Fama-French Five-Factor Asset Pricing Model: Testing Validity for Borsa Istanbul and German Stock Exchange

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ABSTRACT

Purpose – Fama and French (2015, 2017) proposed to expand Fama and French (1993) three-factor (portfolio & the overall market factor, firm size, and book-to-market equity) model building two new factors (profitability and investment) on, resulting in a five-factor model. This paper investigates the validity of the five-factor asset-pricing model (FF5F) in BIST30 index in Borsa Istanbul and DAX30 Index in Germany Stock Exchange.

Design/methodology/approach – Static panel data analysis is employed by the fixed-effects within-group estimator for the period 2009Q2-2018Q4 with two different types of market indices BIST30 Index and DAX30 Index in order to investigate the validity of the five-factor asset-pricing model (FF5F).

Findings – In overall, results demonstrate that there is not enough evidence to suggest the robustness of the five-factor model may be valid for stocks listed in DAX30 Index but provide evidence for two-factor model. As for, stocks listed in BIST30, we find enough empirical evidence to suggest that the four-factor model holds rather than the five-factor model.

Discussion – Due to the differentiation of developed markets in terms of higher returns and different market dynamics it is therefore of utmost importance to assess the applicability of the FF5F model for developing countries. The findings of the present paper will assist a better evaluation of the risk factors faced by firms and investors.