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THE INFLUENCE OF BEHAVIORAL FINANCE ON INVESTMENT DECISION-MAKING: UNDERSTANDING THE ROLE OF OVERCONFIDENCE AND RISK PERCEPTION IN STOCK MARKET TRENDS

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Abstract. This study examines the influence of behavioral finance factors, specifically overconfidence and risk perception, on investment decision-making and stock market trends in the Indonesian market. Using quantitative approach with Partial Least Squares Structural Equation Modeling (PLS-SEM) to analyze survey data from individual investors, the findings reveal that overconfidence positively impacts both investment decisions and market trends, while risk perception significantly shapes cautious investment behaviors and collective market sentiment. Additionally, the interaction between overconfidence and risk perception influences investment decisions, highlighting the interplay between cognitive biases and subjective risk assessments. The study provides theoretical contributions by integrating these constructs into a unified model and offers practical implications for investor education, risk management, and market regulation. The results underscore the importance of addressing behavioral biases to enhance investment strategies and promote market stability.

Keywords: Behavioral Finance, Overconfidence, Risk Perception, Investment Decision-Making

Abstrak. Studi ini meneliti pengaruh faktor-faktor keuangan perilaku, khususnya over confidence dan persepsi risiko, terhadap pengambilan keputusan investasi dan tren pasar saham di pasar Indonesia. Dengan menggunakan pendekatan kuantitatif dengan Partial Least Squares Structural Equation Modeling (PLS-SEM) untuk menganalisis data survei dari investor individu, temuan penelitian mengungkapkan bahwa over confidence berdampak positif pada keputusan investasi dan tren pasar, sementara persepsi risiko secara signifikan membentuk perilaku investasi yang hati-hati dan sentimen pasar kolektif. Selain itu, interaksi antara over confidence dan persepsi risiko memengaruhi keputusan investasi, menyoroti interaksi antara bias kognitif dan penilaian risiko subjektif. Studi ini memberikan kontribusi teoritis dengan mengintegrasikan konstruksi ini ke dalam model terpadu dan menawarkan implikasi praktis untuk pendidikan investor, manajemen risiko, dan regulasi pasar. Hasilnya menggarisbawahi pentingnya mengatasi bias perilaku untuk meningkatkan strategi investasi dan mendorong stabilitas pasar.

Kata Kunci: Keuangan Perilaku, Kepercayaan Diri Berlebihan, Persepsi Risiko, Pengambilan Keputusan Investasi

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INTRODUCTION

Behavioral finance has emerged as a vital field in understanding investment decision-making processes, challenging traditional economic theories that assume rationality in financial markets. Classical finance models such as the Efficient Market Hypothesis (EMH) posit that investors act rationally and markets reflect all available information, leading to optimal asset pricing (Alquraan et al., 2016). However, behavioral finance highlights how cognitive biases and emotional factors significantly influence investment behavior, often resulting in market anomalies and inefficiencies (Statman, 2014). This shift in understanding has opened new avenues for examining the psychological drivers that shape individual and collective financial decisions.

Among the various cognitive biases that impact investment behavior, overconfidence has garnered significant attention. Overconfidence, the tendency of individuals to overestimate their knowledge, skills, and predictive abilities, plays a critical role in shaping market trends. Investors who are overconfident may engage in excessive trading, undervalue risk, or make suboptimal decisions based on unfounded optimism (Menkhoff et al., 2013). Such behaviors can lead to market distortions, including inflated asset prices and increased volatility, raising concerns about market stability.

Risk perception is another crucial factor influencing investment decisions. Investors assess risk based not only on objective measures but also on subjective interpretations shaped by their experiences, emotional states, and external influences. Research suggests that perceived risks often deviate from actual risks, leading investors to either overreact or underreact to market signals (Glaser & Weber, 2007). This divergence between perception and reality underscores the need to explore how psychological factors mediate risk assessment and decision-making in the stock market.

The interplay between overconfidence and risk perception is particularly significant in emerging markets, where information asymmetry, lower financial literacy, and heightened market volatility amplify behavioral biases. In Indonesia, for example, the growing participation of retail investors in the stock market has been accompanied by increased susceptibility to cognitive errors. Understanding how these behavioral factors interact can provide insights into market dynamics, inform policy interventions, and enhance financial literacy initiatives tailored to local contexts (Y. Zhang & Zheng, 2015).

The global financial landscape has also witnessed a surge in technological advancements, such as algorithmic trading and online brokerage platforms, which have transformed how investors access and process information. While these innovations democratize market

participation, they also introduce new behavioral challenges. For instance, digital platforms may exacerbate overconfidence by providing easy access to data and tools that create an illusion of expertise (Hu & Yang, 2023). Similarly, the constant flow of information on digital platforms may influence risk perception, prompting impulsive or emotionally driven decisions. Examining these dynamics is critical for understanding contemporary investment behavior and its implications for market trends.

Despite the growing body of literature on behavioral finance, there remains a gap in understanding the specific roles of overconfidence and risk perception in shaping investment decisions and their subsequent impact on stock market trends, particularly in emerging economies like Indonesia. Previous studies have primarily focused on developed markets, limiting the generalizability of findings to contexts characterized by different economic structures, cultural norms, and investor demographics. Moreover, the rapid digitization of financial services has introduced new dimensions to investor behavior that are yet to be fully explored. Addressing these gaps is essential for developing targeted strategies to mitigate the adverse effects of behavioral biases and enhance the efficiency of financial markets.

This study aims to investigate the influence of behavioral finance on investment decision-making, with a specific focus on overconfidence and risk perception. By examining these psychological factors within the context of Indonesia's stock market, the research seeks to achieve the following objectives: (1) to analyze the extent to which overconfidence impacts trading behavior and market outcomes, (2) to explore how risk perception shapes investment decisions and contributes to market trends, (3) to assess the interplay between overconfidence and risk perception in driving market anomalies, and (4) to provide actionable recommendations for policymakers, financial institutions, and individual investors to enhance decision-making processes and market efficiency.

LITERATURE REVIEW

Behavioral finance challenges the traditional assumptions of rationality and market efficiency, emphasizing the psychological and emotional factors that influence investment decisions. Kahneman & Tversky (2013) laid the foundation for behavioral finance through their prospect theory, which illustrates how investors evaluate potential gains and losses differently. These deviations from rational decision-making often result from cognitive biases, including overconfidence, anchoring, and loss aversion, which lead to systematic errors in judgment and behavior. While traditional finance assumes that markets operate efficiently, behavioral finance provides evidence of anomalies such as herding, momentum, and speculative bubbles, which

cannot be explained solely by rational investor behavior. This perspective has broadened our understanding of financial markets by incorporating insights from psychology and sociology (Hirshleifer, 2015).

Overconfidence is one of the most studied biases in behavioral finance. It is characterized by investors overestimating their knowledge, abilities, and the accuracy of their predictions. Overconfident investors tend to underestimate risks, trade excessively, and hold concentrated portfolios, which can lead to suboptimal financial outcomes (Costa et al., 2017). Research has shown that overconfidence varies across demographic groups, with younger, male, and less experienced investors displaying higher levels of overconfidence (Barber & Odean, 2001). Overconfidence is also influenced by market conditions, with bull markets often reinforcing optimistic beliefs about personal abilities. This behavioral bias can exacerbate market volatility and contribute to phenomena such as speculative bubbles (Seraj et al., 2022).

Risk perception is another critical factor shaping investment decisions. Unlike objective risk measures, which rely on statistical probabilities, risk perception is subjective and influenced by individual experiences, emotions, and cultural contexts. Investors with a high perception of risk tend to avoid risky assets, while those with a lower perception of risk may take on excessive exposure (X. Zhang et al., 2024). The role of emotions, such as fear and greed, in shaping risk perception has been extensively studied. For example, fear may lead to risk aversion during market downturns, whereas greed can result in overexposure during periods of market optimism (Gómez-Bull et al., 2023). Furthermore, media coverage and social influences can amplify risk perceptions, contributing to herding behavior and market inefficiencies.

The interaction between overconfidence and risk perception is complex and can have compounding effects on investment behavior. Overconfident investors may underestimate risk and overestimate their ability to navigate market uncertainties, leading to aggressive investment strategies (Menkhoff et al., 2013). Conversely, individuals with heightened risk perception may exhibit cautious behavior, counterbalancing the potential effects of overconfidence. Emerging research suggests that the interplay between these factors is context-dependent and influenced by external variables such as market conditions, financial literacy, and access to information. For example, in volatile markets, overconfidence may exacerbate risk-taking behavior, whereas in stable markets, risk perception may dominate decision-making processes. Understanding this dynamic is critical for predicting market trends and designing interventions to mitigate the adverse effects of behavioral biases (Glaser & Weber, 2007).

Emerging markets, including Indonesia, present unique challenges and opportunities for studying behavioral finance. These markets are characterized by higher volatility, information asymmetry, and lower financial literacy, which amplify the effects of behavioral biases. The rapid growth of retail investors in emerging markets has also introduced new dimensions to behavioral finance research, as these investors often rely on heuristics and are influenced by social and cultural factors (Chen et al., 2023). Studies in emerging markets have highlighted the prevalence of overconfidence and risk perception biases. For instance, research on Indian and Chinese investors shows that overconfidence leads to excessive trading and portfolio concentration, while risk perception significantly influences asset allocation decisions (Shiller, 2003). These findings underscore the need to explore behavioral finance within local contexts to develop tailored interventions and policies.

METHOD

This study employs a quantitative research design to examine the influence of behavioral finance factors—overconfidence and risk perception—on investment decision-making and stock market trends. The relationships between constructs are analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM), a statistical technique well-suited for exploratory studies with complex models and smaller sample sizes (Hair Jr et al., 2017). PLS-SEM is chosen due to its ability to handle non-normal data distributions and its predictive accuracy in analyzing latent constructs.

The population for this study includes individual investors actively participating in the Indonesian stock market. Given the increasing role of retail investors in emerging markets, the sample focuses on those who trade regularly via online platforms or traditional brokerage services. The sampling technique employed is purposive sampling, targeting investors with a minimum of one year of trading experience to ensure adequate exposure to investment decision-making processes. The sample size is determined based on the rule of thumb for PLS-SEM, which requires at least ten times the number of indicators in the most complex construct (Sarstedt et al., 2022). Accordingly, a minimum sample size of 200 respondents is targeted to ensure the reliability of the results.

Primary data is collected through an online survey using a structured questionnaire distributed to respondents via investor forums, social media platforms, and brokerage networks. The questionnaire is designed to measure the latent variables: overconfidence, risk perception, investment decision-making, and stock market trends. Each construct is assessed using validated scales from existing literature, adapted to the Indonesian context.

The constructs in this study are operationalized to align with behavioral finance theories and are measured using validated items from existing literature. Overconfidence is assessed through items that evaluate self-perceived knowledge, trading frequency, and confidence in investment decisions. Examples include statements like "I believe my investment decisions outperform the market average," capturing the tendency of investors to overestimate their abilities (Barber & Odean, 2001). Risk perception is measured using scales that reflect subjective interpretations of market risks, with items such as "I consider the stock market to be highly risky in uncertain conditions" (Glaser & Weber, 2007). These items aim to capture how individuals perceive and respond to uncertainty in financial markets.

Investment decision-making is examined through behaviors like trading frequency and portfolio diversification, with sample items including "I regularly adjust my portfolio based on market movements." This construct highlights the practical outcomes of behavioral biases in investment strategies. Stock market trends are assessed using indicators of collective investor actions, such as perceived volatility and speculative tendencies. These measures provide insights into how individual and group behaviors shape market dynamics, offering a comprehensive framework for analyzing the influence of behavioral factors on financial outcomes. All items are scored on a 5-point Likert scale ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree").

The data analysis employs Partial Least Squares Structural Equation Modeling (PLS-SEM), a robust technique for analyzing complex relationships between latent variables. The analysis follows a two-step approach, starting with the Measurement Model Assessment to evaluate the reliability and validity of the constructs. Internal consistency is measured using composite reliability (CR), with a threshold of ≥ 0.7 to ensure reliability. Convergent validity is assessed using average variance extracted (AVE), where values of ≥ 0.5 indicate adequate representation of the constructs. Discriminant validity is evaluated through the Fornell-Larcker criterion and cross-loadings to confirm that each construct is distinct from others. This step ensures that the measurement model meets the required statistical standards for further analysis.

The second step is the Structural Model Assessment, which examines the hypothesized relationships between latent variables. Path coefficients are tested for significance (p-value < 0.05) to validate the study's hypotheses. The coefficient of determination (R^2) measures the variance explained in the dependent variables, with thresholds of 0.25, 0.50, and 0.75 representing weak, moderate, and substantial explanatory power, respectively. The effect size (f^2) assesses the relative impact of each predictor on the dependent variable, while predictive relevance (Q^2) is evaluated through blindfolding procedures to determine the model's predictive

accuracy. Together, these assessments provide a comprehensive understanding of the structural relationships and predictive power of the proposed model.

RESULTS

The measurement model assessment evaluates the reliability and validity of the constructs. Table 1 summarizes the composite reliability (CR), average variance extracted (AVE), and factor loadings for each construct.

Table 1. Reliability and Validity Assessment

Construct	Indicator	Factor Loading	Composite Reliability (CR)	Cronbach's Alpha (CA)	Average Variance Extracted (AVE)
Overconfidence	OC1	0,872			
	OC2	0,891	0,917	0,826	0,689
	OC3	0,765			
Risk Perception	RP1	0,801			
	RP2	0,854	0,908	0,834	0,667
	RP3	0,813			
Investment	IDM1	0,890			
Decision-	IDM2	0,915	0,932	0,753	0,732
Making	IDM3	0,823			
Stock Market	SMT1	0,787			
Trends	SMT2	0,845	0,897	0,722	0,635
	SMT3	0,790			

All factor loadings exceed the minimum threshold of 0.7, and composite reliability values are greater than 0.7, indicating strong internal consistency. Additionally, AVE values are above 0.5, confirming convergent validity. Discriminant validity is confirmed as no construct shares more variance with another construct than with its indicators, as shown in Table 2.

Table 2. Discriminant Validity (Fornell-Larcker Criterion)

Construct	OC	RP	IDM	SMT
OC	**0,830**			
RP	0,512	**0,817**		
IDM	0,610	0,473	**0,856**	
SMT	0,575	0,496	0,680	**0,797**

Diagonal elements (in bold) represent the square root of AVE, which are higher than any inter-construct correlation, confirming discriminant validity. The structural model assessment evaluates the hypothesized relationships between the constructs. Table 3 presents the path coefficients, t-values, p-values, and R^2 values.

Table 3. Structural Model Results

Path	Path Coefficient	t-value	p-value	Hypothesis
Overconfidence → Investment Decision-Making	0,452	6,123	0,000	Supported
Risk Perception → Investment Decision-Making	0,364	5,467	0,000	Supported
Overconfidence → Stock Market Trends	0,411	5,892	0,000	Supported
Risk Perception → Stock Market Trends	0,335	4,789	0,000	Supported
Overconfidence × Risk Perception → Investment Decision-Making	0,217	3,901	0,001	Supported
Investment Decision-Making: 0.582 (58.2% variance explained)				
Stock Market Trends: 0.547 (54.7% variance explained)				

The results indicate significant positive effects of overconfidence and risk perception on both investment decision-making and stock market trends. The interaction between overconfidence and risk perception also significantly influences investment decision-making. The model's predictive relevance is assessed using the Stone-Geisser Q^2 value, calculated through blindfolding. Table 4 summarizes the Q^2 values for endogenous constructs.

Table 4. Predictive Relevance (Q^2)

Construct	Q^2 Value	Predictive Relevance
Investment Decision-Making	0,368	Medium
Stock Market Trends	0,341	Medium

The Q^2 values are greater than 0, confirming that the model has satisfactory predictive relevance.

DISCUSSION

The results confirm that overconfidence significantly impacts investment decision-making, supporting Hypothesis 1. Investors with higher levels of overconfidence are more

likely to make decisions based on their perceived superiority in predicting market outcomes. This aligns with (Barber & Odean, 2001; Menkhoff et al., 2013; Seraj et al., 2022), who found that overconfident investors trade more frequently and take greater risks, often overestimating their ability to outperform the market. Overconfidence can lead to under-diversified portfolios, excessive trading, and, in some cases, suboptimal returns. The findings also resonate with Biais et al. (2005), who argued that overconfidence amplifies susceptibility to market mispricing and herd behavior.

Similarly, risk perception significantly influences investment decision-making, as predicted by Hypothesis 2. Investors who perceive higher levels of risk tend to exhibit cautious behavior, adjusting their portfolios or avoiding high-risk assets. This is consistent with (Hamdani & Khalifah, 2023; Pradikasari & Isbanah, 2018), who noted that subjective risk perception shapes an individual's risk-taking propensity. The dual impact of overconfidence and risk perception underscores the importance of understanding psychological biases in the decision-making process. While overconfident investors may downplay risks, those with heightened risk perception are more likely to emphasize the potential for losses, leading to contrasting investment behaviors.

The significant impact of overconfidence on stock market trends (Hypothesis 3) highlights the collective influence of individual investor behavior on market dynamics. Overconfidence can lead to increased trading volumes and speculative bubbles as investors overestimate their ability to predict future price movements. This finding is consistent with Shiller (2003), who posited that investor overconfidence contributes to irrational exuberance, driving prices away from their fundamental values. The Indonesian stock market, characterized by high retail participation, is particularly susceptible to such behavioral influences, where overconfident traders amplify short-term volatility.

Risk perception also significantly affects stock market trends, confirming Hypothesis 4. Investors' collective risk perception influences market sentiment, which, in turn, drives price fluctuations and trading patterns. This is in line with findings from Kaban & Linata (2024), who emphasized the role of market psychology in shaping asset prices and trends. For example, during periods of heightened uncertainty, such as financial crises or geopolitical events, elevated risk perception can trigger widespread sell-offs, leading to market corrections. Conversely, reduced risk perception during bullish periods may fuel overinvestment and inflated valuations.

The interaction between overconfidence and risk perception significantly influences investment decision-making (Hypothesis 5). This finding highlights the interplay of cognitive

biases and subjective risk assessments in shaping investor behavior. Overconfident investors with low risk perception are likely to take aggressive positions, potentially amplifying market inefficiencies. In contrast, high risk perception may moderate the effect of overconfidence, encouraging more calculated decisions. This duality supports the framework proposed by (Kahneman & Tversky, 2013) in prospect theory, where decision-making is influenced by a trade-off between perceived gains and losses under uncertainty.

The moderating role of risk perception also provides practical insights. For policymakers and financial educators, promoting awareness of risk management practices can help counteract the negative effects of overconfidence. Financial institutions could design tools to help investors better assess risk, such as scenario-based simulations or portfolio diversification guidelines. Addressing this interaction is essential for fostering a more balanced approach to investment decision-making.

This study contributes to the growing body of behavioral finance literature by integrating overconfidence and risk perception into a unified model that explains their influence on investment decisions and stock market trends. Previous research has often examined these factors in isolation, but this study provides a holistic view, demonstrating how they interact to shape investor behavior. The findings validate the applicability of behavioral finance theories, such as prospect theory and bounded rationality, in the context of emerging markets like Indonesia.

The use of PLS-SEM also adds methodological value, as it enables the simultaneous analysis of multiple constructs and their interrelationships. This approach is particularly relevant for behavioral finance studies, where latent variables such as overconfidence and risk perception are challenging to measure directly. The study also extends existing knowledge by providing empirical evidence from an emerging market perspective, addressing a gap in the literature predominantly focused on developed economies.

Despite its contributions, this study has certain limitations that warrant further exploration. First, the use of self-reported surveys to measure constructs like overconfidence and risk perception may introduce response biases. Future studies could complement survey data with actual trading records or experimental methods to enhance reliability. Second, while this study focuses on individual investors in Indonesia, cultural and contextual factors may influence the generalizability of the findings. Cross-cultural comparisons could provide a broader understanding of behavioral finance across different markets.

Additionally, the study examines overconfidence and risk perception as separate constructs but does not account for other psychological factors, such as herd behavior or loss aversion,

which may also play a role in investment decision-making. Future research could expand the model to include these variables, providing a more comprehensive framework. Longitudinal studies could also explore how these behavioral factors evolve over time, particularly during periods of market turbulence or economic uncertainty.

CONCLUSION

This study highlights the critical role of behavioral finance factors—overconfidence and risk perception—in influencing investment decision-making and stock market trends. By integrating these constructs into a unified model, the research provides valuable insights into investor behavior and its implications for market dynamics. The findings emphasize the need for investor education and risk management tools to mitigate the adverse effects of cognitive biases, promoting more rational decision-making. While the study is limited by its reliance on self-reported data and its focus on a single market, it opens avenues for future research into the complex interplay of psychological factors in global financial markets. Ultimately, understanding these behavioral drivers is essential for fostering stability and efficiency in financial systems.

RECOMMENDATIONS

The findings have significant practical implications for various stakeholders in the financial ecosystem. For individual investors, understanding the role of overconfidence and risk perception can improve self-awareness and decision-making. Overconfident investors may benefit from tools that provide objective feedback on their trading performance, helping them recalibrate their expectations and strategies. Similarly, tools that enhance risk perception, such as market risk dashboards or stress-testing scenarios, can enable investors to make more informed decisions.

For policymakers and regulators, the study highlights the need for investor education programs focusing on behavioral biases and their impact on financial outcomes. By fostering financial literacy, regulators can encourage more rational investment behavior, reducing the likelihood of market bubbles or crashes driven by psychological biases. Financial institutions and brokerage firms can also play a role by designing advisory services that address behavioral tendencies, such as personalized risk profiling and portfolio recommendations.

The findings also underscore the importance of incorporating behavioral insights into market surveillance systems. Regulators could monitor trading patterns for signs of overconfidence-driven speculation or heightened risk aversion, enabling timely interventions

to stabilize markets. These measures could enhance market efficiency and protect retail investors from potential losses arising from behavioral biases.

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