

ABSTRACT

The variation in stock excess returns that has not been well explained remains a problem in portfolio analysis in capital markets, thereby encouraging the development of more complex asset pricing models, such as the Fama-French Three-Factor and Carhart Four-Factor models. This study aims to evaluate the ability of these two models to explain the excess returns of stock portfolios in the IDXHIGHDIVIDEND20 index. The data used consist of daily stock prices and market index data for the period January 2025 to December 2025, as well as companies' financial statements for 2024. Portfolio formation is based on firm size (SMB) and book-to-market ratio (HML) classifications, resulting in five portfolios, namely S/M, S/H, B/L, B/M, and B/H. All portfolios are then weighted using the minimum variance method to obtain optimal investment proportions. The analysis is conducted using multiple linear regression with classical assumption tests and significance testing at the 5% level. The results show that the firm size (SMB) factor has a significant effect on all portfolios, while the book-to-market (HML) factor is only significant for the S/H, B/L, and B/H portfolios. The momentum factor (WML) in the Carhart Four-Factor model is significant for most portfolios. The coefficient of determination for the Fama-French Three-Factor model ranges from 0,42 to 0,75, while that of the Carhart Four-Factor model ranges from 0,51 to 0,76, indicating an improvement in the model's explanatory power. Based on the results of classical assumption testing, the significance of regression coefficients, and overall model evaluation, the B/H portfolio is identified as the best-performing portfolio. Performance evaluation shows that this portfolio has an expected return of 0,00103 and a Sharpe Ratio of 0,04733. The positive Sharpe Ratio indicates that the portfolio is able to generate excess returns commensurate with the level of risk borne during the study period.

Keywords: Fama-French Three Factor, Carhart Four Factor, excess return, IDXHIGHDIVIDEND20, firm size, book-to-market, momentum, mean variance