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FINANCIAL STOCK MARKET CO-MOVEMENT AND CORRELATION: EVIDENCE IN THE EUROPEAN UNION (EU) AREA BEFORE AND AFTER THE OCTOBER 2008 FINANCIAL CRISIS

Abstract:

This paper investigates the effect that the financial stock market had on co-movement and correlation when modeling and forecasting individual financial stock market. According to both the Capital Asset Pricing Model (CAPM) (Sharpe-Linter-Mossin, 1960's) and portfolio theory (Markowitz, 1952), the likely presence of correlations between various financial stock markets is an important issue for stock market portfolio managers; for example, in terms of portfolio diversification, it could reduce overall portfolio risk. Hence, we propose a multivariate extension of the conditional CAPM with a time-varying beta using the state space model; this, in turn, would allow the correlation between financial stock markets to be utilized during the estimation process. This paper presents evidence based on monthly data generated by several EU area financial stock markets before and after the October 2008 financial crisis and forecasting 1 year into the future. The empirical results overwhelmingly support one's considering the financial stock market co-movement and correlation structure when modeling and forecasting individual EU area financial stock markets.

Keywords:

CAPM, Co-movement and Correlation, EU Area Financial Stock Markets, October 2008 Financial Crisis, Multivariate State Space Model, Systematic Risk.

JEL Classification: C52, C58, C19