Market Insight:

Diversity on the Frontier

Srinivas Maloor

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Abstract:

The integration of global financial markets has caused concern that future returns and volatility may become increasingly correlated with developed markets. Risk-tolerant investors are exploring fledgling equity markets in far flung corners of the globe, hoping to find better growth prospects and investment returns that are less dependent on global integration. In this paper we review the potential for international diversification that frontier markets could offer relative to its more mature emerging and developed counterparts. We observe that the relative isolation and idiosyncratic nature of frontier markets could provide an attractive source of equity exposure while mitigating overall portfolio volatility.

Why This Matters:

The seeming opacity of frontier markets can raise important questions for investors:

- How do the risk characteristics of frontier markets compare to emerging and developed markets?
- Are frontier markets an attractive source of diversification?
- Have frontier markets offered any diversification benefits since the crisis of 2008?

This paper provides a first step in addressing these questions.

Introduction

Globalization appears inevitable. Financial markets around the world are becoming progressively integrated while emerging and frontier markets are capturing an increasing share of world market capitalization. Frontier markets include many publicly traded companies across the Middle East, Africa, Asia, and Europe. Although these markets have had limited analyst coverage, they may offer undiscovered investment opportunities.

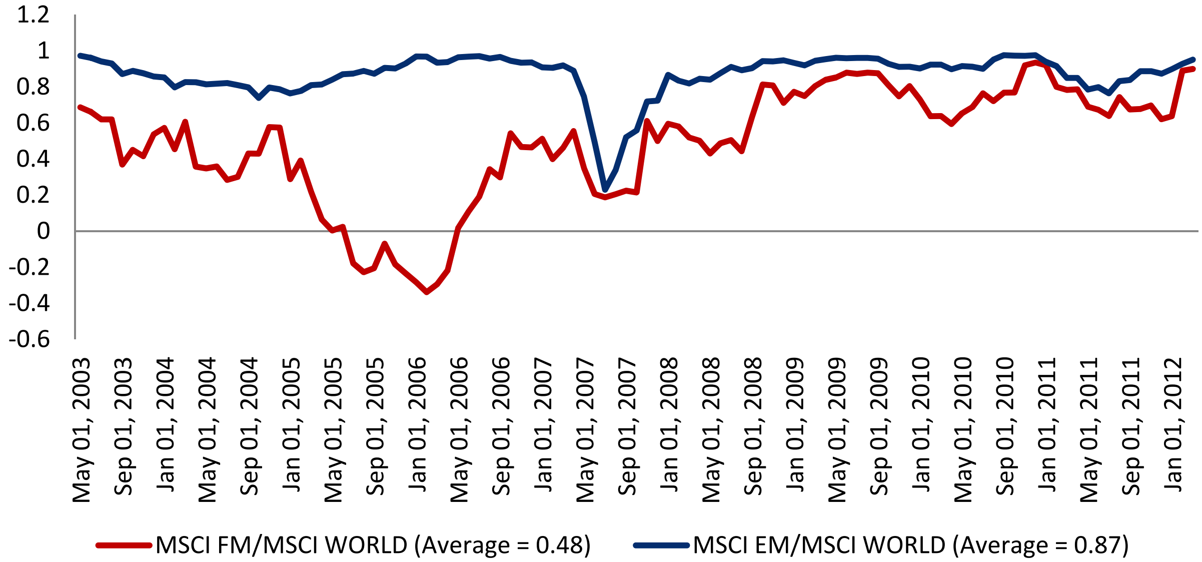
International economies are becoming more closely linked, not only because of growing international trade and investment flows, but also due to the nature of international financial transactions, including the advances in financial systems technology and the growing influence of multinational companies from major industrialized nations. As noted in Khandani and Lo (2007), financial markets have become much more interconnected than they were a decade ago; hence the risk of contagion is now much higher than in 1998.

The recent financial crisis starting in 2008 ("crisis") has increased instability in equity markets worldwide. Many of the most stable developed market countries suffered negative publicity owing to investment downgrades due to high levels of government debt and the slow pace of economic recovery. While this may have led many investors to seek opportunities outside of developed equity markets, it is also widely accepted that the risks involved could be substantial. While part of the risk may ease with the rebalancing of worldwide markets, other risks may be mitigated through appropriate diversification.

Correlations (and Beta)

While it is true that cross-country correlations are on the rise, perhaps driven by the growing interdependence among international financial markets, many investors may be concerned that the benefits of international portfolio diversification are overstated. However, as seen in Figure 1, the data does not appear to be a cause for concern, at least not yet.

Figure 1: Low Correlations with Emerging and Developed Markets

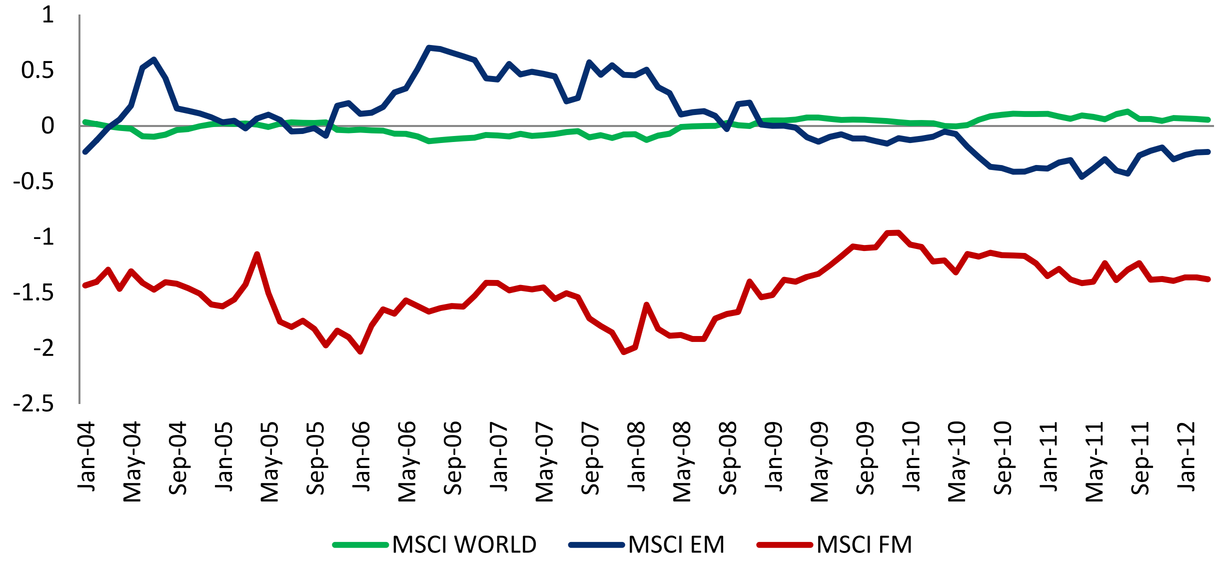


During 2003-2012, the MSCI World and MSCI Emerging Markets indices had an average correlation on a rolling 52-week basis of roughly 0.87. In contrast, frontier markets remain more local in character, heavily driven by internal economic and political dynamics. Although their correlations with the MSCI World rose during the financial crisis, the average rolling correlation between the MSCI Frontier Markets Index and the MSCI World is still at a relatively low 0.48. Although historical correlations may point to the diversification benefits of frontier markets, it is less clear in Figure 1 if this holds in the more recent, post-crisis period.

Figure 2 displays the Beta factor exposures of the stocks within the MSCI Frontier Markets, MSCI Emerging Markets, and MSCI World indices respectively, and provides a more lucid post-crisis picture. [1] Although it appears the developed and emerging worlds are moving in lockstep, a striking feature of the pattern in Figure 2 is the consistently low beta factor exposures of the MSCI Frontier Markets Index compared to the MSCI Emerging Markets and MSCI World indices.

[1] Using GEM3L model, results as of March 30th, 2012 (http://www.barra.com/support/models/equity/datasheets/GEM3L.pdf)

Figure 2: Beta Factor Exposures



International diversification also has a sector diversification component that is based on observations of diversity in the sector composition of national markets across countries. As different sectors are less than perfectly correlated, investing in frontier markets may also enable the investor to take advantage of potential diversification effects driven by the sector composition of the portfolio.

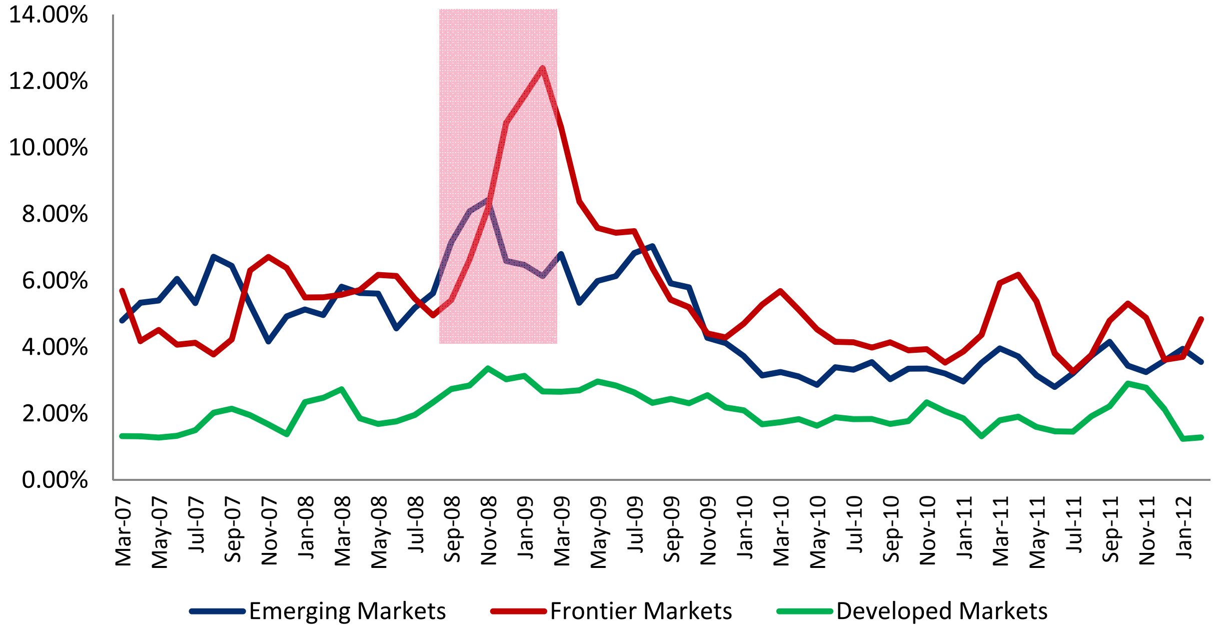
Volatilities

At an aggregate level, frontier market stock returns tend to be driven by fundamental and country-specific risk drivers. While the appeal of investing in individual frontier countries may be driven by the potential for higher returns (compared to a more diversified strategy), similar to stock picking, country selection also represents unique investment styles. As noted in Ankrim and Ding (2002), it is well-known that a change in the level of cross-sectional volatility (CSV) of returns tends to exhibit a strong link with the distribution of active manager returns. Hence an upward-trending country factor CSV could suggest a widening potential for disparity in the performance of an asset manager who follows a country rotation strategy. Figure 3 displays a time series of historical CSV[2] of monthly country factor returns for frontier, emerging, and developed countries.[3] In the shaded region of the chart, the sharply upward trending “spike” in the CSV values for the frontier countries between September 2008 and March 2009 is rather striking. We examine this next.

[2] Cap-weighted based on USD market cap, 3 months trailing average.

[3] This consists of 24, 21, and 25 country factors corresponding to the constituents of the MSCI World Index, MSCI Emerging Markets Index, and MSCI Frontier Markets Index, respectively.

Figure 3: Country Factor Cross-Sectional Volatility (3 months trailing average)



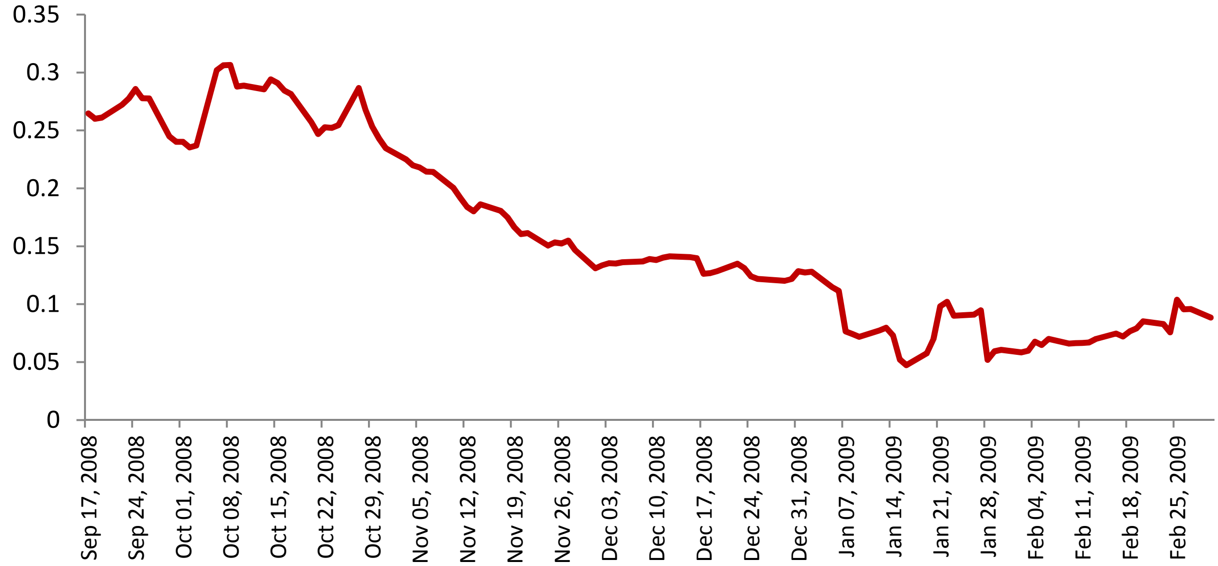
It is likely that the spike in the frontier country factor CSV observed in figure 3 is broadly indicative of a change in the frontier country cross-correlations, with the frontier economies experiencing differential (idiosyncratic) patterns in market movement[4]. Intuitively, a rise in cross-sectional volatility *could* be broadly attributable to declining correlations (also see, Campbell, Lettau, Malkiel, and Xu (2001)).

We explore this further by examining the three-month (daily time series, average) rolling correlations of the top five constituents of the MSCI Frontier Markets Index - MSCI Kuwait, MSCI Qatar, MSCI UAE, MSCI Nigeria, and MSCI Argentina Indices respectively (figure 4). Note that these five countries account for approximately 2/3[rd] of the total free float adjusted market capitalization[5] of the MSCI Frontier Markets Index. Hence it stands to reason that they would together also serve as a significant driver of the cap-weighted frontier market CSV spike that is observed between September 2008 and March 2009. Figure 4 focuses on this time period.

[4] This time period also coincided with the decline in Dubai's real estate market. In particular, Dubai's requests for a debt deferment following its massive renovation and development projects, as well as the late-2000s recession caused global stock markets to drop.

[5] As of March 31, 2012

Figure 4: Three Month Rolling Correlations



Interestingly, as figure 4 shows, the CSV spike coincides with a steady decline in correlations (from 0.31 to 0.05), corroborating the intuitive observation noted earlier. Such domination by the local-market-behavior may not be totally unexpected as the countries are located in different parts of the world and only really share the characteristics that they are for the most part relatively small and underdeveloped. Differing drivers of growth between the frontier countries adds credence to the observation of the idiosyncratic nature of these financial markets, pointing to a "developed market – frontier market" link that is perhaps tenuous at best.

Conclusion

Frontier markets have traditionally been closed to foreign investors because of local investment restrictions, high capital gains taxes, and illiquid currency markets. While many frontier countries have recently been promoting the maturity of their financial markets, various investment risks remain.

The lack of information about frontier markets may cause these stocks to be less efficiently priced than the blue chips that dominate institutional investors' portfolios. In general, the less developed and less liquid a frontier market is, the less volatile its returns. This is true in part because markets that trade less frequently have fewer price movements captured by standard volatility statistics. However, this does not imply fewer risks. Because frontier markets are smaller and relatively insulated from one another, especially in comparison to their more mature "emerging" and "developed" counterparts, the consistently low levels of beta factor exposures observed indicate the inherent diversification benefits that they may provide.

Investors should be aware that a single-country or regional approach to frontier-markets investing could create significant sovereign and sector concentration risks; at the same time, it could provide the opportunity to participate in the growth of these countries and realize the benefits of diversification while taking advantage of market segmentation on a global scale. Financial theory implies an inverse relationship between the benefits of international diversification and the integration levels of global markets, and it seems there is currently little evidence of frontier markets integrating with the global marketplace. Meaning there is still diversity on the frontier.

References

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[1]*As of June 30, 2011, based on eVestment, Lipper and Bloomberg data.*