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The Role of Fundamental Accounting Variables in Determining Systematic Risk: Financially Distressed and Healthy Corporates

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Abstract

Objective: The aim of this paper is to investigate the role of the fundamental accounting variables in determining the systematic risk by focusing on two samples of healthy and financially distressed firms.

Methods: The method is pairwise comparison. For this purpose, the data of 17975 monthly observations of healthy firms and 6430 monthly observations of distressed firms (309firm) were analyzed.

Findings: The results indicated that there is a significant difference between the status of fundamental variables in healthy and distressed stocks. Also, systematic risk in distressed firms is higher than in healthy firms (at 90% confidence level). And finally, the results showed that the expected returns and risk premium in healthy firms is higher than distressed firms.

Conclusion: The results indicated that there is a relationship between the fundamental accounting variables and systematic risk in two samples of financially distressed and healthy firms, and this relationship causes the difference in expected return and premium risk of financially distressed and healthy firms.

Contribution: Identifying the fundamental accounting variables and explaining their relationship with systematic risk by separating financially distressed and healthy firms leads to a more accurate premium risk assessment.

Keywords: Expected Return, Financial Distress, Fundamental Accounting Variables, Systematic Risk.

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Introduction

In financial literature, investment risk includes systematic and unsystematic risks. This classification is conceptualized in terms of the standard deviation of investment returns from the perspective of diversification (Kazi, 2008: 89). Unsystematic risk can be reduced through diversification, while systematic risk is non-diversifiable and arises from overall market movements (Rezaei & Heydari, 2021: 351). The principle of systematic risk states that the reward for bearing risk depends solely on the systematic risk of an investment, and the expected return of a risky asset depends only on its systematic risk (Kazi, 2008: 90). Based on the Capital Asset Pricing Model (CAPM), it can be argued that the only risk that matters is systematic risk, which is measured by beta. However, this model does not provide information about contextual factors that influence beta (Chen et al., 1986: 384). On the other hand, many market-based accounting studies have examined the role of accounting information and fundamental company variables in determining the systematic risk of securities (Beaver et al., 1970; Brimble & Hodgson, 2007; Agnew et al., 2020). Therefore, understanding the relationship between fundamental accounting variables and systematic risk is of great importance. Additionally, companies must operate in an environment dominated by risk and uncertainty, which may lead to financial distress (Jilan, 2021: 506). Financial distress, as a source of systematic risk, is a key variable in financial analyses (Agnew et al., 2020: 322). Thus, the main objective of this research is to examine the role of fundamental accounting variables in determining systematic risk in two samples of financially distressed and healthy companies.

Materials and Methods

This study employs a mean comparison method to examine the relationship between variables. For testing the research hypotheses, the required data were collected from existing sources, namely the financial statements of companies and reports from the Tehran Stock Exchange. The temporal scope of the study spans from 2012 to 2021. To calculate the research variables, annual and monthly data were collected and analyzed using statistical methods. For testing the hypotheses, since the research samples are dependent (due to some companies transitioning from financial distress to health and vice versa over the 10-year study period), the Kolmogorov-Smirnov test was first used to determine the distribution type of the research variables. Then, for variables following a normal distribution, the dependent T-test (parametric) was used, and for variables not following a normal distribution, the Wilcoxon test (non-parametric) was applied.

Results and Discussion

The findings revealed a significant difference in the status of fundamental accounting variables between healthy and financially distressed companies. Therefore, the first hypothesis of the research is confirmed. In fact, fundamental accounting variables play a significant role in predicting financial distress in companies, which explains the significant difference in the status of these variables between financially distressed and healthy companies. Additionally, according to the findings, there is a significant

difference in the level of systematic risk between healthy and financially distressed companies at a 90% confidence level. Furthermore, given that the number of observations in the distressed state is greater than in the healthy state, this indicates that the level of systematic risk in distressed companies is higher than in healthy companies. In reality, systematic risk is not static; this means that systematic risk in financially distressed companies exhibits different behavior. Financial distress indeed plays a role in the changes in the systematic risk of the company. The findings also indicated a significant difference between the expected return and risk premium of healthy companies and those of financially distressed companies. Moreover, since the number of observations in the healthy state is greater than in the distressed state, this shows that the expected return and risk premium in healthy companies are higher than in distressed companies.

Conclusions

In this study, fundamental accounting variables were used to determine systematic risk, focusing on two samples of healthy and financially distressed companies. In fact, the better the status of the fundamental variables of companies, according to the average of fundamental accounting variables in the desired community, the lower the systematic risk of those companies. Conversely, the worse the status of the fundamental variables in adverse conditions, the higher their systematic risk, following Agnew et al. (2020). The findings of the research indicated a significant difference between the status of fundamental accounting variables in healthy and financially distressed companies, suggesting that the financial ratios calculated by analysts of financial statements affect economic decision-making by users (investors, creditors, and a wide range of individuals in society) and are influenced by the company's status concerning health or financial distress. Additionally, at a 90% confidence level, the findings showed that systematic risk is higher in distressed companies than in healthy ones. This means that systematic risk is not static; that is, the systematic risk of companies behaves differently in the stage of financial distress and in the status of healthy companies. Therefore, based on the research findings, it can be concluded that the status of fundamental accounting variables in companies is a factor that leads to changes in the level of systematic risk in those companies. Thus, there is a relationship between fundamental variables and systematic risk. By examining fundamental accounting variables and systematic risk in distressed companies and those that are healthy, one can understand the role of fundamental accounting variables in determining the systematic risk of companies. On the other hand, the findings showed that the expected return and risk premium of healthy companies are higher than those of financially distressed companies. According to the research findings, it can be concluded that there is a relationship between fundamental accounting variables and systematic risk, which influences the expected return and risk premium.

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