Finance Research Letters 18 (2016) 108–115

Contents lists available at ScienceDirect

Finance Research Letters

journal homepage: www.elsevier.com/locate/frl

Are there significant premiums in the Saudi stock market?

Ryadh Alkhareif*

Economic Research Department, P.O. Box 2992, Riyadh 11169, Saudi Arabia

ARTICLE INFO

Article history:
Received 11 December 2015
Revised 12 March 2016
Accepted 3 April 2016
Available online 9 April 2016

JEL Classifications:
G10
G11
G12
G18
G20

Keywords:
Saudi stock exchange
Multifactor model
And factor premiums

ABSTRACT

Saudi Arabia has announced the opening of its Stock Exchange for qualified foreign investors starting June 15, 2015. This decision marks a major milestone that deserves special recognition. Given the presence of factor anomalies in other stock markets, we examine whether similar factors concur in the Saudi market. The findings confirm the existence of significant premiums for all of the factors under investigation. Interestingly, we encounter a remarkable anomaly within which riskier assets do not necessarily offer higher returns. Such findings could prove valuable for retail investors who mistakenly believe that higher risks result in higher rewards.

1. Introduction

A key question when investing in equity markets is how to properly capture significant factor premiums that largely determine the pattern of stock returns. There are a large number of factors that influence the performance of stocks. On the one hand, there are common factors that systemically affect stock markets worldwide, although possibly with different lags and magnitude. The recent financial crisis is an example of a common shock that caused turmoil in many stock markets across the globe. However, economic differences exist across countries. Idiosyncratic components such as sectorial-specific factors can certainly influence equity prices. As indicated by Alkhareif and Barnett (2015a), the downturn in the Saudi stock market in 2006 clearly exemplifies the existence of country-specific factors.

Many financial studies attempted to capture the dynamics of equity returns using a number of meaningful factors.[1] Such factors include CAPM beta, momentum, size, value, and dividend yield. In this context, Fama and French (2012) examined the relative importance of size, value, and momentum for stock returns in four key regions (North America, Europe, Japan, and Asia Pacific). Their findings confirm the significant explanatory power of return momentum and value premiums in small cap stocks for all of these regions except Japan. Baker and Haugen (2012) analyzed 21 developed and 12 emerging market economies and concluded that low-volatility stocks outperformed their high-volatility counterparts. Cheung et al. (2014), applied multifactor models to explain the pattern of stock returns in China's A-Share Market. Their findings suggest that

* Tel.: +966537699995.
E-mail address: alkhareif@gmail.com

[1] For more details, see Sharpe (1964), Mossin (1966), and Fama and French (1992).

http://dx.doi.org/10.1016/j.frl.2016.04.007
1544-6123/

Table 1
Factor construction.

Factors (e.g., HML, WML, Yield, Vol.)				
Size	Small/Low Big/ Low 30% of securities	Small/Neutral Big/ Neutral 40% of securities	Small/ High Big/High 30% of securities	10% of Market Cap 90% of Market Cap

Table 2
Summary statistics for factor returns (Jan 1999 – Dec 2014).

	Market	SMB	HML	WML	Yield	Volatility
Mean	1.08	0.40	0.72	0.48	0.50	0.73
St. Dev	6.77	3.54	5.86	1.80	2.49	6.14
T-Mean	2.20	1.58	1.70	1.83	1.36	1.66
Significance	99%	94%	95%	97%	91%	95%

Table 3
Factor correlation matrix (Jan 1999 - Dec 2014).

	Market	SMB	HML	WML	Yield	Volatility
Market	1					
SMB	0.05	1.00				
HML	0.27	-0.09	1.00			
WML	0.03	0.39	0.09	1.00		
Yield	0.08	0.14	0.76	-0.09	1.00	
Volatility	0.27	-0.11	0.04	-0.35	0.11	1.00

only two factors (i.e., value and dividend yield) contain positive and significant explanatory power in the stock returns. Other factors, including CAPM beta, size, momentum and volatility, were insignificant in explaining the stock returns' pattern.

The main goal of this study is to test for the existence of significant factor premiums in the Saudi stock exchange. This exchange, the largest in the Middle East, is evolving rapidly and more recently qualified foreign investors are allowed to join the market. Such developments will certainly influence the behavior of the market, as domestic retail investors have been the dominant player in the market since inception. Therefore, it is extremely useful for both investors and policymakers to carry out further empirical research and analysis, especially during this critical transition period.

This paper examines the existence of significant premiums to volatility, size, momentum, value, and dividend yield in the Saudi stock market. The paper is organized as follows: Section 2 outlines the methodology used in this study; Section 3 describes the dataset and sources; Section 4 discusses the empirical results; and lastly Section 5 concludes the paper.

2. Methodology

This study estimates five-factor asset-pricing model for the Saudi stock exchange. Our analysis is based on the multifactor models introduced by Fama and French (1993, 2012) and further developed by Cheung et al. (2014). In specific, the paper runs the following regression:

$$R_{it} - R_{ft} = \alpha_i + \beta_i\left(R_{mt} - R_{ft}\right) + \gamma_i SMB_t + \lambda_i HML_t + \omega_i WML_t + \eta_i Yield_t + \nu_i Volatility_t + \varepsilon_{it} \quad (1)$$

where R_{it} is the return on portfolio i and R_{ft} is the risk-free rate at time t. Thus, the left hand side of the equation stands for the excess return of the ith portfolio at time t. The variables in the right hand side R_{mt}, SMB_t, HML_t, WML_t, $Yield_t$, and $Volatility_t$ are market return, size, value, momentum, dividend yield, and volatility factors, respectively. Their corresponding coefficients are β_i, γ_i, λ_i, ω_i, η_i, ν_i, whereas α_i and ε_{it} represent the intercept and the error term, respectively.[2] Obviously, $(R_{mt} - R_{ft})$ is considered as the returns of the market premium and hence its coefficient, β_i, is the CAPM standard market premium. We use the 12-month SAMA Bills rate as a proxy for the risk-free rate, R_{ft}.

Regarding the right hand side variables, the market premium factor, $R_{mt} - R_{ft}$, is computed as the difference of the market return and the risk-free return in each month. In order to construct the size factor, SMB_t, we apply the following procedure:

I. Cluster the universe (all stocks in TASI) into two buckets: small caps, which account for 10% of total market capitalization, and big caps which account for 90% of total capitalization.

[2] The error term is assumed to be independent and normally distributed.