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Are Islamic stock returns predictable? A global perspective

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ABSTRACT

Using the sharia-compliant measures, we compile a data set that spans January 1981 to December 2014 and contains 2577 Islamic stocks. Using as many as 12 financial and macroeconomic predictors, we discover strong evidence of both in-sample and out-of-sample return predictability. There is robust evidence of predictability only when U.S. stock returns are used as a predictor. We find that investing in regional (industry) portfolios offers on average, across the 12 predictors, meaningful profits of 6.16% (6.03%) per annum. Investing in a portfolio of Islamic stocks belonging to emerging markets (9.89% per annum) and a portfolio of Islamic stocks belonging to the consumer goods sector (6.37% per annum) offers the most returns amongst regions and industries, respectively.

1. Introduction

There is a proliferation of research on Islamic finance. Such has been the interest on Islamic finance that recent years have seen multiple special issues on Islamic finance published in such journals as *Journal of Economic Behaviour and Organization* and *Pacific-Basin Finance Journal*. A key challenge which has become obvious from the work on Islamic finance is the lack of historical time-series data; therefore, research questions that revolve around the use of time-series data at the stock-level are limited. Most of the time-series analyses, as a result, make use of index-level data. In this regard, the Dow Jones Islamic Stock Price Index has been the most popular. The aim of our paper is to compile a new comprehensive data set on Islamic stocks. Drawing on the Sharia-compliant principles, we screen all Islamic stocks listed on stock exchanges globally. The screening procedure is aimed at selecting stocks that persistently follow the Sharia-compliant criterion. Over the time period January 1981 to December 2014, we end up with 2577 Islamic stocks; more details are provided later, in Section 2.

Our concurrent aim is to test whether the time-series of Islamic stock returns are predictable. This is not a trivial question despite the fact that the literature on stock return predictability is voluminous and, therefore, rich (see, inter alia, Fama, 1981; Campbell, 1987; Fama and French, 1988, 1989; Campbell and Shiller, 1988a,b; Kothari and Shanken, 1997; Pontiff and Schall, 1998; Lamont, 1998; Rapach et al., 2005; Welch and Goyal, 2008; Campbell and Thompson, 2008; Rapach et al., 2010, Westerlund and Narayan, 2012). However, none of these studies considers whether Islamic stock returns are predictable. Ignoring Islamic stock returns can be costly because there are a number of important differences between Islamic stocks and non-Islamic stocks. Islamic stocks that form part of the Dow Jones Islamic Market World Index and its sub-indices, reflecting country-specific, regional and industry attributes, cover investment products that facilitate ethical investing within the context of Sharia-principles

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and differ from conventional stocks in two main ways. The first distinguishing feature is that for a stock to be categorized as a Sharia-compliant Islamic investment it must satisfy the business activity criteria. Twenty-three business activities[1] are regarded as inappropriate by Sharia-principles. In addition, a company will not qualify if its income source is from either alcohol, tobacco, pork-related products, conventional financial services (such as banking and insurance), weapons and defence, and/or entertainment and exceeds 5% of its total revenue.

The second feature that distinguishes Islamic stocks from conventional stocks relates to the financial health of the firm with particular emphasis on solvency-related measures. For instance, to qualify as an Islamic stock (a) total debt to market capitalization, (b) cash and interest bearing securities to market capitalization, and (c) accounts receivables to market capitalization, should all be <33% of the 24-month average trailing market capitalization.[2] Given the screening criteria applicable to business activities and, in particular, the financial health of individual stocks, the discriminatory ability of Islamic stocks could offer a different story regarding stock return predictability compared to what we already know with respect to non-Islamic stocks. Whether or not this is the case is the subject of this paper and, therefore, our paper takes a step in this direction of understanding Islamic stock pricing.

In addition to these features of Islamic finance, it is also imperative to note that the Islamic finance industry has grown rapidly over the last two decades, in the process becoming an alternative (to conventional finance) investment option. The main attractiveness of Islamic finance is that it brings greater diversification and financial stability (see Balcilar et al., 2015). The total value of Islamic finance assets under management was estimated to be more than US$2 trillion in 2014 with a compounded average growth rate of over 17% over 2010–2014 (Ibrahim, 2015). Ibrahim (2015) points out that the Islamic financial sector is no longer an investment option for faith-based (Muslim) investors—a point echoed by Umar (2015)—and that it is catering for the needs and demands of new customs which are predominantly non-Muslims. The recent global financial crisis has emphasized the importance of Islamic finance—which has provided the much needed stability to the financial system at a time it was most needed. Likewise the global emerging sukuk (Islamic bond) market is gaining prominence and is valued at around US$130 billion ((see Balcilar et al., 2015). This achievement is not trivial, a point made by Ibrahim (2015: 189) when he notes that: "The most exciting development is the acceptance of sukuk outside the Muslim world as manifested by its issuance in … the UK, Senegal, Hong Kong, South Africa, and Luxembourg".

To address our proposed research question, we follow three steps. In the first step, we handpick all Islamic stocks from around the globe, that is, Islamic stocks that are listed on the stock exchanges from around the world; see Section 2 for details. This search leads to a total of 2577 stocks. In the second step, we identify a range of predictors, those that have been popular in the stock return predictability literature. We identify 12 predictors of returns. These first two steps allow us to compile a unique stock-level time-series monthly data over the period January 1981 to December 2014 for 2577 Islamic stocks. In the third step, we undertake econometric tests—both in-sample and out-of-sample tests—for predictability. These statistical tests are complemented by an economic significance test where we estimate investor utility gains and profits for an investor faced with a mean-variance utility function.

Our approaches deliver the following new insights on the behaviour of Islamic stocks. First, out of the 12 commonly used predictors of returns, we find that exchange rate returns, U.S. stock returns and a commodity price index returns consistently predict both regional and sectoral stock returns. This predictability holds in both in-sample and out-of-sample tests. By comparison, inflation and money supply are the weakest predictors of returns. Second, specifically on out-of-sample evidence of predictability, we find that U.S. stock returns beat the constant returns model more consistently than does the combination forecast method. Third, in economic significance analysis, based on a mean-variance investor utility function, we discover that utility gains are positive for all regions and sectors when using U.S. returns as a predictor. Moreover, the annualized utility gains fall in the 0.42% to 3.09% range with an average utility gain of 1.73% and 1.61% per annum for regions and sectors, respectively. Fourth, we also estimate profits for a mean-variance investor and find that the most profitable region is the emerging markets with annualized profits of 9.89% followed by Africa (8.01%). The developed countries are the least profitable with an annualized profit of 3.56%. Amongst sectors, the annualized profits fall in the 5.70% to 6.37% range.

Our findings connect with several strands of the literature. Our first finding confirming the leading role of U.S. stock returns connects with a recent study by Rapach et al. (2013), who show that U.S. returns predict stock market returns of 11 industrialized countries. Our findings reveal the important role of U.S. returns for a large time-series data set on Islamic stocks. Our second finding, establishing the economic significance of predictability, connects with the broader literature on stock return predictability which shows that forecasting models do beat the constant returns model in providing investors greater utility. We discover this too; however, a caveat is in order. Of the 12 predictors we consider, not all offer investors utility gains over the constant returns model. Therefore, the choice of predictors and indeed forecasting models is important in maximizing investor utility. In this exercise, again the forecasting model based on using U.S. returns as a predictor provides investors utility gains over the constant returns model regardless of whether we consider regional or sectoral portfolios. The key implication of these findings is that in any future evaluation of asset pricing of Islamic stocks, regardless of whether it is empirical or theoretical, an explicit role for U.S. stock returns would need to be established. In this regard, our results set the motivation for future studies.

[1] The Dow Jones system, for example, identifies the following business activities as inappropriate for Islamic investments: Defence, Brewers, Distillers & Vintners, Food Products, Recreational Products, Tobacco, Food Retailers & Wholesalers, Broadcasting & Entertainment, Media Agencies, Gambling, Hotels, Recreational Services, Restaurants & Bars, Banks, Full Line Insurance, Insurance Brokers, Property & Casualty Insurance, Reinsurance, Life Insurance, Consumer Finance, Specialty Finance, Investment Services, and Mortgage Finance.

[2] The trailing 24-month average market capitalization is used, which avoids any skewed figures arising from factors regarded as seasonal.