Pacific-Basin Finance Journal 34 (2015) 205–232

Contents lists available at ScienceDirect

Pacific-Basin Finance Journal

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

Combining momentum, value, and quality for the Islamic equity portfolio: Multi-style rotation strategies using augmented Black Litterman factor model☆

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ARTICLE INFO

Article history:
Received 24 August 2014
Accepted 24 December 2014
Available online 30 December 2014

JEL classification:
C01
C49
C58
G11
G17
G24

Keywords:
Islamic equity
Portfolio strategy
Multi-style rotation
Black Litterman factor model
Forecast

ABSTRACT

This study constructs active Islamic portfolios using a multi-style rotation strategy, derived from the three prominent styles, namely, momentum, value, and quality investing. We use the stocks that are consistently listed in the U.S. Dow Jones Islamic index for a sample period from 1996 to 2012. We also include two macroeconomic mimicking portfolios to capture the premiums of industrial production growth and inflation innovation, accommodating the economic regime shifts.

Based on the information coefficients, we find the six-month momentum and the fractal measure as momentum factors; the enterprise yield (gross profit/TEV) and the book to market ratio as valuation factors; the gross profit to total assets, the return on capital, and the scaled total accruals as quality factors. We further construct active portfolios using the augmented Black Litterman (ABL) factor model to avoid the factor alignment problem, with the factor views predicted using Markov Switching VAR, MIDAS, and Bayesian Model Averaging. The out-of-sample performance of our portfolios can produce information ratios of 0.7–0.8 over the composite indices, and information ratios of 0.42–0.48 over the style indices, with the annualized alphas of 10–11%.

☆ This is a revised version of the paper which received the 'Pacific Basin Finance Journal Research Excellence Award' at the 16th Malaysian Finance Association Annual Conference held in June 2014 at Kuala Lumpur. This paper is part of the first author's Ph.D. dissertation. The authors are grateful to the participants of the conference, the anonymous reviewer and the guest editor (Professor Mansor Ibrahim) for their valuable comments which improved the quality of the paper immensely.

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http://dx.doi.org/10.1016/j.pacfin.2014.12.006

Even when we put the constrained tracking error of 1% over the benchmark, our portfolios still produce information ratios of 0.9–1.2 before transaction costs, and 0.6–0.8 after transaction costs. We provide intuitive explanations for each premium changing over time, and suggest the promising strategy for Islamic equity investors to outperform the market.

1. Introduction

The primary goal of active equity portfolio management is to beat the market or any benchmark at a regular basis. The performance of active managers is measured by alpha (residual return) relative to its tracking error (residual volatility), which is defined as information ratio. A strand of literature suggested the need of style allocation to achieve this objective. Particularly, widespread empirical findings have documented three most prominent equity styles for active management. The first two are value and momentum investing (Cakici et al., 2013; Asness et al., 2013; Yeh and Hsu, 2011). Value strategies exploit the ratio of multiple measures of fundamental value over equity price in order to identify underpriced stocks. Momentum strategies use the principle that high cumulative returns over the past years continue to outperform. The two are driven by strong empirical studies such as value effects (Fama and French, 1992, 1996; Lakonishok, Shleifer, and Vishny, 1994; Fama, 1991; Schwert, 2003) and momentum effects (Jegadeesh and Titman, 1993, 2001). The third style comes from a recent major interest to incorporate quality, which include earnings quality (Sloan, 1996), financial strength (Piotroski, 2000; Piotroski and So, 2012), gross profitability (Novy-Marx, 2013), and so on.

Despite the superior returns gained from each of these three prominent styles, some studies showed that the different styles behave differently at different points in time (Arshanapalli, Coggin and Doukas, 1998; Oertmann, 2000; Ahmed, Lockwood and Nanda, 2002; Amenc et al., 2003). This is reasonable since each style goes in and out of favor, subject to different economic and financial risk factors. Hence, a certain style-consistent strategy cannot deliver consistent performance (Arshanapalli, Switzer, and Panju, 2007). Its main implication is that active managers should blend and rotate multiple styles consistently, with timing abilities, in order to add value. Many studies documented the promising performance of multi-style rotation strategies, due to either return enhancement or factor diversification (Vayanos and Woolley, 2013; Rousseau and van Rensburg, 2004; Bird and Casavecchia, 2007; Leivo and Pätäri, 2011; Piotroski and So, 2012; Kozlov and Petajisto, 2013; etc.).

Apart from a strand of literature on multiple equity styles' strategies in the mainstream equity markets, there is no similar study in the context of Islamic equities. The main objective of our study therefore is to formulate active equity portfolio strategies using the three prominent equity styles, namely momentum, value, and quality. There are three major reasons that motivate our research.

Firstly, the *Shariah* (Islamic) screening excludes some firms with any non-compliant activity and imposes a certain upper limit of interest-based leverage, interest income and cash-equivalent assets (Derigs and Marzban, 2008). Its consequence is a unique optimal multi-style rotating allocation, which is a central contribution of our study. Secondly, prior studies in Islamic equities focus merely on measuring the performance of either Islamic equity indices[1] or Islamic mutual funds. Our study attempts to fill the gap by formulating equity portfolio strategies with a constraint to invest only in the Islamic equity universe. Thirdly, some researches in Islamic mutual funds' performance found that Islamic funds perform averagely similar to their conventional counterparts, subject to multiple regimes (Hassan and Antoniou, 2006; Elfakhani, Hassan and Sidani, 2005; Hassan and Antoniou, 2006; Abdullah, Hassan, and Mohamad, 2007). The recent study by Kamil et al. (2013) discovered that the Malaysian Islamic equity funds do not outperform market benchmarks. When their performance is superior, only 1.95% of funds are genuinely skilled, whereas 47% of the observed positive fund alpha is statistically due to luck. In that case, our study provides an insight to Islamic portfolio managers regarding the use of multi-style rotation strategies to produce a persistent alpha.

[1] For example, see Girard and Hassan (2005).