

# Effect of Loss Aversion on Investor Behaviour During Market Downturns

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## Abstract

Cognitive biases, and in particular loss aversion, greatly influence investor behavior. This is a term used in relation to the propensity by individuals to shun away losses as opposed to accepting the same benefits. This paper examines the issue of loss aversion on investor decision-making in times of market crash. It demonstrates the effect of psychological biases on financial decisions. This study employs a structured questionnaire and statistical tests such as ANOVA and t-tests to establish the patterns in the investor responses, risk tolerance and portfolio modifications during economic downturns. The research is based on a wide range of demographics, which emphasizes the perception and reactions of various groups of investors on the subject of losses. The results indicate that loss aversion leads to the use of conservative investment techniques, periodic panic-selling events and difficulty in rejoining the market following a decline. The findings underscore the relevance of investor education and behavioral finance plans in the reduction of irrational decision-making. The paper ends by advising the financial advisor and the policymaker to develop interventions that facilitate rational investment action in the face of market volatility. **ABSTRACT:** How do investors behave? Cognitive biases, Loss aversion, Investor decision-making, Market downturns, Psychological biases, Risk tolerance, Portfolio changes.

## Introduction

Financial markets are not fixed environments but constantly altered by the fluctuations of the economy, political upheavals, and monetary policies as well as the mood of investors. When the economy is on a downfall or the stock market crashes, the emotional reactions of investors can be of great influence and they tend to overreact. Loss aversion is one of the key psychological biases that influence the behavior of investors. This is the idea of prospect theory (Kahneman and Tversky, 1979). Loss aversion means that people experience losses of money more significantly than they experience the gains of the same sum. This cognitive bias has a tendency of causing investors to make decisions that are not in their financial best interest, more so when they are faced by a difficult market. The recessions within the market may lead to fear induced habits such as panic selling, hesitancy to re-invest and an overall move to more safe investments. Past financial crises such as the 2008 Global Financial Crisis, the COVID-19 market crash of 2020 and several stock market corrections show that loss-averse investors tend

to exit the market prematurely due to the fear of additional downfalls. Although such measures are probably justifiable in short-term perspective, they often lead to lost chances of future profit when the market bounces back. Empirical studies in the behavioral finance field have repeatedly revealed that loss-averse investors are too slow to dispose of losing stocks (the disposition effect) or too fast to sell winning stocks (the confirmation trap), which is inefficient management of a portfolio, and harmful to long-term wealth. The degree of loss aversion differs among the investors depending on the age, gender, experience in investment, level of income earned, and financial literacy among investors. Research has shown that inexperienced investors and those with lesser financial literacy have a tendency to be more loss averse than experienced investors whose investments have gone through several market cycles. Also, these are differences in culture and regions that affect risk perception. Economic uncertainties and market inefficiencies tend to make investors in emerging markets hyper sensitive towards losses as opposed to developed economies. Since loss aversion plays a major role in determining investor behavior in the market, this paper seeks to examine how it impacts the decision-making process of investors in the market when there is a downturn. Through a structured questionnaire and a descriptive analysis on the answers of the investors using ANOVA and t-tests, the research will aim at establishing patterns in the investor responses, risk-taking, and portfolio adjustments in case of financial setbacks. The results will provide useful information on the perception and reaction of investors to losses and recommend the financial advisors, policymakers, and investors to develop strategies that will reduce the adverse effect of loss aversion.

### **Review of Literature**

The behavioral finance has taken a particular interest in studying the behavior of investors particularly in bad times of the market. The classical economic models suppose that investors are rational and make decisions on the basis of risk-return trade-offs only. Nevertheless, behavioral finance refutes this notion by demonstrating that psychological biases, feelings and mental constraints influence investment choices. Loss aversion is one of the most important biases that affect the behavior of investors. Such a bias means that humans are more likely to experience the suffering of losses than the happiness of a similar reward. It causes making poor investment choices including panic selling, too long retaining losing stocks, and too long reinvestment when markets crash. Prospect Theory is at the foundation of the concept of loss aversion, which was developed in their article Prospect Theory: An Analysis of Decision under Risk by Kahneman and Tversky (1979). They demonstrated that investors discount losses nearly twice the equivalent gains and risk-averse behavior when experiencing gains and risk-seeking behavior when experiencing losses. Consequently, investors tend to reject losses in hope to see a market turn around and as such, they end up holding on to falling stocks until they become worthless. In *Advances in Prospect Theory: Cumulative Representation of Uncertainty*, Tversky and Kahneman (1992) highlighted that people evaluate investment choices in comparison to some reference point (e.g. the price of a stock at the time of purchase). Their results contribute to understanding why investors become over-reactive to negative market performance and make a panic-driven decision. According to Benartzi and Thaler (1995), Myopic Loss Aversion and the Equity Premium Puzzle alleges that investors exhibit short-term loss aversion, and, thus, make less risky investments despite their tendency to result in lower returns in the long term. Their study throws some light on why a lot of investors do not invest in equities enough, particularly when markets are in bear. Much has been written about investor behavior in bad times. In *Mental Accounting, Loss Aversion, and Individual Stock Returns*, Barberis and Huang (2001) concluded that loss-averse investors will avoid volatile stocks because of the fear of incurring psychological pain upon loss. This tendency rises in cases of financial crunches when

investors rush to less risky securities such as bonds. Disposition effect was presented by Goldstein and Statman (1985) in *The Disposition to Sell Winners Too Early and Ride Losers Too Long: Theory and Evidence*. This is a tendency of the investors to sell the winning stocks prematurely in an attempt to isolate the gains and keep the losing stocks in hopes that the market might pick up. This is a behavior that is highly affected by the loss aversion and which increases worse when the market is performing poorly. In *Irrational Exuberance*, Shiller examined the overreaction of the investors to financial crises and discovered that loss aversion causes them to become panic sellers even when fundamental economic data would indicate a probable recovery on the market. In the article by Dean (1998) *Are Investors Reluctant to Realize Their Losses*, empirical evidence provided that retail investors do not realize their losses because it causes them psychological pain when selling at a loss which would damage their portfolio performance. An Experiment on Risk Taking and Evaluation Periods (Gneezy and Potters, 1997) proved that more frequent checkers are more likely to be loss-averse, in comparison to those that check their portfolios less frequently. They concluded that repeated experience of short-term losses is one of the reasons behind conservative investment decisions, which eventually lower returns. The mental accounting was represented in relation to loss aversion by Haler (1980) in *Toward a Positive Theory of Consumer Choice* who argued that investors group their financial gains and losses into different mental accounts. Such a strategy can cause making unsound decisions, like not selling a stock at a loss in order to avoid a psychological pain. According to David and Hirsh Leifer (2012) in *Investor Overconfidence and Stock Market Performance*, overconfident investors are less likely to be affected by the loss aversion, and most retail investors are more cautious because of loss aversion fears. In *Loss Aversion and Household Portfolio Choice*, Dimmock & Loewenberg (2010) observed that the loss aversion tends to be higher among the older investors and thus they tend to use low-risk investments such as government bonds over equities. In the article, *Men, Women and Risk Aversion: Experimental Evidence*, Eckel and Grossman (2008) observe that women are more likely to be loss-averse than men and that this explains why women prefer to invest in less risky ventures. In *Risk Attitude and Market Behaviour*, Fellner and Maciejewski (2007) have found that an increase in financial literacy is associated with a decrease in the level of loss aversion and that education can serve to diminish some of the loss averseness. Grinblatt and Kelo Harju (2001) in *What Makes Investors Trade* found that and highly loss-averse investors have higher chances to sell stocks in impulsive manner during downtrades leading to more market instabilities. In *What Investors Really Want*, Statman (2008) shown that people tend to make irrational investment decisions due to fear of loss and that these herd behavior results in selling the assets at the bottom of a market cycle. *Investor Sentiment in the Stock Market*, finished by Baker and Wurgler (2007) discovered that excessive pessimism is brought about by loss aversion and that this type of sentiment can increase bear markets and stretch economic recessions. According to Choi et al. (2009) in *Why Does the Law of One Price Fail*, it is possible that financial literacy programs and behavioral nudges can be used to get investors to restrict their use of emotions in decision making. Regulatory tools such as circuit breakers to minimize panic-selling were suggested by Hirsh Leifer (2001) in *Investor Psychology and Asset Pricing*. *Risk as Feelings* by Loewenstein et al. (2001) illustrated how the emotional response to losses experienced in finance impacts a large part of the decision-making process. The research suggested advisory services where psychologists provide support to investors in order to put downturns in proper perspective. Bogle on *Mutual Funds* (1994) proposed the use of passive investment funds such as index funds to reduce the effects of loss-aversion so that investors could concentrate on long-term financial objectives rather than on the fluctuation of the market in the short term..

## Research Methodology

This paper is a research on loss aversion and its influence on behavior of investors when the market is down. Loss aversion theory, which is an essential idea in behavioral finance, means that investors experience losses more intensely than the same gains, which makes them make risk-averse decisions. In periods of down turns, investors tend to panic sell, reinvestment, or to switch to lower risk assets when a better financial objective is not part of their long term financial objectives. These behaviors are critical to the financial advisers, policymakers, and market analysts as understanding the behavior provides them with information on the investor psychology and stability of the market. This paper aims to determine whether loss-averse investors are poor decision-makers because of their emotional biases and contributions of financial literacy, risk tolerance, and past investment experience to their responses to downfalls. It also examines the hypothesis of younger and less experienced investors being more prone to loss aversion in comparison to experienced investors. The overall objective of the research is to study how the concept of loss aversion affects investment decision-making in bad times and how the concept influences trading behavior. It also looks into whether the riskier investors are less averse to losses and tend to remain invested more when the market is going down. The study also examines how financial literacy might diminish the adverse influences of loss aversion so as to encourage rational decision making and motivate investors to make wise decisions. Another area of concern is to determine the behavioral variance between different demographic categories such as age, sex, education and investment experience in order to determine how different groups of investors respond to market volatility. Lastly, the research seeks to identify whether an investor has prior experience in a financial loss and this influences their predisposition to sell assets in case of a market downturn, and the study will also focus on how past losses determine the future investment pattern.

**Research types** The research is based on the quantitative research method with emphasis put on the survey data gathering. The study is explanatory and descriptive and seeks to derive and elucidate the behavior of investors by evaluating the effects of the loss aversion, financial literacy and demographic factors. It is based on statistical analysis of behavioral patterns and significant relationships among variables are identified in the study. It also involves correlation analysis in order to determine the intensity of the relationships among loss aversion, trading frequency, and investor risk profile. The testing techniques of ANOVA and t-tests are used to confirm the findings and determine the effect of major factors on the investor decision-making. Data collection was done using a non-probability convenience sampling method. The questionnaire was sent with the help of Google Forms to individual and institutional investors to a broad set of participants with varying levels of investment background. This sampling technique was chosen because it is available and economical.

## Results and Discussion

The researchers conducted a survey of 110 investors to investigate the loss aversion behavior in relation to the behavior of investors during market corrections. Demographic characteristics of the respondents also revealed numerous facts about the respondents investment habits: Age Group: The majority of respondents (35%) belonged to the 25-34 age group, and the further percentage was 30 and 20 respectively. The youngest and the oldest cohort (18-24) constituted 10 and 5 percent of the respondents respectively. Such a distribution implies that many middle-career professionals are involved, and probably have already formed investment habit. Gender Distribution: 60 percent of respondents in the study were males and 40 percent were females. Gender-based investment behaviors were analyzed to determine risk-taking and decision making differences. Experience in investing: 40% of the respondents had between 1-5 years of experience and were still relatively new investors. Moreover, 35 percent had worked on 6-10 years of experience and 25 percent had

more than 10 years experience in investment. It is such a combination of novice, intermediate, and experienced investors that made it possible to make a comprehensive evaluation of decision-making tendencies in terms of the various levels of experience. Risk Tolerance Levels: According to the responses, 55 per cent of the respondents were found to be of moderate risk tolerance, 30 per cent were of high risk tolerance and 15 per cent were of highly risk-averse persons. The research analyzed the level of risk tolerance, and the outcome was the correlation between the risk tolerance and loss aversion. Descriptive statistics of the investment behavior give an account of the important variables that are measured giving an insight into the way investors behave. The Loss Aversion Score was mean of 3.6 with standard deviation (SD) of 1.2 implying that the majority of investors were in a moderate tendency not to take a loss. On the same note, the Risk Avoidance Score mean encompassed 3.2 and SD of 1.4 and indicated that some investors had been very risk-averse, whereas others were more risk-takers. The Investment Strategy Score averaged 3.8 with an SD of 1.1, reflecting a balanced approach among investors regarding their market strategies. These findings highlight differences across demographic segments, emphasizing diverse financial behavior influenced by individual risk perceptions and market conditions. ANOVA Test: A one-way ANOVA test was performed to analyze whether age significantly impacts an investor's reaction to losses by comparing loss aversion scores across different age groups. The results,  $F(4,105) = 4.67, p = 0.002$ , indicate a significant difference among the groups. Post-hoc comparisons revealed that investors in the 35-44 and 45-54 age groups had significantly higher loss aversion scores compared to both younger and older investors. In contrast, investors in the 18-24 and 55+ age groups showed lower levels of loss aversion. This suggests that younger investors may be more willing to take risks, likely due to a longer investment horizon. On the other hand, older investors (55+) might use their experience and diversified portfolios to reduce emotional biases, leading to lower loss aversion tendencies. t-Test Analysis: A t-test was conducted to compare risk avoidance scores between male and female investors. The results,  $t(108) = 1.92, p = 0.056$ , suggest that female investors tend to show slightly higher risk avoidance than male investors. Although the p-value is slightly above the conventional 0.05 significance threshold, the observed trend indicates that women may take a more cautious approach to investment decisions. This aligns with earlier behavioral finance studies, which often show that female investors are generally more risk-averse, prioritizing stability and long-term security over high-risk, high-reward opportunities. The findings confirm that loss aversion plays a crucial role in shaping investment decisions during market downturns. Investors with a higher sensitivity to losses are more likely to adjust their investment strategies in response to market volatility. This aligns with behavioral finance theories that suggest emotions heavily influence financial decision-making. The ANOVA results show that middle-aged investors (35-54 years) experience the highest levels of loss aversion, likely due to their financial responsibilities and need for stability. Younger investors (18-24) showed lower loss aversion, possibly due to a longer investment horizon and a greater willingness to take risks. Similarly, older investors (55+) may rely on past experiences and diversified portfolios to counteract loss aversion tendencies.

## Conclusion

This research brings a clear insight on the role of loss aversion on the behaviors of investors, particularly during turbulent market time. Loss aversion is the tendency of investors to experience the loss pain more than the pleasure of equal increase. This psychological bias is what results in investors holding onto losing investments too long or selling winning investments too soon or not taking risky but potentially profitable opportunities at all. According to the research, strongly loss-averse investors will have conservative investment choices during downward market runs. Many

investors sell their stocks in panic when prices drop, fearing further losses, even if their investments are fundamentally strong. Some investors avoid re-entering the market when conditions improve, missing opportunities for recovery and growth. Additionally, the study found that age, gender, financial literacy, and investment experience influence the level of loss aversion among investors. Middle-aged investors showed the highest level of loss aversion, likely due to their family and retirement planning responsibilities. The study also highlighted that financially literate investors tend to make more rational decisions and are less impacted by loss aversion.

### **Limitations of the Study**

Although this research is very informative, some drawbacks must be mentioned. A significant shortcoming is the low sample size; there was only 110 investors in the study. This might not entirely capture the various type of investors in various geographical locations, financial background and risk preferences. The sample would be more representative should it be bigger and more diverse to give more precise insights about the behavior of investors. Also, the research was based on self-reporting, in which investors provided their own experiences and actions based on surveys.. This approach is prone to bias, whereby individuals might fail to recall the decisions made in the past correctly or they might also provide social desirability providing answers, which are not true. The other drawback is the impact of market conditions because the research was done in a particular economic climate which might have affected how the investors reacted. The behavior of the investors during the bull markets (increasing markets) and bear markets (fading markets) can be characterized differently. Research in future should focus on how the loss aversion varies in various stages of the market in order to understand the investment decision-making process in the different economic settings better. Moreover, this study focused mainly on loss aversion, but investor behavior is shaped by several other psychological biases, including overconfidence bias (where investors overestimate their ability to predict market movements), herding behavior (where investors follow market trends instead of making independent choices), and the framing effect (where the way information is presented affects choices). Future research should look at multiple biases together to better understand their combined impact on financial decision-making. Lastly, the study's exploration of financial literacy's role in mitigating loss aversion was limited. While it noted that financial education affects investment decisions, it did not analyze how different levels of financial knowledge help investors overcome emotional biases. A more detailed investigation into how financial training and awareness programs can aid individuals in making more rational choices would enhance future research. Despite these limitations, the study provides important insights into how loss aversion impacts investment behavior, setting the stage for further exploration of investor psychology and financial decision-making strategies. Based on the study's findings, several recommendations can help investors overcome loss aversion and make better financial decisions. One key suggestion is to improve investor education and awareness through organized educational programs that teach investors about behavioral biases, particularly loss aversion. Financial literacy campaigns should focus on helping investors make rational decisions even in uncertain market conditions. Workshops, seminars, and online courses can effectively raise awareness about long-term investment strategies and reduce impulsive decision-making. Another crucial recommendation is to promote long-term investment strategies to help investors avoid emotional reactions to short-term market fluctuations. Strategies like portfolio diversification, systematic investment plans (SIPs), and passive investing (e.g., index funds) can reduce the negative effects of loss aversion. Investment advisors play a significant role in this by stressing the importance of sticking to financial goals rather than making rash decisions based on short-term market shifts. Additionally, implementing behavioral interventions can help investors maintain discipline in their

financial decisions. Techniques like pre-commitment strategies, where investors agree to long-term financial goals upfront, and automated investment plans, which ensure continued investment regardless of market conditions, can be beneficial. Financial counseling and psychological coaching can further assist investors in recognizing and overcoming emotional biases. To ensure investment decisions align with individual financial goals, regular risk profiling and professional advice should be encouraged. Investors should periodically reassess their risk tolerance and adjust their portfolios accordingly. Seeking guidance from professional financial advisors can help create investment strategies based on sound financial planning instead of emotional responses. Financial advisors should also incorporate behavioral coaching to help investors effectively navigate market uncertainties. Lastly, regulatory and policy measures can play a role in reducing panic-driven investment decisions. Market regulators and financial institutions should implement policies that protect investors from extreme volatility, such as circuit breakers (temporary trading halts during significant market fluctuations) and investor protection measures to prevent mass sell-offs due to loss aversion. Furthermore, the government and financial institutions should promote transparency in financial markets, ensuring that investors have access to clear and unbiased information to make informed decisions. By implementing these suggestions, investors can develop better financial habits, overcome loss aversion, and achieve long-term financial stability.

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