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Emotional Biases and Mutual Fund Investment Decision-Making: Evidence from Retail Investors in an Emerging Market

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Abstract

Behavioural finance challenges the traditional assumption that investors make fully rational decisions by highlighting the influence of psychological and emotional factors on financial behaviour. Despite the growing popularity of mutual funds in emerging economies, limited empirical evidence exists on how emotional biases shape retail investors' investment decisions. This study investigates the influence of four emotional biases—overconfidence, herding, loss aversion, and availability bias—on mutual fund investment decision-making among retail investors in Surat, India. A quantitative research design was adopted using a structured questionnaire administered to 202 mutual fund investors selected through convenience sampling. Data were analysed using descriptive statistics, Pearson correlation analysis, and multiple regression analysis in SPSS. The findings reveal that emotional biases are significantly associated with investment decision-making. Among the examined biases, overconfidence and loss aversion exert a statistically significant positive influence on investors' decisions, whereas herding and availability bias do not demonstrate significant effects when controlling for other behavioural factors. The regression model explains 57.5% of the variance in investment decision-making, indicating substantial explanatory power. These findings reinforce the growing relevance of behavioural finance in explaining investor behaviour beyond conventional rational choice models. The study contributes to the behavioural finance literature by providing empirical evidence from an emerging market context and offers practical implications for investors, mutual fund companies, financial advisors, and policymakers seeking to promote more informed and rational investment decisions through behavioural awareness and investor education.

Keywords: Behavioural Finance, Emotional Biases, Mutual Fund Investment, Investment Decision-Making, Overconfidence Bias, Loss Aversion, Herding Behaviour, Availability Bias, Retail Investors, India.

Introduction

Investment decision-making has traditionally been explained through the lens of rational economic theory, which assumes that investors objectively evaluate available information to maximize expected returns while minimizing risk. Foundational theories such as the Efficient Market Hypothesis (EMH), Capital Asset Pricing Model (CAPM), and Modern Portfolio Theory (MPT) are built upon the premise that financial markets are efficient and that investors behave rationally when making investment decisions. However, numerous market anomalies, speculative bubbles, and recurring financial crises have challenged these assumptions, suggesting that investor behaviour frequently deviates from rational expectations (Kahneman & Tversky, 1979; Barberis & Thaler, 2003).

Behavioural finance emerged as an alternative perspective by integrating insights from psychology and economics to explain how cognitive and emotional factors influence financial decision-making. Rather than acting as perfectly rational agents, investors often rely on heuristics and are influenced by emotions, resulting in systematic biases that affect investment choices. These behavioural tendencies may lead investors to overestimate their knowledge, avoid realizing losses, imitate the behaviour of others, or rely excessively on readily available information instead of conducting comprehensive financial analysis (Shefrin, 2007; Nofsinger, 2017).

Among various investment avenues, mutual funds have become one of the most preferred financial products because they offer diversification, professional fund management, liquidity, and accessibility for retail investors. The rapid expansion of the Indian mutual fund industry, supported by increasing financial inclusion, digital investment platforms, and systematic investment plans (SIPs), has attracted a growing number of first-time investors. Despite these advantages, mutual fund investment decisions remain susceptible to behavioural influences, particularly among retail investors who often possess limited investment experience and financial expertise.

Previous studies have documented that emotional biases significantly influence investment behaviour. Overconfidence may encourage investors to overestimate their ability to select superior mutual funds or forecast future market performance. Loss aversion often causes investors to react more strongly to potential losses than equivalent gains, leading to conservative or delayed investment decisions. Herding behaviour encourages investors to imitate the decisions of friends, relatives, or the broader market rather than relying on independent evaluation, whereas availability bias results in decisions based on information that is recent, familiar, or easily accessible through media and digital platforms (Baker & Nofsinger, 2002; Waweru et al., 2008; Prosad et al., 2015; Jain et al., 2020).

Although behavioural finance has received substantial scholarly attention over the past two decades, empirical evidence regarding emotional biases in mutual fund investment decisions remains relatively limited, particularly in emerging economies such as India. Much of the existing literature has focused on equity investors, stock market participants, or institutional investors, while comparatively fewer studies have examined behavioural influences specifically among retail mutual fund investors. Furthermore, findings regarding the relative importance of different emotional biases remain inconsistent across countries and investment environments, indicating the need for additional empirical investigation.

India provides an appropriate context for examining behavioural influences because of its rapidly expanding retail investor base, increasing adoption of mutual funds, and growing participation of young investors in financial markets. Understanding the psychological determinants of mutual fund investment behaviour is important not only for advancing behavioural finance theory but also for improving investor education, financial advisory services, and policy initiatives aimed at encouraging informed investment decisions.

Accordingly, this study examines the influence of four prominent emotional biases—overconfidence, herding, loss aversion, and availability bias—on mutual fund investment decision-making among retail investors in Surat, Gujarat. Using primary data collected from 202 mutual fund investors and employing correlation and multiple regression analyses, the study evaluates the extent to which these behavioural factors explain variations in investment decisions.

The study contributes to the behavioural finance literature in three important ways. First, it extends empirical evidence on emotional biases within the context of retail mutual fund investors in an emerging economy. Second, it compares the relative influence of four major behavioural biases on investment decision-making using a unified analytical framework. Third, the findings provide practical implications for mutual fund companies, financial advisors, regulators, and investor education programmes by identifying behavioural tendencies that may hinder rational investment decisions.

The remainder of the paper is organised as follows. Section 2 reviews the relevant literature and develops the research hypotheses. Section 3 presents the research methodology. Section 4 reports the empirical findings, while Section 5 discusses the results and their theoretical and managerial implications. The final section concludes the study by outlining its limitations and suggesting directions for future research.

Literature Review and Hypotheses Development

- **Behavioural Finance and Investment Decision-Making**

Behavioural finance emerged as a response to the limitations of traditional finance theories, which assume that investors behave rationally and always maximize expected utility. Contrary to these assumptions, behavioural finance argues that investment decisions are frequently influenced by psychological and emotional factors that cause systematic deviations from rational behaviour (Kahneman & Tversky, 1979; Barberis & Thaler, 2003). Investors often rely on heuristics, intuition, and emotions when evaluating investment opportunities, particularly under conditions of uncertainty.

Previous research has consistently demonstrated that behavioural biases influence asset selection, portfolio allocation, trading frequency, and risk perception (Shefrin, 2007; Baker & Nofsinger, 2002). Rather than processing all available information objectively, investors tend to simplify complex financial decisions through mental shortcuts, making them vulnerable to irrational investment behaviour. Consequently, behavioural finance has become an important theoretical framework for explaining investment decisions that cannot be adequately interpreted using conventional financial theories.

The growing participation of retail investors in mutual funds has further increased the relevance of behavioural finance. Although mutual funds are professionally managed and diversified investment vehicles, investors' decisions regarding fund selection, investment timing, and redemption continue to be affected by emotional biases. These behavioural tendencies often result in suboptimal investment outcomes despite the availability of professional financial advice.

- **Emotional Biases and Mutual Fund Investment Decisions**

Emotional biases arise when investment decisions are driven primarily by feelings, intuition, or psychological reactions rather than objective financial analysis. Such biases influence how investors interpret information, perceive risk, and respond to market uncertainty.

One of the most widely studied emotional biases is **overconfidence**, which reflects investors' tendency to overestimate their knowledge, forecasting ability, and investment skills. Overconfident investors frequently underestimate investment risk, trade more aggressively, and believe they can consistently outperform the market (Barber & Odean, 2001; Prosad et al., 2015). In the context of mutual funds, overconfidence may encourage investors to rely excessively on their personal judgement while ignoring professional advice or objective performance indicators.

Loss aversion, derived from Prospect Theory (Kahneman & Tversky, 1979), explains that individuals experience the psychological pain of losses more intensely than the satisfaction derived from equivalent gains. Consequently, investors may

avoid realizing losses, delay portfolio rebalancing, or prefer conservative investment strategies even when higher-return opportunities exist. Previous studies consistently identify loss aversion as one of the strongest behavioural determinants of investment decisions (Jain et al., 2020; Chaudhary, 2025).

Another important behavioural tendency is **herding, whereby investors imitate the actions of other market participants rather than** relying on independent financial analysis. Herding is particularly common during periods of market uncertainty because following the majority reduces psychological discomfort and perceived responsibility for investment outcomes (Waweru et al., 2008). While herding may occasionally generate favourable outcomes, excessive dependence on market sentiment can contribute to speculative bubbles and inefficient investment decisions.

Similarly, **availability bias** occurs when investors base decisions on information that is recent, familiar, or easily accessible rather than conducting comprehensive analysis. Media coverage, social networking platforms, advertisements, and recommendations from financial influencers often become primary sources of information, potentially leading investors to overreact to recent events while neglecting long-term fundamentals (Tversky & Kahneman, 1973). As digital investment platforms continue to expand, the influence of readily available information on investor behaviour has become increasingly important.

Collectively, these emotional biases demonstrate that mutual fund investment decisions are shaped not only by financial fundamentals but also by investors' psychological characteristics.

- **Research Gap**

Although behavioural finance has attracted substantial scholarly attention, several research gaps remain. First, much of the existing empirical literature has concentrated on stock market investors, institutional investors, or general financial decision-making, while comparatively limited attention has been devoted specifically to retail mutual fund investors.

Second, previous studies have frequently examined behavioural biases individually, making it difficult to understand their relative influence when considered simultaneously within a unified analytical framework. Since multiple emotional biases may coexist during the investment decision process, analysing them together provides a more comprehensive understanding of investor behaviour.

Third, empirical findings concerning the significance of individual behavioural biases remain inconsistent across countries and market environments. While some studies report strong effects of herding and availability bias, others identify overconfidence and loss aversion as the dominant determinants of investment

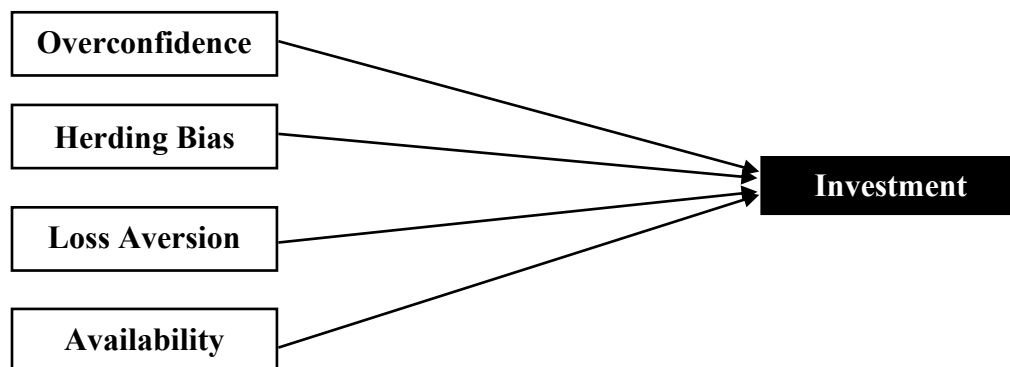
behaviour. These inconsistencies suggest that behavioural influences may vary across different economic, cultural, and demographic contexts.

Finally, relatively few studies have examined emotional biases among retail mutual fund investors in emerging Indian cities. Given the rapid expansion of India's mutual fund industry and increasing participation of first-time investors, further empirical evidence is required to understand how emotional biases influence mutual fund investment decisions in this context.

Accordingly, the present study addresses these research gaps by examining the simultaneous influence of overconfidence bias, herding behaviour, loss aversion, and availability bias on mutual fund investment decision-making among retail investors in Surat, Gujarat.

Conceptual Framework

The proposed conceptual framework examines the direct effects of four emotional biases—overconfidence, herding behaviour, loss aversion, and availability bias—on mutual fund investment decision-making. Each emotional bias is treated as an independent construct influencing the dependent variable, namely mutual fund investment decision-making. The framework is grounded in behavioural finance theory, which posits that psychological factors systematically influence investors' financial decisions beyond purely rational considerations.



Research Methodology

- **Research Design**

This study adopted a **quantitative, cross-sectional research design** to investigate the influence of emotional biases on mutual fund investment decision-making among retail investors. A quantitative approach was considered appropriate because it enables the statistical examination of relationships among behavioural constructs and investment decisions. The cross-sectional design facilitated the collection of data from respondents at a single point in time, providing a snapshot of investors' behavioural characteristics.

- **Population and Sampling**

The target population comprised retail investors actively investing in mutual funds in Surat, Gujarat, India. Since a comprehensive sampling frame of mutual fund investors was unavailable, **non-probability convenience sampling** was employed. Although convenience sampling limits the generalisability of findings, it is widely adopted in behavioural finance research where respondents are selected based on accessibility and willingness to participate.

A total of **202 valid responses** were collected through both online and offline surveys. The sample size is considered adequate for multiple regression analysis involving four independent variables and satisfies commonly recommended minimum sample requirements for behavioural research.

- **Data Collection**

Primary data were collected using a structured questionnaire developed from established behavioural finance literature. The questionnaire consisted of two sections. The first section gathered demographic and investment-related information, including age, gender, educational qualification, occupation, investment experience, risk preference, income, and investment horizon. The second section measured emotional biases and investment decision-making.

All measurement items were assessed using a five-point Likert scale, ranging from 1 = Strongly Disagree to 5 = Strongly Agree.

- **Measurement of Variables**

The study examined one dependent variable and four independent variables.

Dependent Variable

- **Mutual Fund Investment Decision-Making (ID)**

Investment decision-making represents investors' preferences and considerations while selecting mutual fund schemes. The construct was measured using four items related to fund evaluation, fund manager reputation, historical performance, and tax-saving considerations.

- **Independent Variables**

Four emotional biases were examined as predictor variables:

- **Overconfidence Bias (OB):** Investors' tendency to overestimate their investment knowledge and decision-making ability.
- **Herding Bias (HB):** Investors' tendency to imitate the investment decisions of other individuals rather than relying on independent analysis.
- **Loss Aversion (LA):** Investors' tendency to assign greater psychological importance to avoiding losses than achieving comparable gains.

- **Availability Bias (AB):** Investors' tendency to rely on readily available or frequently encountered information while making investment decisions.

Each construct was operationalised using multiple observed indicators adapted from previous behavioural finance studies with minor modifications to suit the mutual fund context.

- **Research Hypotheses**

The following hypotheses were tested:

- H1:** Overconfidence bias significantly influences mutual fund investment decision-making.
- H2:** Herding bias significantly influences mutual fund investment decision-making.
- H3:** Loss aversion significantly influences mutual fund investment decision-making.
- H4:** Availability bias significantly influences mutual fund investment decision-making.

- **Statistical Analysis**

Data analysis was performed using **IBM SPSS Statistics**.

The analysis was conducted in four stages:

- Descriptive statistics were computed to summarise respondent characteristics and the prevalence of emotional biases.
- Pearson correlation analysis was performed to examine the associations among study variables.
- Multiple linear regression analysis was employed to evaluate the influence of emotional biases on mutual fund investment decision-making.
- Multicollinearity diagnostics were examined using **Variance Inflation Factor (VIF)** and **Tolerance** statistics to ensure that the predictor variables did not exhibit problematic levels of multicollinearity. The obtained VIF values were below the commonly accepted threshold, indicating that multicollinearity was not a concern.

Multiple Regression Model

The multiple linear regression model used in this study is expressed as:

$$\text{Investment Decision (ID)} = \beta_0 + \beta_1(\text{OB}) + \beta_2(\text{HB}) + \beta_3(\text{LA}) + \beta_4(\text{AB}) + \varepsilon$$

Where:

- **ID** = Mutual Fund Investment Decision-Making (Dependent Variable)
- **OB** = Overconfidence Bias

- **HB** = Herding Bias
 - **LA** = Loss Aversion
 - **AB** = Availability Bias
 - β_0 = Intercept (Constant)
 - $\beta_1, \beta_2, \beta_3, \beta_4$ = Regression coefficients of the independent variables
 - ε = Random error term
- **Ethical Considerations**

Participation in the survey was voluntary. Respondents were informed about the academic purpose of the study before completing the questionnaire. Confidentiality and anonymity were maintained throughout the research process, and the collected information was used solely for research purposes.

Results

• Respondent Profile

A total of 202 valid responses from retail mutual fund investors were included in the analysis. The sample consisted of 58% male and 42% female respondents. Most participants (76.2%) were between 18 and 25 years of age, indicating strong participation by young investors. More than half of the respondents (56%) possessed postgraduate qualifications, while students constituted the largest occupational group (57.4%).

Regarding investment characteristics, 50.5% of respondents had less than one year of mutual fund investment experience, suggesting that the sample was dominated by relatively new investors. Most respondents preferred moderate investment risk (56.9%) and a medium-term investment horizon (42.1%), indicating a balanced approach toward risk and return.

• Descriptive Statistics

Table 1 presents the descriptive statistics of the study variables.

Table 1: Descriptive Statistics

Variable	Mean	Standard Deviation
Investment Decision	3.27	1.20
Overconfidence Bias	3.30	1.21
Herding Bias	3.17	1.21
Loss Aversion	3.15	1.18
Availability Bias	3.21	1.21

The descriptive statistics indicate that respondents exhibited moderate levels of emotional biases, with mean scores ranging from 3.15 to 3.30. Among the independent variables, overconfidence bias recorded the highest mean score ($M = 3.30$), followed by availability bias ($M = 3.21$), herding bias ($M = 3.17$), and loss

aversion ($M = 3.15$). The dependent variable, mutual fund investment decision-making, also demonstrated a moderate level ($M = 3.27$), indicating that respondents generally considered multiple factors while making investment decisions.

• Correlation Analysis

Pearson correlation analysis was conducted to examine the relationships among the study variables.

Table 2: Pearson Correlation Matrix

Variable	1	2	3	4	5
1. Investment Decision	1				
2. Overconfidence Bias	.705**	1			
3. Herding Bias	.648**	.739**	1		
4. Loss Aversion	.659**	.641**	.727**	1	
5. Availability Bias	.624**	.689**	.774**	.741**	1

Note. **Correlation is significant at the 0.01 level (2-tailed).

The findings reveal statistically significant positive correlations among all study variables. Mutual fund investment decision-making exhibited the strongest association with overconfidence bias ($r = 0.705$, $p < 0.01$), followed by loss aversion ($r = 0.659$, $p < 0.01$), herding bias ($r = 0.648$, $p < 0.01$), and availability bias ($r = 0.624$, $p < 0.01$). These results suggest that higher levels of emotional bias are associated with stronger behavioural influence during mutual fund investment decisions.

• Multiple Regression Analysis

Multiple regression analysis was performed to determine the extent to which emotional biases explain mutual fund investment decision-making.

Model Fitness

The regression model was statistically significant ($F = 66.676$, $p < 0.001$), indicating that the selected emotional biases collectively explain variation in investment decision-making.

The model produced an R^2 value of 0.575, indicating that 57.5% of the variation in mutual fund investment decisions can be explained by the four emotional bias variables included in the model. The adjusted R^2 value of 0.567 suggests good explanatory power after adjusting for the number of predictors.

Furthermore, the Durbin–Watson statistic of 1.753 indicates that autocorrelation was not a concern.

Regression Coefficients

Table 3: Multiple Regression Results

Predictor	β	t-value	p-value	Decision
Overconfidence Bias	0.420	5.807	<0.001	Supported

Herding Bias	0.087	1.022	0.308	Not Supported
Loss Aversion	0.285	3.804	<0.001	Supported
Availability Bias	0.056	0.683	0.495	Not Supported

The regression analysis indicates that overconfidence bias significantly and positively influences mutual fund investment decision-making ($\beta = 0.420$, $p < 0.001$), supporting H1. Similarly, loss aversion demonstrates a statistically significant positive effect ($\beta = 0.285$, $p < 0.001$), providing support for H3.

In contrast, herding bias ($\beta = 0.087$, $p = 0.308$) and availability bias ($\beta = 0.056$, $p = 0.495$) do not significantly predict investment decision-making after controlling for the remaining behavioural variables. Consequently, H2 and H4 are not supported.

Collinearity diagnostics revealed acceptable tolerance values and Variance Inflation Factor (VIF) values below the recommended threshold of five, indicating that multicollinearity was not present.

- **Summary of Hypothesis Testing**

Table 4: Hypothesis Testing Results

Hypothesis	Statement	Result
H1	Overconfidence bias significantly influences investment decision-making.	Supported
H2	Herding bias significantly influences investment decision-making.	Not Supported
H3	Loss aversion significantly influences investment decision-making.	Supported
H4	Availability bias significantly influences investment decision-making.	Not Supported

Overall, the findings demonstrate that emotional biases play an important role in mutual fund investment decisions. However, among the four behavioural factors examined, only overconfidence bias and loss aversion exert statistically significant independent effects on investment decision-making.

Discussion

The primary objective of this study was to examine the influence of emotional biases on mutual fund investment decision-making among retail investors in Surat, India. The empirical findings reveal that emotional biases significantly shape investment behaviour; however, not all behavioural factors exert the same degree of influence. Specifically, overconfidence bias and loss aversion were found to have significant positive effects on mutual fund investment decision-making, whereas herding bias and availability bias did not demonstrate statistically significant effects after controlling for other behavioural variables.

The results indicate that **overconfidence bias** is the strongest predictor of mutual fund investment decisions. Investors who exhibit higher levels of confidence in their investment knowledge and judgement are more likely to make independent investment decisions and rely on their own assessment rather than external advice. This finding is consistent with behavioural finance theory, which suggests that investors frequently overestimate their ability to analyse financial information and predict market performance (Barber & Odean, 2001; Shefrin, 2007). Similar evidence has been reported in studies conducted by Prosad et al. (2015) and subsequent behavioural finance research, which found that overconfidence often leads investors to trade more actively and exhibit greater confidence in portfolio selection. In the context of mutual funds, excessive confidence may encourage investors to believe that they can identify superior investment opportunities despite the inherent uncertainty of financial markets.

The study also demonstrates that **loss aversion** significantly influences mutual fund investment decisions. This finding supports Prospect Theory (Kahneman & Tversky, 1979), which proposes that individuals perceive losses more intensely than equivalent gains. Consequently, investors tend to adopt cautious investment strategies and place greater emphasis on avoiding financial losses than on maximizing returns. The present findings align with previous empirical studies that identify loss aversion as one of the most influential behavioural biases affecting investment behaviour (Jain et al., 2020; Nofsinger, 2017). For retail mutual fund investors, this behavioural tendency may explain preferences for relatively stable investment options, hesitation in switching between schemes, and reluctance to redeem underperforming investments.

Contrary to expectations, **herding bias** did not significantly influence investment decision-making after accounting for other emotional biases. Although the correlation analysis suggested a positive association between herding behaviour and investment decisions, its independent effect became statistically insignificant in the regression model. One possible explanation is that respondents increasingly rely on personal financial knowledge, digital investment platforms, and professional financial advisors rather than merely following the decisions of friends, relatives, or the broader market. Additionally, the dominance of young and educated respondents in the sample may have reduced dependence on social imitation when making investment decisions. Similar findings have been reported in several emerging market studies where herding behaviour weakens after controlling for other behavioural characteristics.

Similarly, **availability bias** did not exert a statistically significant influence on mutual fund investment decisions. Although investors frequently access financial information through digital media, advertisements, and online investment platforms, readily available information alone may not be sufficient to determine investment

decisions. Instead, investors may combine publicly available information with personal experience, financial advice, and risk assessment before making investment choices. The insignificant coefficient suggests that while information accessibility remains important, it may not independently explain investment behaviour when stronger psychological factors such as overconfidence and loss aversion are simultaneously considered.

Overall, the findings reinforce the central proposition of behavioural finance that investment decisions cannot be fully explained by traditional rational choice theories. The significant effects of overconfidence and loss aversion demonstrate that investors' psychological characteristics substantially influence financial decision-making even within professionally managed investment products such as mutual funds. These findings therefore extend the growing body of behavioural finance literature by providing empirical evidence from an emerging market context and highlighting the relative importance of different emotional biases in shaping mutual fund investment behaviour.

From a practical perspective, the results suggest that investor education programmes should extend beyond financial literacy and also address behavioural awareness. Financial advisors should recognise that clients may overestimate their investment abilities or become excessively influenced by the fear of financial losses. Incorporating behavioural counselling into investment advisory services may help investors make more balanced and objective decisions. Similarly, mutual fund companies and financial regulators should design investor awareness initiatives that encourage rational evaluation of investment alternatives while reducing the adverse effects of emotional decision-making.

Overall, the study demonstrates that behavioural factors remain important determinants of mutual fund investment decisions. By identifying overconfidence and loss aversion as the most influential emotional biases, the research contributes to a deeper understanding of investor behaviour and provides valuable insights for academics, practitioners, and policymakers seeking to promote informed investment decision-making.

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