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Testing Fama and French Three-Factor Model and Earnings-to-Price on Stock Excess Return

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ABSTRAK

Bursa Efek Indonesia adalah pusat pasaran ekuiti di Indonesia. Kajian ini menguji secara empirikal model tiga-faktor Fama dan French di pasaran ekuiti Indonesia yang mana ciri-cirinya dipengaruhi oleh keadaan ekonomi Indonesia. Selain itu, model baru yang dicadangkan juga diuji di pasaran ekuiti berkenaan yang mana model tiga-faktor ini digabungkan dengan kadar hasil pendapatan untuk menjelaskan variasi ke atas lebihan kadar pulangan saham. Keputusan menunjukkan bahawa lebihan kadar pulangan saham bukan sahaja dipengaruhi oleh kadar pulangan pasaran tetapi juga dipengaruhi oleh saiz dan nisbah pasaran kepada buku. Tambahan pula, kadar hasil pendapatan membantu model tiga-faktor menerangkan variasi dalam lebihan kadar pulangan saham. Keputusan empirikal ini adalah selari dengan model tiga-faktor Fama dan French dan juga model empat-faktor. Selain daripada itu, penglibatan kadar hasil pendapatan juga dibuktikan secara empirikal dapat meningkatkan kecekapan model tiga-faktor.

Katakunci: Model tiga-faktor Fama dan French, kesan saiz kecil, kadar pulangan saham

ABSTRACT

Bursa Efek Indonesia (BEI) is the centre of Indonesia equity market. This study empirically tests Fama and French three-factor model in Indonesia equity market characteristic which is influenced by Indonesia economic condition. Furthermore, new proposed model is also tested in this equity market where three-factor model is combined with earnings yield to explain variation on stock excess return. The result shows that stock excess returns is not affected by only market return but also by size and market to book ratio. Moreover, earnings yield helps three-factor model to capture more variation in stock excess return. The empirical results are consistent with Fama and French three-factor model and also four-factor model. In addition, involvement of earnings yield also is proved empirically improve efficiency of three-factor model.

Keyword: Fama and French three-factor model, small size effect, stock return

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LIST OF ABBREVIATIONS

American Stock Exchange	AMEX
Book-to-market equity ratio	BE/ME
Bursa Efek Indonesia	BEI
Capital Asset Pricing Model	CAPM
Earnings-to-price ratio	E/P
Foreign Direct Investment	FDI
Gross Domestic Profit	GDP
High minus low	HML
National Association of Securities Dealers Automated Quotations	NASDAQ
New York Stock Exchange	NYSE
Price-to-earnings ratio	P/E
Small minus big	SMB
Underrated minus overrated	UMO

CHAPTER ONE
INTRODUCTION

1.0 Background

Stock returns are a most important concern that will always be considered as the main point when investors plan to put their money into any financial and/or real assets. Higher returns would be entailed by higher risks, and vice versa. Investors have to consider their decision in investing their money according to their risk-taking capabilities. Many theories have evolved to guide investors in measuring their appropriate risk for a given particular level of return, which will help them to make their decision easier. But not all theories created can be practiced in different markets and times. Anomalies could occur in every different condition of the global market and force scholars to test their theories occasionally and prove that the theories are still reliable.

The most well-known theory is the Capital Asset Pricing Model (CAPM), proposed by Sharpe (1964) and finally followed by Lintner (1965). They suggested that particular stock excess returns are affected solely by market portfolio excess returns. It can be said that an appropriate return on a particular stock was affected by β (non-diversifiable risk), which is explained by the relationship between its return to market return. Investors will be compensated by time values that are represented by risk-free returns and returns required for any additional risk from market portfolio excess returns. This model was proposed as an extension of the Markowitz theory of portfolio theory. In this theory, risk of portfolio is indicated by the sum of the weighted volatility of the portfolio and less volatility due to diversification and covariance between

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