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Research Paper

Distress Risk Anomaly and Stock Pricing[1]

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INTRODUCTION

The relationship between distress risk and stock returns has garnered significant attention as a conundrum in financial research. High levels of financial distress often indicate a company's reduced ability to issue low-risk debt, categorizing such companies as highly vulnerable to equity risk (George and Wang, 2009). This perplexing phenomenon, known as the financial distress risk anomaly, represents a puzzling cross-sectional effect. In this context, an anomaly refers to a deviation from established norms (Hornby, 2015). In finance, it signifies a departure from expected patterns in average stock returns that contradict traditional asset pricing models (Sederberg and Doherty, 2015). In modern portfolio theory-based asset pricing models, stock returns are generally linked only to systematic risk, without accounting for compensation for risks unrelated to systematic factors. However, these models often fail to fully explain variations in stock returns, prompting researchers to develop more robust models to address anomalies in return behavior (Jaafari et al., 2021). The distress risk anomaly suggests that high-credit-risk securities exhibit unexpectedly low returns, despite being significantly riskier than low-credit-risk securities. This finding challenges the fundamental risk-return relationship in finance (Andrew et al., 2021). Despite extensive research, substantial ambiguity remains regarding the nature of financial distress risk and its impact on stock return pricing. As a result, evaluating the relationship between a company’s financial distress and its efficiency, as well as identifying the factors contributing to this anomaly, is essential for advancing our understanding of financial return dynamics.

MATERIALS AND METHODS

The study population consists of all companies listed on the Tehran Stock Exchange. This specific population was chosen due to the quality of available

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information and the accessibility of financial statements and other relevant data. Following the methodology outlined by Andrew et al. (2021), the first hypothesis, which examines the impact of distress risk on stock returns, is tested using Model 1. Additionally, Model 2 is used to evaluate the second hypothesis, which posits that mispricing negatively influences distress risk and subsequently adjusts stock returns.

Model (1) $SR_{i.t} = \beta_0 + \beta_1 DR_{i.t} + \beta_2 LEV_{i.t} + \beta_3 SIZE_{i.t} + \beta_4 B/M_{i.t} + \varepsilon_{i.t}$

Model (2) $SR_{i,t} = \beta_0 + \beta_1 DR_{i.t} + \beta_2\ MiV_{i.t} + \beta_3 (DR * MiV)_{i.t} + \beta_4 LEV_{i.t} + \beta_5 SIZE_{i.t} + \beta_6 B/M_{i.t} + \varepsilon_{i.t}$

RESULTS AND DISCUSSION

This study examines the impact of mispricing on the relationship between financial distress risk and stock returns, providing insight into the distress risk anomaly. It aims to contribute to the existing body of literature on financial distress risk anomalies. The significance of this research lies in its practical implications: investors risk incurring negative returns and potential capital losses if they incorrectly select companies for their investment portfolios. To investigate the distress risk anomaly, the study first analyzed the effect of financial distress risk on stock returns. The findings confirm the existence of the distress risk anomaly among the studied companies, indicating that selecting firms with high financial distress risk can lead to unfavorable future returns for investors. The study then explored mispricing as a potential cause of this anomaly. However, the results reveal that stock mispricing does not significantly affect the negative correlation between financial distress risk and stock returns. Based on hypothesis testing, mispricing does not appear to be the underlying factor driving the distress risk anomaly. Several alternative explanations have been proposed for this phenomenon. Garlapi et al. (2008) and Garlapi and Yan (2011) suggest that the anomaly arises from renegotiation options available to shareholders during bankruptcy. Bali et al. (2019) argue that reorganization or sale options incentivize firms to aim for higher return skewness, ultimately resulting in lower stock returns. Additionally, Konrad et al. (2014) attribute the adverse distress-return relationship to the elevated likelihood of lottery-like returns from distressed firms. In emerging markets such as Iran's capital market, a significant portion of investors tend to concentrate their investments in individual stocks or portfolios comprising only a few shares (e.g., three or four). This trend likely reflects the prevalence of less experienced investors or suboptimal investment conditions, which diminish analytical capacity and adversely affect decision-making behavior (Jaafari et al; 2018).

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