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# Idiosyncratic risk and expected returns in frontier markets: Evidence from GCC

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### ABSTRACT

We investigate the pricing of idiosyncratic volatility of seven frontier markets in six GCC countries. We find a significant (marginal) negative relationship between expected returns and lagged idiosyncratic volatility for individual stocks in Saudi Arabia (Qatar) but none in Kuwait and Abu Dhabi. However, when we estimate conditional idiosyncratic volatility either by EGARCH or AR Models, the relationship turns positive. Introducing unexpected idiosyncratic volatility as an explanatory variable to control for any unexpected returns uncovers the true relationship between expected idiosyncratic volatility and expected returns. The evidence turns out to be robust for return reversals and other control variables. Moreover, the pricing of idiosyncratic risk is less evident in higher country governance and seems to be unrelated to the degree of financial development.

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## 1. Introduction

In the realm of Capital Asset Pricing Model, CAPM (Sharpe, 1964; Lintner, 1965) investors are well diversified and hold the efficient mean–variance market portfolio in equilibrium. The CAPM predicts a linear relationship between expected return and systematic risk but assigns no role to idiosyncratic risk. Moreover, the CAPM makes no predictions about the role of idiosyncratic risk in situations when investors are under-diversified. Merton (1987) extends the CAPM and advances a model that assumes investor under-diversification. Merton argues that if investors cannot, or do not, hold the market

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portfolio they will consider total risk in their asset allocation decisions and therefore require higher returns for stocks with higher idiosyncratic risks to compensate for imperfect diversification.<sup>2</sup> Current empirical evidence on the existence of idiosyncratic risk premia in expected returns has not only produced mixed results but also been limited to developed or developing markets. Frontier markets such as those in the Gulf Cooperation Council (GCC) have been widely overlooked despite their growing importance in recent years.<sup>3</sup> For example, Ang et al. (2009, hereafter, AHXZ) investigate the relationship between idiosyncratic volatility and expected returns in 23 countries. However, their sample is restricted to developed countries. Brockman et al. (2009) document international support to Fu (2009) findings on US traded stocks, using data across 44 markets, only two of which are frontier markets, Argentina and Pakistan. The authors show a positive relationship between conditional idiosyncratic volatility estimated by EGARCH Models and expected returns. This gap in the literature is surprising given the fact that frontier markets make a natural candidate to test the pricing of idiosyncratic risk because investor under-diversification is most prevalent in these relatively small, concentrated, and often illiquid markets. As a result, frontier markets tend to display return characteristics that are different from emerging and developed markets. Our paper, therefore, contributes to the literature by shedding light on the idiosyncratic risk pricing mechanism in the frontier markets of the GCC region.

Traditionally, investors who are interested in diversification benefits have been seeking emerging markets because of their low correlations with developed markets. However, mounted globalization and increased financial integration between developed and emerging financial markets reduced these benefits. This led to a new interest in a subset of emerging markets, known as “Frontier” markets, which are typically the smallest, least liquid, and, importantly, least integrated. While several papers support the notion that frontier markets offer high return potential and diversification benefits (e.g., Speidell and Krohne, 2007; and more recently, Berger et al., 2011), empirical research on asset pricing in frontier markets remains rare; and in the case of the Gulf Cooperation Council (GCC) is virtually nonexistent. As a result, very little is known about the return generating process of stocks traded in these markets and how the different risk components, systematic versus idiosyncratic, are priced. A notable exception is a paper by Cheng et al. (2010) who study nine emerging and frontier markets, four of which are in the GCC, and report evidence that risk premia in these markets are locally priced.

In 2011, five of the six GCC countries (excluding Saudi Arabia) constituted more than one-third of the S&P Frontier Broad Market Index that is made of 37 countries.<sup>4</sup> Moreover, international investors are having growing interest in the GCC equity markets which not only provide tax haven opportunities, i.e. lack of taxes on capital gain, but also return potentials and diversification benefits. For example, Bley and Chen (2006) show that GCC equity markets are dependent to a greater extent on stocks that are within the region rather than the outside. Indeed, the stock markets of the GCC have been growing at a breathtaking pace. Fueled by a combination of high oil prices and low interest rates, investor's risk appetite propelled regional stock markets throughout the first five years of the new millennium. Qatar, the best performing GCC stock market, gained approximately 850% from 2000 to 2005. The index of Saudi Arabia reached similar heights in February of 2006 with markets in Kuwait and the UAE increasing “only” by about 500% over the same period. Also, the number of companies listed in GCC markets has increased from 399 in 2000 to 702 at the beginning of 2011, an increase of 76%. GCC stock market capitalization, however, increased from \$139.3 bn to \$762.4 bn, or 350%, over the same period. Finally, policy makers in the GCC have shown commitment to steady economic reforms and continuing market liberalization. While some markets still operate with foreign ownership limits for certain industry segments that are regarded sensitive to national security interests, currently non-GCC investors can buy most regional shares directly and without any restrictions. Even Saudi Arabia has started to welcome foreign investors by allowing stock ownership by way of equity swap since August 2008.

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<sup>2</sup> Other return models that incorporate investor under diversification predict a positive relationship between expected return and idiosyncratic risk include Barberis and Huang (2008), Boyle et al. (2009).

<sup>3</sup> The GCC was created on May 25, 1981, and includes Bahrain, Kuwait, Qatar, Oman, Saudi Arabia, and the United Arab Emirates.

<sup>4</sup> Information collected from Standard and Poor's Frontier Broad Market Index fact sheet.

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