

The differential long-term and short-term impacts of risk factors on stock returns of financial holdings and traditional banks

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ABSTRACT

This study investigates the differential short-term and long-term impacts of macroeconomic risk factors, specifically interest rate, exchange rate, and credit risk, on the stock returns of financial holding companies and traditional banks in Taiwan. Utilizing a Transfer Function-Noise (TFN) model and numerical analysis methods, we analyze monthly data from 2000 to 2023. To address the challenge of directly testing long-term effects involving ratio distributions, this study proposes a novel bootstrapping procedure to re-generate the multivariate probability distribution of polynomial ratios, enabling statistical testing of long-term coefficients. Outlier detection techniques are employed to mitigate bias. Our findings reveal significant heterogeneity in short-term responses to these risk factors across institutions, with financial holdings exhibiting greater sensitivity. Long-term effects, however, show convergence, suggesting similar risk management strategies over time. These insights have important implications for investment strategies, risk management practices, and financial policy formulation.

Keywords:

Risk factor, Financial holdings, Bank, Transfer function-noise model, Bootstrap simulation, Numerical analytics.

風險因子對金融控股與傳統銀行股票收益的長期和短期影響差異

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摘要

本研究探討總體經濟風險因子（特別是利率、匯率和信用風險）對臺灣金融控股公司和傳統銀行股票收益之短期和長期影響的差異。透過傳遞函數-雜訊模型（TFN）和數值分析方法，我們分析了 2000 年至 2023 年間每月的月資料。為了解決直接測試涉及比率分佈的長期效應的挑戰，本研究提出了一種新穎的拔靴法的程序（bootstrapping procedure）來重新生成多項式比率的多元機率分佈，從而能夠對長期係數進行統計測試。採用異常值檢測技術來減輕偏差。我們的研究結果顯示，兩類金融機構對這些風險因素的短期影響部份存在顯著異質性，尤其金融控股公司表現出更高的敏感性。然而，在長期影響部份則呈現出收斂趨同的情形，顯示隨著時間推移，兩類金融機構逐漸採取類似的風險管理策略。這些見解對投資策略、風險管理實踐和金融政策制定具有重要意義。

關鍵字：

風險因子、金融控股公司、銀行、轉移函數-雜訊模型、拔靴法、數值分析