



# Investigating the relationship between managers' overconfidence and stock crash risk with emphasis on the mediating variable of company size

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### Abstract

The role of personality traits and worldview of managers on their professional judgment is not hidden from anyone, and therefore, interpreting its dimensions can help control the emotions and excessive reactions of managers to the spread of good and bad news published in relation to the business unit. Overconfidence, as a personality type that is rooted in exaggerated self-esteem, will have negative consequences on estimates, evaluations, and most importantly, professional judgment of managers. Therefore, in this study, we are looking for the relationship between managers' overconfidence and the risk of stock collapse. The correlation method has been used to analyze the data. The results of the present study show that the more optimistic managers are about future events, the more their desire to invest will be, and consequently, the risk of stock collapse will increase. Also, the size of the company, as a moderating variable, will moderate and control the relationship between overconfidence and the risk of stock collapse.

**Keywords:** Overconfidence, Stock Price Decline Risk, Financial Reporting

**JEL Classification:** [A14](#) [.G11](#) [.M41](#)

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## INTRODUCTION

Today, the science of psychology in behavioral fields is not confined to the scope of understanding interpersonal behaviors and repairing relationships between individuals, and is very influential far beyond one field, but also in other economic, political, social, and cultural fields ([Strömbäck et al., 2017](#)). In other words, understanding the dimensions, personality, and internalities of individuals in these fields can help others make better decisions. The field of investment and capital markets has also not been deprived of this knowledge, and with the growth and development of the theoretical dimensions of this field, it has received much attention from researchers ([Borghans et al., 2008](#)). In fact, understanding the personality differences of managers in companies active in capital markets can help investors and shareholders better analyze their behavioral performances in order to create a better understanding of the situation for them ([Dew & Xiao, 2011](#)). Despite the fact that managers are selected from knowledgeable and experienced individuals in the field of company management and are expected to make rational decisions, studies show that the psychological characteristics of managers also affect their decision-making ([Fernandes et al., 2014](#)). In the traditional financial economics model, it is assumed that managers, as decision-makers, behave rationally and always seek to maximize their utility ([Gatherdood, 2012](#)); however, empirical researchers believe that sometimes, in order to find the answer to financial puzzles, the possibility must be accepted that decision-makers may not behave completely rationally. In other words, the personality characteristics of managers are also important factors in their decision-making and can lead to errors in the correct decision-making path ([Yannick, 2018](#)). It is important to note that different psychological components such as managerial optimism, overconfidence, efficiency motives, managerial shortsightedness, etc. can affect the performance of managers as helmsmen and cause a relapse in their decision-making ([Rahnamay Roodposhti et al., 2018](#)). One of the important personality traits is overconfidence or hyper confidence. Overconfidence is one of the most important concepts of new behavioral finance that has a special place in both financial theories and psychology. Overconfidence causes a person to overestimate their knowledge and skills and underestimate risks, and to feel that they have control over issues and events; while this may not actually be the case.

## METHODOLOGY

The most difficult step in the process of any research is to identify the problem under study. First, there is doubt about something, an obstacle or an ambiguous situation, a doubt that needs to be determined. In any research, the type, nature, objectives of the research and its scope must first be determined so that facts can be reached using appropriate rules and tools and through valid means. Therefore, the present research is classified as applied research in terms of its purpose and its direction is retrospective. Applied research is the development of applied knowledge in a specific field. The retrospective method is used when the researcher studies the subject after the events have occurred. Also, the present research is descriptive and correlational in terms of method and nature. Descriptive because its purpose is to describe the conditions or phenomena under study and to better understand the existing conditions, and correlation because in this research the relationship between variables is considered. The present research examines the relationships between variables and seeks to prove the existence of this relationship in the current conditions based on historical data. The statistical population of this study includes companies listed on the Tehran Stock Exchange, and the available population of this study includes all companies that were active on the Tehran Stock Exchange during the period from 1397 to 1401.

## RESULTS

The first main hypothesis states: There is a significant relationship between financial manager overconfidence and stock crash risk.

According to the results obtained from the first hypothesis, it can be said that there is a significant relationship between manager overconfidence and company crash risk. Since the direction of this relationship is direct, if the company manager's overconfidence increases by one unit, the risk of stock crash increases by 1.20 units. The first hypothesis of the research will be accepted at a 95% confidence level. The results of the first hypothesis of the research are consistent with the results of Darabi ([Darabi, 2017](#)), Ebrahimi et al. ([Ebrahimi et al., 2022](#)), Sadeghi & Esmaeil Zade ([Sadeghi & Esmaeil Zade, 2021](#)), Sharpe et al. ([Sharpe et al., 2023](#)), Shaoji et al. ([Shaoji et al., 2020](#)).

The second main hypothesis states: Company size has a significant moderating role in the relationship between financial manager overconfidence and stock crash risk. The results of the second hypothesis showed that there is a positive and significant relationship between the moderating variable of manager overconfidence in company size and the risk of company crash, and the second hypothesis will be accepted. If the moderating variable of manager overconfidence in company size increases by one unit, the risk of stock crash increases by 1.04 units. As a result of the first hypothesis, we have observed that if the company manager overconfidence increases by one unit, the risk of stock crash increases by 1.20 units. By entering the company size variable as a moderator, the intensity of this relationship has decreased. That is, in large companies in the sample, the effect of financial manager overconfidence on stock crash risk is less than in all sample companies. The results of this research hypothesis are inconsistent with the results of Darabi ([Darabi, 2017](#)), but are consistent with the research of Sharpe et al. ([Sharpe et al., 2023](#)), ([Shaoji et al., 2020](#)).

## CONCLUSION

Overconfidence is a behavioral bias in which individuals or managers overestimate their abilities and predictions and see their chances of success as higher than they actually are. This bias is particularly important in the financial world, as it can influence investment or financial decisions, especially when managers are overconfident in their ability to predict markets or make strategic decisions ([Malmendier & Tate, 2005](#)). In the business world, overconfidence can lead to riskier decisions or poor investments. For example, overconfident managers may allocate large amounts of money to projects that they believe are more likely to succeed than they actually are. Because this bias often deviates from realistic and rational analysis, it can lead to a disregard for risks and hazards ([Chen et al., 2022](#)).

### Contribution of Authors

All authors participated in the process of writing the article, collecting data and analyzing it.

### Ethical Approval

All stages of the research were conducted with the informed consent of the participants and their information will remain confidential.

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### Conflict of Interest

No conflicts of interest have been declared by the authors.

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