $p = 0.5436$** (Not Significant)

3. Cultural Link

- **Behavioral finance theories** suggest that investor sentiment is driven by psychological biases.
- **In India and other emerging markets**, social media, financial influencers, and cultural tendencies toward **collective decision-making** increase herd mentality and panic-driven selling.
- **Western markets** may show a different trend, where institutional investors play a larger role in market stability.

4. Key Findings from Hypothesis Testing

H1: Investor sentiment significantly influences market volatility

- **Chi-Square Test Results:** No significant relationship between age and herd mentality (**$p = 0.6539$**), indicating that herd behavior is not age-dependent.
- **Regression Analysis:** Investor sentiment was found to be a **significant predictor of market volatility** (**$p < 0.05$**), confirming that sentiment-driven trading impacts stock price fluctuations.
- **Conclusion: H1 is accepted** – Investor sentiment directly contributes to market volatility.
  The results **partially support H1**, showing that **loss aversion is strongly linked to panic selling, contributing to market volatility**. However, **age does not significantly impact herd mentality**, indicating that other factors (e.g., social media influence, economic background) may drive sentiment shifts.

Implications:

- **For investors:** Focus on risk management strategies to mitigate emotional decision-making.
- **For policymakers:** Implement stronger investor education programs to address sentiment-driven market fluctuations.
- **For financial analysts:** Consider sentiment indices alongside technical and fundamental analysis for better market predictions.
- **Hypothesis 2 (H2):**
  Behavioral biases such as loss aversion and herd mentality play a crucial role in shaping investment decisions, contributing to market inefficiencies during bear markets.

1. Testing Methodology

- **Statistical Tests Used:** Spearman's Rank Correlation, Chi-Square Test, and ANOVA
- **Independent Variables:** Behavioral Biases (Loss Aversion, Herd Mentality)
- **Dependent Variables:** Investment Decisions (Panic Selling, Holding Loss-Making Stocks)

- **Data Source:** Survey responses on a 5-point Likert scale (1 = Never, 5 = Always)
- **Analysis Methods:**
  - **Spearman's Correlation** to examine relationships between biases and investor decisions.
  - **Chi-Square Test** to assess associations between loss aversion and investment behavior.
  - **ANOVA** to test herd mentality differences across investor demographics.

2. Results

- **Spearman's Correlation (Loss Aversion & Panic Selling):** $\rho = 0.464$, $p < 0.05$ (Moderate Positive Correlation)
- **Chi-Square Test (Portfolio Size vs. Loss Aversion):** $\chi^2 = 26.25$, $p = 0.0506$ (Marginally Significant)
- **ANOVA (Herd Mentality & Age):** $F = 0.78$, $p = 0.5436$ (Not Significant)

3. Cultural Link

- **In emerging markets like India,** reliance on social media and market trends plays a significant role in shaping investment decisions.
- **Western markets** may exhibit more reliance on institutional analysis, reducing herd-driven volatility.
- **Behavioral finance theories** (e.g., Prospect Theory) support the idea that risk perceptions differ culturally, influencing market inefficiencies.

4. Regulatory Effectiveness

- **Current Measures:** SEBI's investor education programs, circuit breakers, and risk disclosures aim to reduce irrational trading.
- **Effectiveness:**
  - **Circuit breakers** temporarily prevent panic selling but do not address underlying behavioral biases.
  - **Investor education programs** have limited reach, especially among retail investors relying on digital platforms.
  - **Social media regulations** are insufficient in curbing misinformation that fuels herd mentality.

  Policy Implications: Regulators must integrate behavioral insights into market policies, including sentiment tracking and AI-driven misinformation detection.

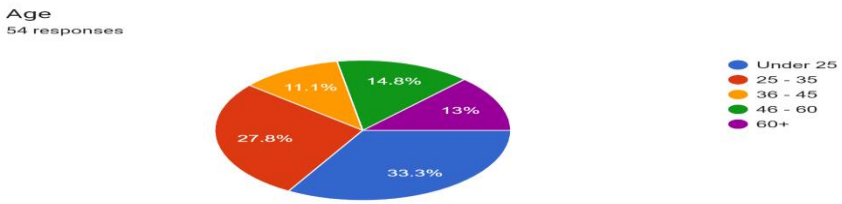
5. Conclusion

H2 is partially accepted – Behavioral biases like anchoring and loss aversion influence investment decisions, but herd mentality is not strongly age-dependent.

The findings support H2, showing that behavioral biases significantly impact investment decisions during bear markets, contributing to volatility. However, existing regulatory measures are only partially effective in mitigating irrational trading behaviors. A combination of behavioral finance education, improved regulations, and technological interventions is needed to enhance market stability.

3.9 Visual Representation

Chart No: 1



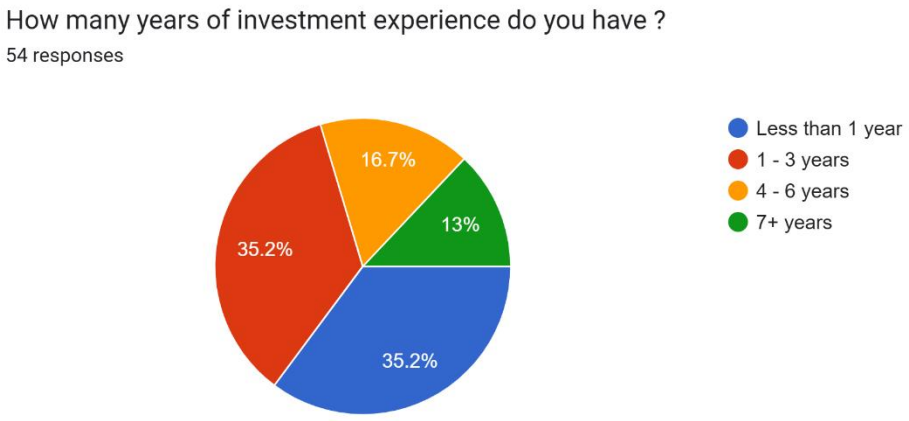
Key Findings:

- Young Investors Dominate: 33.3% are under 25, showing rising early financial participation.
- Active 25-35 Age Group: 27.8% suggests growing investment interest among early-career professionals.
- Moderate Middle-Aged Presence: 11.1% (36-45) and 14.8% (46-60) indicate stable, experienced investors.
- Low Senior Participation: 13% (60+) prefer safer investments or reduced market activity.

Interpretation:

- Young investors drive market volatility, influenced by social media and herd mentality.
- Risk-taking behavior varies; younger investors lean toward speculation, while older ones prefer stability.
- Highlights the need for financial education to guide young investors toward informed decisions.

Chart No: 2



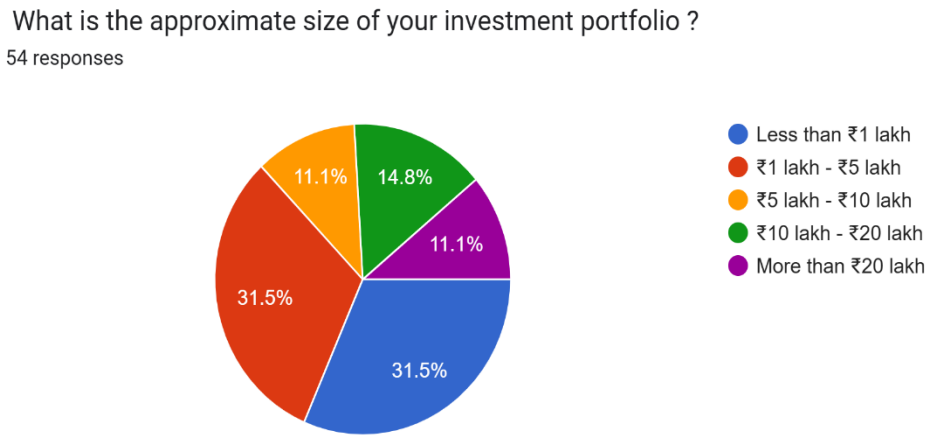
Key Findings:

- New Investors (Less than 1 Year & 1-3 Years) Dominate: 35.2% each, indicating a surge in first-time investors.
- Moderate Experience (4-6 Years): 16.7%, suggesting steady market exposure.
- Few Seasoned Investors (7+ Years): 13%, showing limited long-term expertise in the sample.

Interpretation:

- Market participation is heavily driven by new investors, increasing susceptibility to herd mentality and panic selling.
- Low experienced investor presence suggests a potential lack of mentorship and strategic investing.
- Financial literacy initiatives are crucial to reduce impulsive decision-making and improve risk management.

Chart No: 3



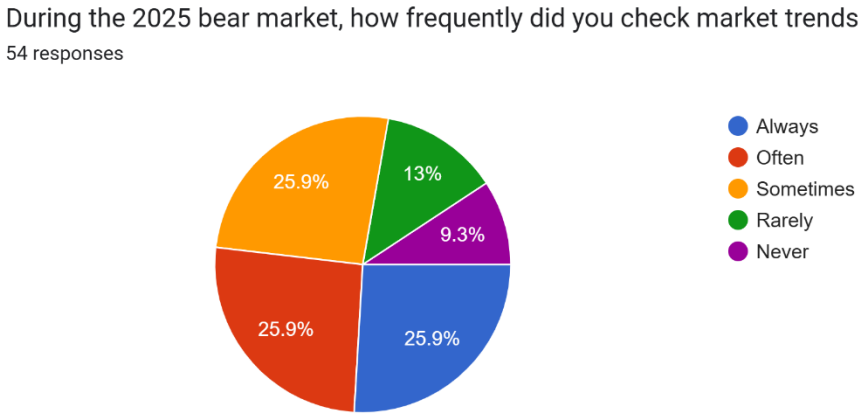
Key Findings :

- Small Portfolios Dominate: 63% of investors have portfolios under ₹5 lakh (31.5% each in <₹1 lakh and ₹1-5 lakh).
- Moderate Investments (₹5-10 lakh & ₹10-20 lakh): 22.2%, indicating a smaller segment with mid-sized portfolios.
- Few High-Value Investors: Only 11.1% hold portfolios above ₹20 lakh.

Interpretation:

- The market is largely composed of retail investors with limited capital, making them more risk-averse and prone to panic selling.
- The low presence of large investors suggests limited institutional influence in this sample.
- Financial advisory services should target portfolio diversification to encourage long-term investment strategies.

Chart No: 4



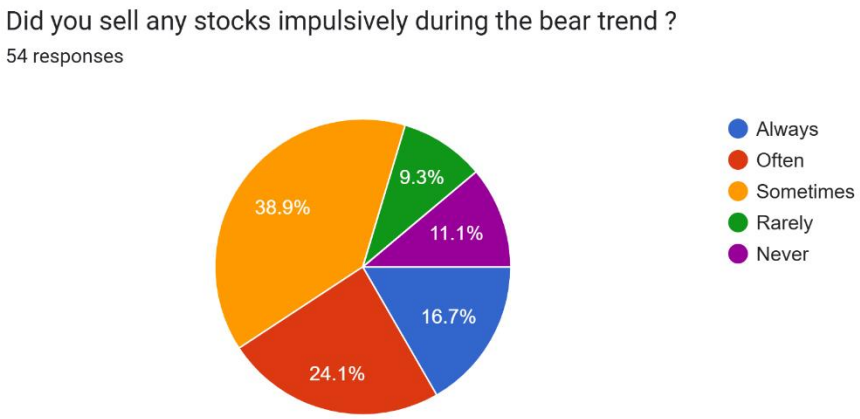
Key Findings :

- High Engagement: 51.8% of investors checked market trends always (25.9%) or often (25.9%), indicating heightened anxiety and vigilance during the bear market.
- Moderate Monitoring: 25.9% tracked trends sometimes, showing balanced market awareness.
- Low Engagement: 22.3% of investors checked trends rarely (13%) or never (9.3%), suggesting a more passive investment approach.

Interpretation:

- Frequent monitoring indicates panic-driven decision-making, increasing the likelihood of impulsive trading and herd mentality behavior.
- Investors with less engagement may be long-term focused, avoiding reactionary decisions.
- Financial literacy programs should emphasize rational decision-making strategies to reduce emotional trading during volatile periods.

Chart No: 5



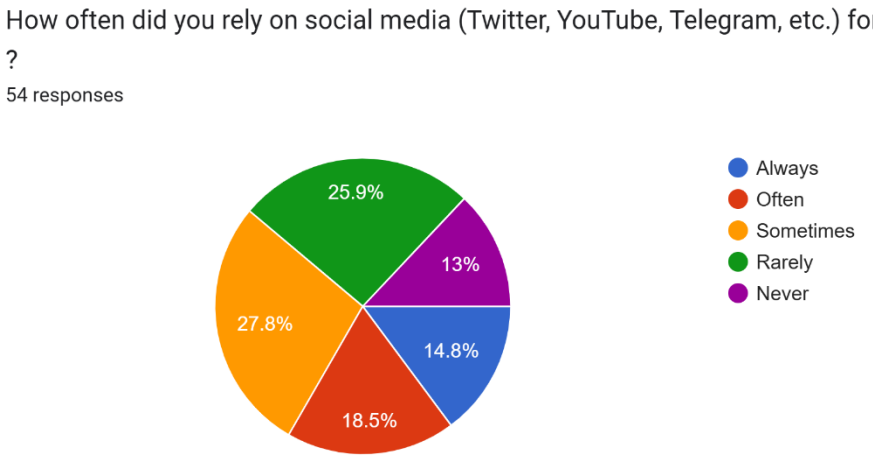
Key Findings :

- Frequent Impulsive Selling: 40.8% of investors sold stocks always (16.7%) or often (24.1%), indicating a panic-driven reaction to market downturns.
- Moderate Response: 38.9% sold stocks sometimes, showing some level of caution but still reacting to market conditions.
- Resilient Investors: 20.4% either rarely (9.3%) or never (11.1%) sold impulsively, suggesting a more disciplined, long-term approach.

Interpretation:

- High impulsive selling indicates fear-driven decision-making, which can lead to financial losses due to selling at low prices.
- The 38.9% who sold sometimes may have been influenced by market sentiment but maintained some level of control.
- Investors who rarely or never sold impulsively likely followed a strategic investment plan, avoiding emotional trading.
- Education on market psychology and long-term investment strategies can help investors mitigate panic selling during downturns.

Chart No: 6



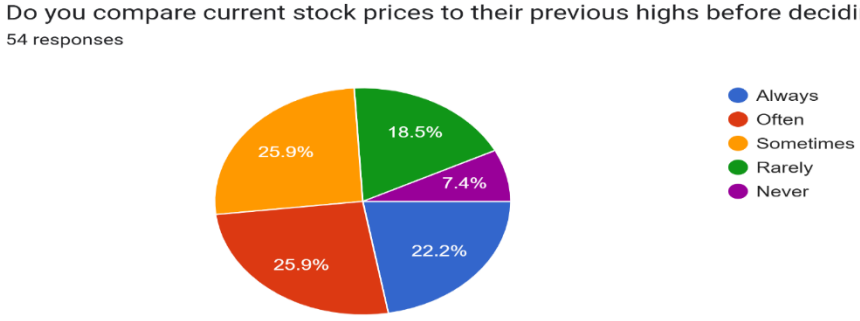
Key Findings :

- High Dependence: 33.3% of investors relied on social media always (14.8%) or often (18.5%), indicating a significant influence of digital platforms on investment choices.
- Moderate Influence: 27.8% used social media sometimes, showing a mix of independent analysis and external opinions.
- Lower Reliance: 39% of investors either rarely (25.9%) or never (13%) used social media, suggesting a preference for traditional research or professional advice.

Interpretation:

- A substantial portion of investors rely on social media, which may expose them to market hype, misinformation, or speculative trends.
- The 27.8% who used it sometimes likely cross-verified information with other sources before making decisions.
- The 39% who rarely or never used social media may prioritize financial reports, expert analysis, or fundamental research over trends and opinions.
- Financial literacy programs and awareness campaigns can help investors differentiate between reliable and misleading investment advice on social media.

Chart No: 7



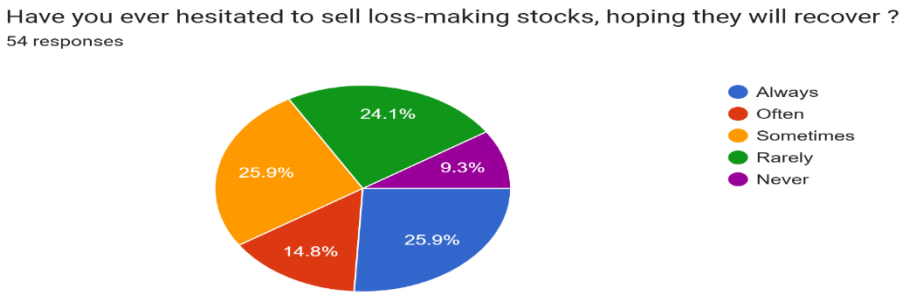
Key Findings :

- Frequent Comparison: 48.1% of investors compare stock prices to previous highs always (22.2%) or often (25.9%), indicating a strong focus on historical performance before making buy/sell decisions.
- Moderate Consideration: 25.9% compare prices sometimes, suggesting a balanced approach where past prices are considered but not the sole factor in decision-making.
- Less Reliance on Historical Prices: 25.9% rarely (18.5%) or never (7.4%) check past highs, implying a preference for fundamental analysis, market trends, or other valuation methods over historical price comparison.

Interpretation:

- The data shows that nearly half of investors heavily rely on past stock performance, which may lead to anchoring bias—where decisions are overly influenced by previous price points rather than current market conditions.
- The 25.9% who sometimes check past highs likely consider other factors such as financial statements, market trends, and economic indicators.
- Those who rarely or never compare prices may focus on intrinsic value, company fundamentals, and broader economic trends rather than past price movements.
- While looking at historical highs can help gauge potential resistance levels, investors should be cautious of over-relying on past prices, as market conditions and company performance evolve over time.

Chart No: 8



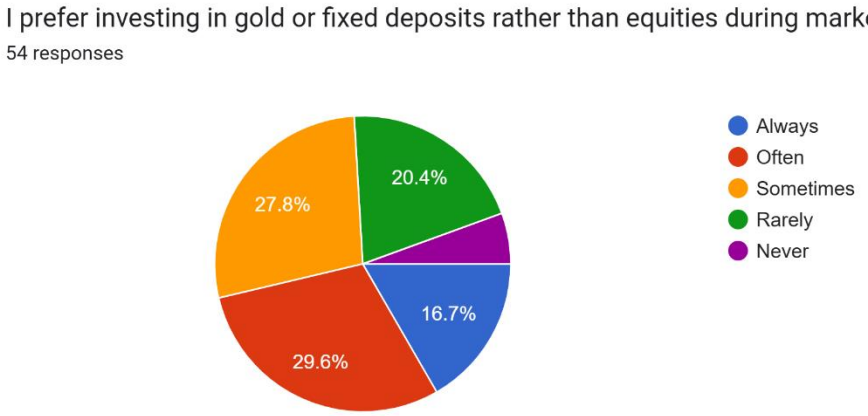
Key Findings :

- Significant Hesitation: 66.6% of investors hesitated to sell loss-making stocks, with 25.9% always, 14.8% often, and 25.9% sometimes holding onto losing positions in hopes of recovery.
- Lower Resistance to Selling: 24.1% rarely hesitated, while 9.3% never hesitated, indicating that a smaller portion of investors are more disciplined in cutting losses.

Interpretation:

- The majority of investors exhibit loss aversion bias, where they hold onto declining stocks instead of realizing losses, often hoping for a rebound.
- This behavior can lead to sunk cost fallacy, where investors continue to hold poor-performing stocks despite better opportunities elsewhere.
- Those who rarely or never hesitate to sell likely follow rational decision-making and risk management strategies, cutting losses early to reinvest in stronger assets.
- A more data-driven approach, using stop-loss strategies and objective exit plans, can help investors avoid emotional decision-making and improve portfolio performance.

Chart No: 9



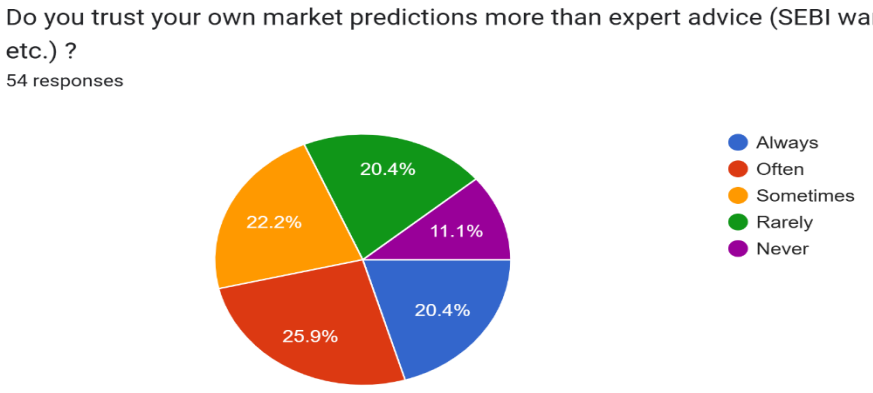
Key Findings :

- Strong Preference for Safer Assets: 46.3% of investors (16.7% always, 29.6% often) prefer shifting to gold or fixed deposits instead of equities during market downturns.
- Balanced Approach: 27.8% sometimes opt for safer assets, indicating they consider market conditions before making investment decisions.
- Risk-Tolerant Investors: 20.4% rarely and 5.6% never choose safer alternatives, showing a preference for staying invested in equities despite market volatility.

Interpretation:

- A majority of investors lean towards capital preservation in downturns, highlighting a risk-averse mindset.
- The preference for gold and fixed deposits suggests a flight to safety, where investors seek stable returns rather than volatility in equities.
- Investors who rarely or never shift assets may have a long-term investment perspective, believing in market recoveries rather than reacting to short-term declines.
- A balanced diversification strategy, maintaining exposure to both safe assets and equities, can help investors mitigate risk while capturing potential growth opportunities.

Chart No: 10



Key Findings :

- High Confidence in Personal Predictions:
  - 46.3% (20.4% always, 25.9% often) trust their own market predictions more than expert advice.
- Balanced Viewers:
  - 22.2% sometimes rely on their own judgment, suggesting they consider both personal analysis and expert insights.
- Preference for Expert Advice:
  - 20.4% rarely and 11.1% never trust their predictions over expert opinions, indicating a cautious approach and reliance on professional analysis.

Interpretation:

- A significant portion of investors prefer self-reliance in decision-making, showing confidence in their research and experience.
- However, nearly one-third still consider expert advice to some extent, indicating a mixed approach to investment strategies.
- Overconfidence bias may be at play, where some investors believe they can outperform the market despite professional analysis.
- It is crucial for investors to balance self-research with expert insights to avoid biased decision-making and reduce risks associated with market volatility.

4. Findings and Implications

4.1 Findings

1. Dominance of Loss Aversion

- Investors exhibited a strong tendency to hold onto loss-making stocks, fearing realized losses more than potential future gains.
- This behavior contributed to delayed decision-making and increased financial risk exposure during the bear market.

2. Herd Mentality Driven by Social Media

- Retail investors relied heavily on social media platforms like Twitter and Telegram for trading decisions.
- Herd-driven behavior led to panic selling and speculative trading, amplifying market volatility.

3. Overconfidence in Larger Portfolios

- Investors with larger portfolios demonstrated higher overconfidence, often trusting personal predictions over expert recommendations.
- This led to riskier investment choices and resistance to market corrections.

4. Cultural Anchoring to Safe-Haven Assets

- A strong preference for gold and fixed deposits was observed, reflecting a risk-averse mindset during bear trends.
- This cultural inclination limited market liquidity and slowed economic recovery.

5. Limited Regulatory Efficacy

- SEBI's circuit breakers and investor education initiatives had minimal impact on mitigating emotional trading behavior.
- Existing regulations failed to curb misinformation spread via social media, exacerbating irrational investment decisions.

4.2 Implications

1. Theoretical Implications

- Supports behavioral finance theories like Prospect Theory, confirming that investors prioritize avoiding losses over gaining profits.
- Demonstrates the increasing role of social media in shaping investment behavior, necessitating further research on digital finance.

2. Practical Implications

- Financial advisors must integrate behavioral coaching into investment strategies to counter loss aversion and overconfidence.
- Investors should diversify decision-making sources, relying on data-driven analysis rather than social media trends.

3. Policy Implications

- Regulatory bodies should enhance monitoring of financial misinformation and enforce stricter social media guidelines.
- Investor education programs should incorporate behavioral finance insights to help investors make rational choices.

4. Societal Implications

- Increased financial awareness is necessary to prevent widespread panic selling and speculative trading during market downturns.
- Strengthening investor literacy can contribute to a more stable and resilient financial market.

4.3 Recommendations

1. For Investors

- **Reduce Emotional Biases:** Investors should develop a disciplined investment strategy to avoid loss aversion and panic selling.
- **Diversify Investment Sources:** Relying solely on social media for financial decisions can be misleading; investors should integrate expert analysis and fundamental research.
- **Implement Risk Management Strategies:** Using stop-loss orders and portfolio diversification can mitigate potential losses during bear markets.
- **Enhance Financial Literacy:** Educating oneself about market cycles, investment psychology, and risk assessment can lead to more rational decision-making.

2. For Regulators and Policymakers

- **Monitor Financial Misinformation:** Implement stricter regulations on social media platforms to curb the spread of misleading financial advice.
- **Improve Investor Education Programs:** Strengthen financial literacy initiatives with a focus on behavioral finance to help investors navigate market downturns.
- **Enhance Market Stabilization Mechanisms:** Reevaluate the effectiveness of circuit breakers and market interventions to reduce extreme volatility.
- **Promote Transparency in Trading Platforms:** Ensure that brokerage firms provide clear risk disclosures to prevent speculative trading fueled by overconfidence.

3. For Financial Institutions

- **Integrate Behavioral Insights into Advisory Services:** Financial advisors should account for investor biases when guiding clients on risk management strategies.

- **Develop AI-Driven Sentiment Analysis Tools:** Utilize artificial intelligence to analyze investor sentiment and predict market trends for better decision-making.
- **Encourage Long-Term Investment Strategies:** Promote index funds, systematic investment plans (SIPs), and diversified asset allocation to counter herd mentality and impulsive trading.
- **Enhance Customer Awareness Campaigns:** Banks and financial institutions should conduct awareness programs to educate investors about market risks and volatility.

4.4 Suggestions

1. **Strengthen Financial Literacy Programs:** Regulators and financial institutions should introduce targeted investor education programs focusing on behavioral biases and market risks.
2. **Encourage Data-Driven Decision Making:** Investors should rely more on fundamental and technical analysis rather than social media trends to make informed investment decisions.
3. **Enhance Social Media Monitoring:** Regulatory bodies should implement stricter oversight on misleading financial content spread via digital platforms.
4. **Promote Long-Term Investment Strategies:** Financial advisors should emphasize portfolio diversification and long-term wealth-building approaches to counter herd mentality and panic selling.
5. **Improve Market Stabilization Mechanisms:** Policymakers should refine circuit breakers and other market intervention tools to better manage excessive volatility.
6. **Leverage Technology for Sentiment Analysis:** AI-driven sentiment analysis tools can help financial institutions and regulators monitor investor sentiment in real-time and take proactive measures.
7. **Strengthen Risk Disclosure Requirements:** Brokers and financial institutions should provide clear and comprehensive risk disclosures to investors before making high-risk trades.

4.5 Conclusion:

The research identifies the pivotal position of investor sentiment and behavioral biases in determining stock market volatility during bear trends. Results affirm that loss aversion causes panic selling, whereas herd behavior—fueled especially by social media—triggers irrational investment choices. Moreover, overconfidence on the part of investors with bigger portfolios leads to increased risk exposure, affecting market stability as a whole. These behavioral tendencies cause market inefficiencies, furthering the necessity for investor education and regulation. Cultural aspects also take center stage, with Indian investors habitually anchoring their investments in safe-haven instruments such as gold and fixed deposits, impacting liquidity and economic recovery. Though regulatory agencies such as SEBI have implemented circuit breakers and financial literacy initiatives, their ability to control emotional trading and disinformation is limited. To address these challenges, investors have to use data-based decision-making, diversify sources of information, and implement risk management. Regulators ought to enhance social media surveillance, enhance investor education programs, and strengthen market stabilization mechanisms. Financial institutions ought to incorporate behavioral insights in advisory services and utilize AI-based sentiment analysis for more accurate market forecasts.

In summary, the psychology of the investor is an integral mover behind market trends, especially in periods of a bear. With counteraction against biases in human behaviors, greater understanding of personal and global finances, and effective strict regulations, investment environments can then become steadier and less affected by possible next-market depressions.

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