Europe Market Report

Identifying Safe Havens in Europe

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Introduction

The crisis in the European sovereign bond and equity markets that started in late 2009 is still not resolved. As European economies and the local equity markets form a strongly connected network, the whole region – including core countries – is exposed to potential negative developments in Greece, Portugal, Spain, Ireland, and Italy.[1]

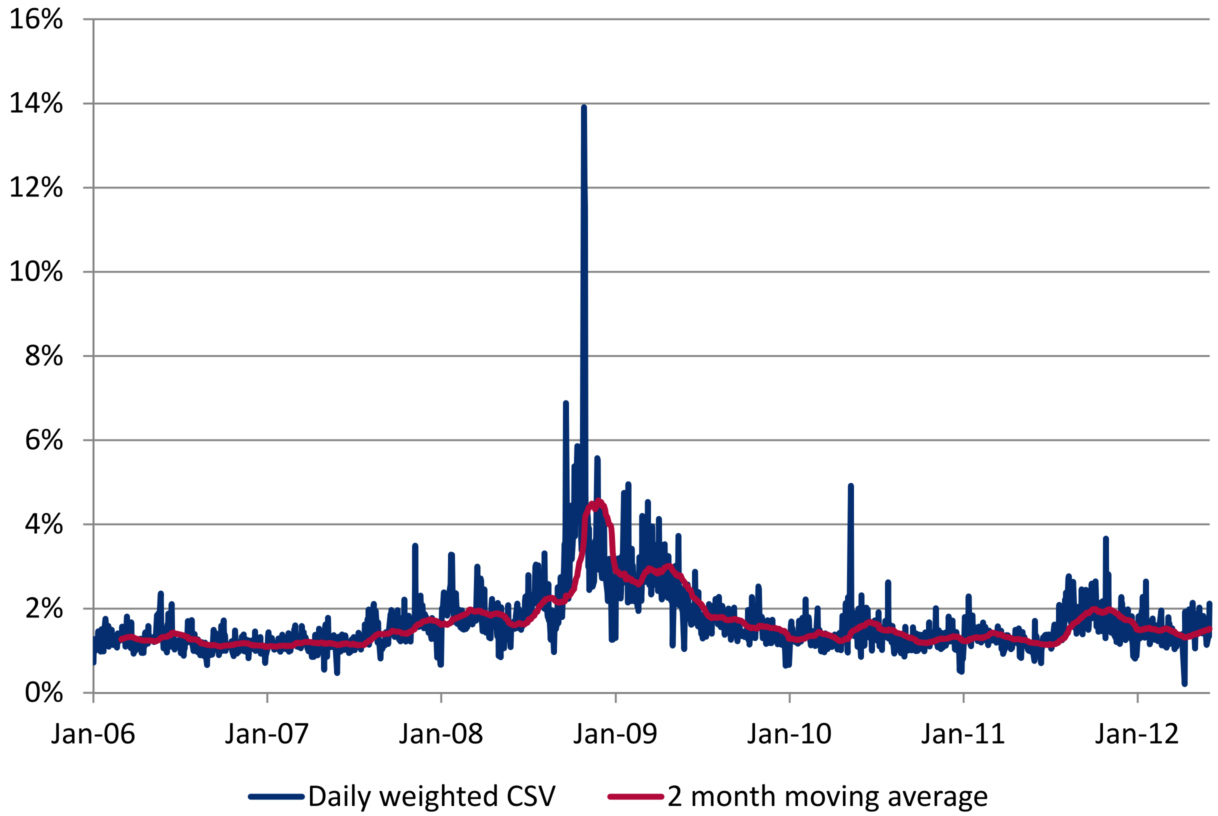
As noted by the *Wall Street Journal*, when market stress rises we often see correlations increase rapidly: within asset classes, across asset classes, and between investor risk appetite and the performance of disparate assets.[2] Cross-sectional volatility (CSV) provides a measure of how instantaneously assets are correlated —whether they have moved together or apart in a given period. In general, shrinking CSV implies less opportunity for picking disparate stocks, and – in particular – more difficulty in finding stocks that are protected from a fall in the equity markets of troubled countries. In Europe, after a rise in September 2011, CSV shrank through early 2012, but started to widen somewhat in April 2012 (see Figure 1).

In this report, we show how the Barra Europe Equity model (EUE3) can be used to help identify stocks that are less sensitive to the unfavorable movements in troubled countries. Using the covariance matrix of the EUE3 model, we calculate the predicted betas of European stocks with respect to a given country. After repeating this separately for the five most troubled countries (Ireland, Portugal, Spain, Italy, and Greece), we look for common characteristics of the lowest beta stocks. Our results show important regional, sector and style commonalities among these securities.

[1] These countries are most frequently mentioned in the press in connection to the sovereign debt crisis in Europe.

[2] http://blogs.wsj.com/eurocrisis/2012/06/27/correlations-have-yet-to-climb-the-wall-of-fear/ .

Figure 1: Daily Cap-Weighted Cross-Sectional Volatility of the MSCI Europe IMI Index, January 2006 – June 2012.



Predicted Betas

The beta of a stock is a traditional measure of its sensitivity to the movements of the market portfolio. We can, of course, replace the market portfolio with any other portfolio in the calculation. For our analysis, we examine the betas of European stocks to the return of selected eurozone equity index portfolios, such as a portfolio based on the MSCI Greece Index. A stock with a low beta to the MSCI Greece Index is less sensitive to movements in the index and thus relatively more protected against potential large negative returns.

We used the Barra Europe Equity Model (EUE3) to calculate betas for each stock in the MSCI Europe Index portfolio relative to the five most troubled countries (Ireland, Portugal, Spain, Italy, and Greece) that may exhibit large equity price declines should the European debt crisis develop further.[3]

To begin, we can get an overview about the sensitivity of European stocks relative to these countries by looking at the evolution of the distributions of their betas to Greece, Spain, Portugal, Ireland, and Italy. Statistical measures of the distributions are in Figure 2 and Figure 3.

[3] These betas are called *predicted* betas, as they are based on the forecast covariance matrix of the EUE3L model.

We notice two distinct groups at the end of 2009. On the one hand, betas with respect to Greece and Ireland were lower, with medians close to 0.4. On the other hand, betas to Italy, Portugal, and Spain were higher, with median values close to 0.8. Two and a half years later, betas to Greece moved even lower, whereas betas to Ireland moved higher, joining the group formed by the other three countries.

To attempt to identify stocks that may be relatively well shielded from shocks to the countries in financial difficulties, we focus on the lower part of the beta distribution. We observe that the lower part of the distributions generally shifted downwards, indicating increased opportunities to find European stocks with lower exposure to risk in the troubled countries. An exception to this trend is Ireland, where we saw the distribution of betas shift upwards.

Figure 2: Distribution of Predicted Betas Relative to Different Peripheral Countries, EUE3L Model, as of December 31, 2009.

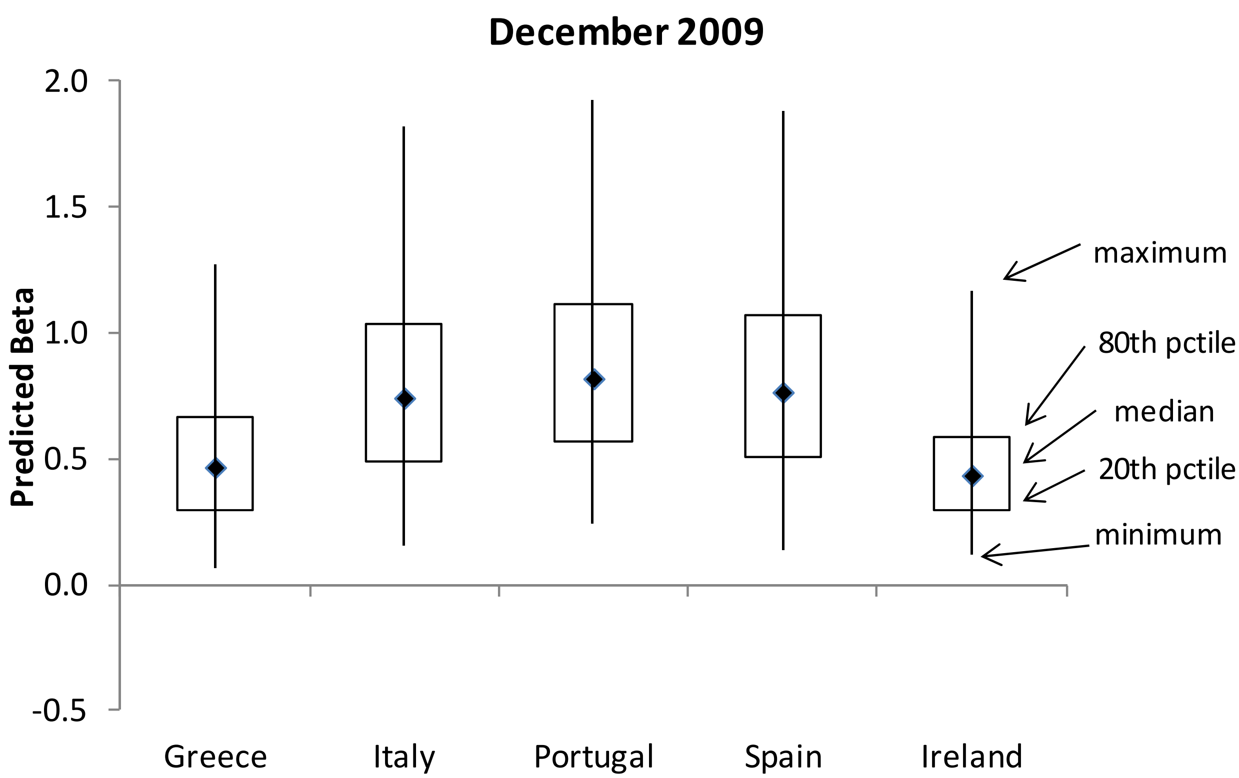
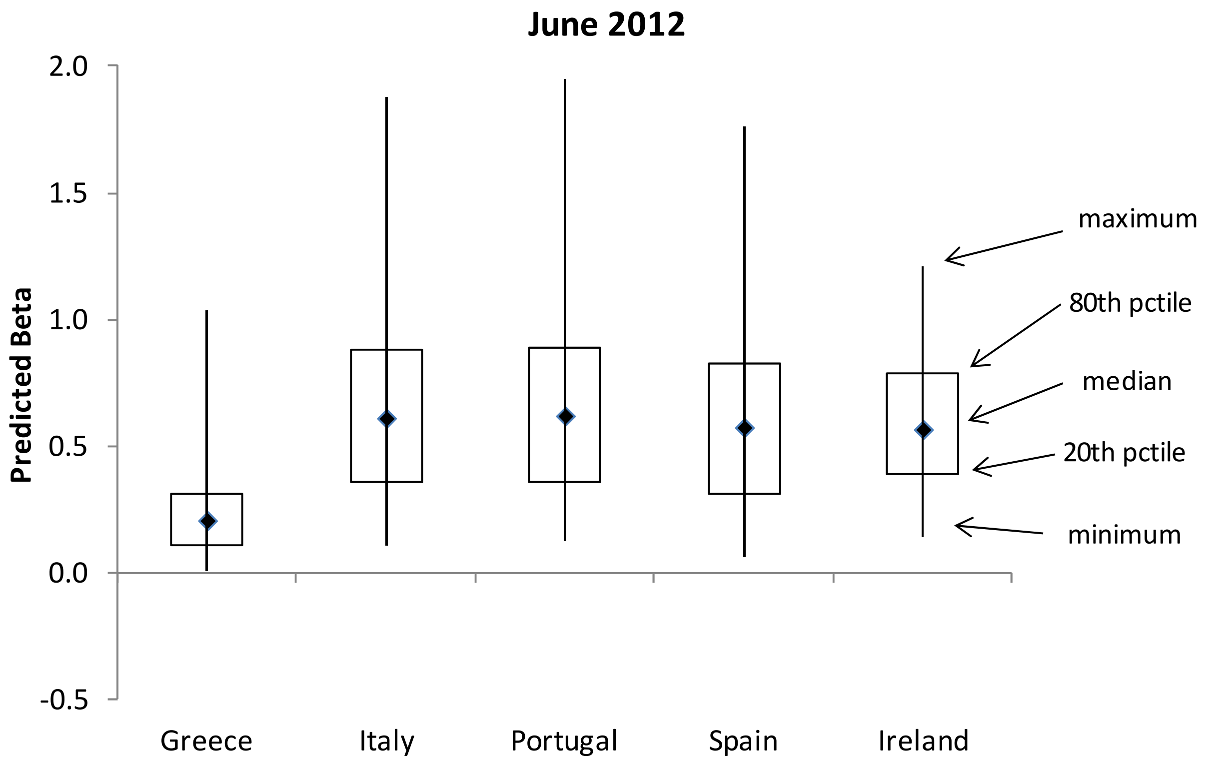


Figure 3: Distribution of Predicted Betas Relative to Different Countries, EUE3L Model, as of June 29, 2012.



Common Characteristics of Low Beta Portfolios

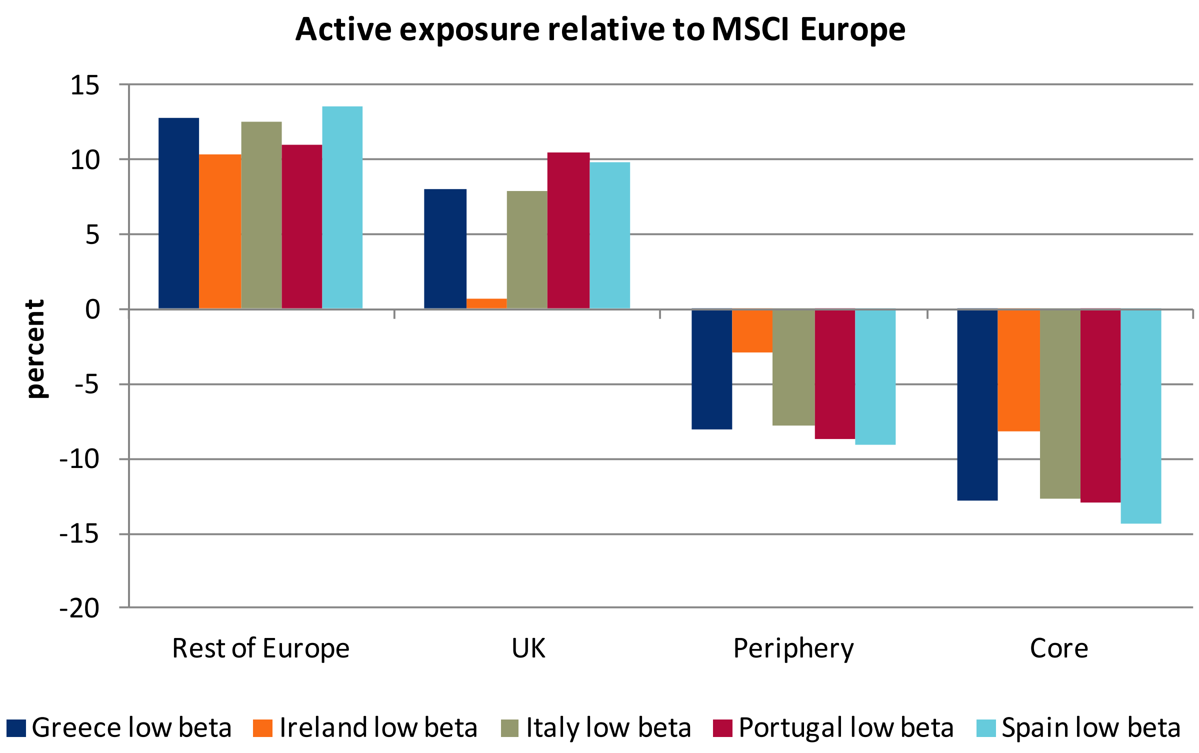
In this section, we examine common characteristics of stocks with low betas to countries in financial difficulty. In theory, a stock that has a low beta relative to one country, say, Greece, might have a high beta relative to another, say, Spain. In reality, however, we find a significant degree of commonality between stocks with low betas to the troubled countries.

To present the results in a comprehensive manner, we created five cap-weighted portfolios corresponding to Greece, Ireland, Spain, Portugal, and Italy. For each country, the portfolio contains the first 20 percent of stocks with the lowest betas to the corresponding country. For example, the “Greece low beta” portfolio contains stocks that with the lowest beta to the MSCI Greece Index.

After creating these portfolios, we analyze their average active exposures to regions, sectors, and style factors between January 2010 and June 2012. The active exposures are calculated relative to the MSCI Europe Index. Thus, a positive (or negative) active exposure represents an overweight (or underweight) in the corresponding factor compared to the benchmark.

We group country exposures into a number of sub-regions (Core Eurozone, Troubled Eurozone, UK, Rest of Europe) and report the over-and under-weights to these sub-regions in Figure 4.[4] We find that the low beta portfolios are overweight in the UK and the Rest of Europe (especially Switzerland and Belgium), but underweight in the Troubled Eurozone and the Core Eurozone regions. Ireland is one notable exception, however, since the low beta stocks to Ireland are only slightly overweight in the UK.

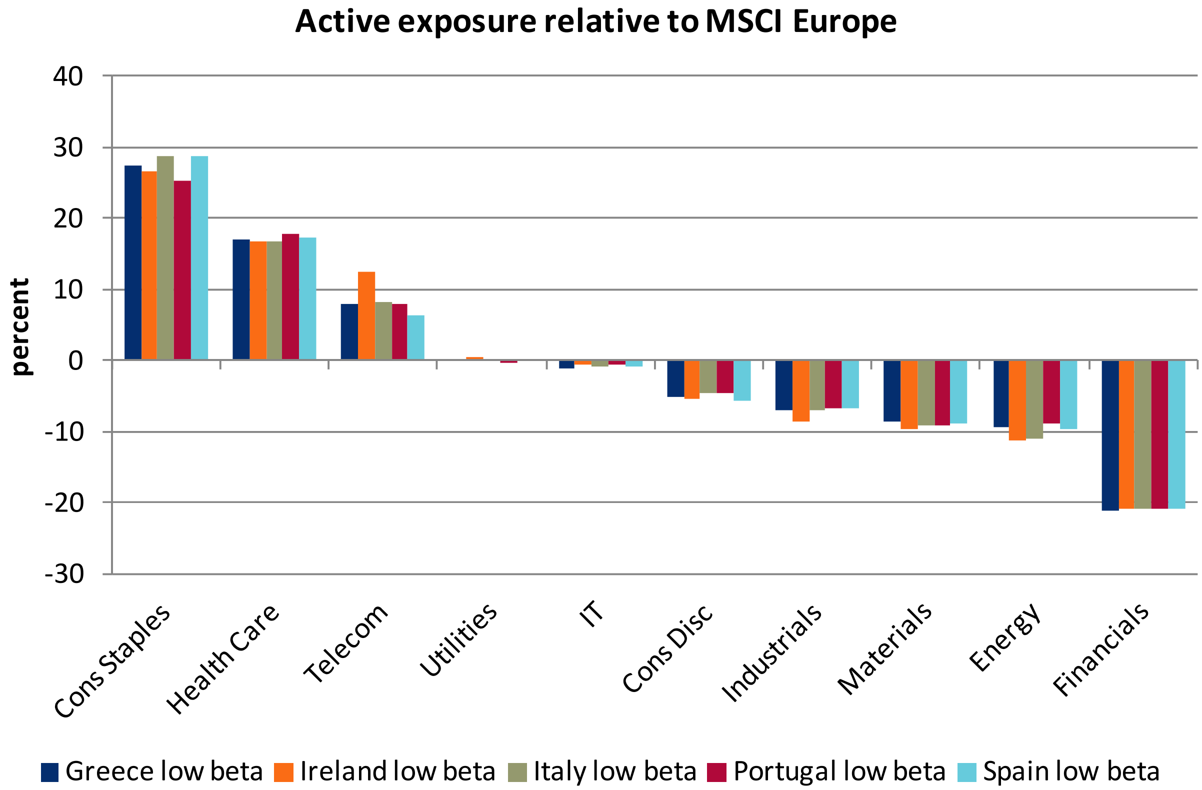
Figure 4: Average Active Exposure of Cap-Weighted Low Beta Portfolios to Regions, January 2010 – June 2012.



In Figure 5, we see that low-beta portfolios also had common characteristics with respect to sector distribution. Quite intuitively, the portfolios are overweight in some of the traditional defensive sectors such as Consumer Staples, Health Care, and Telecommunication Services, and underweight in more cyclical sectors, including Financials, Energy and Materials. For sectors, the distribution is relatively independent of the country, implying that the right sector bets could reduce risk coming from the eurozone countries in financial difficulties.

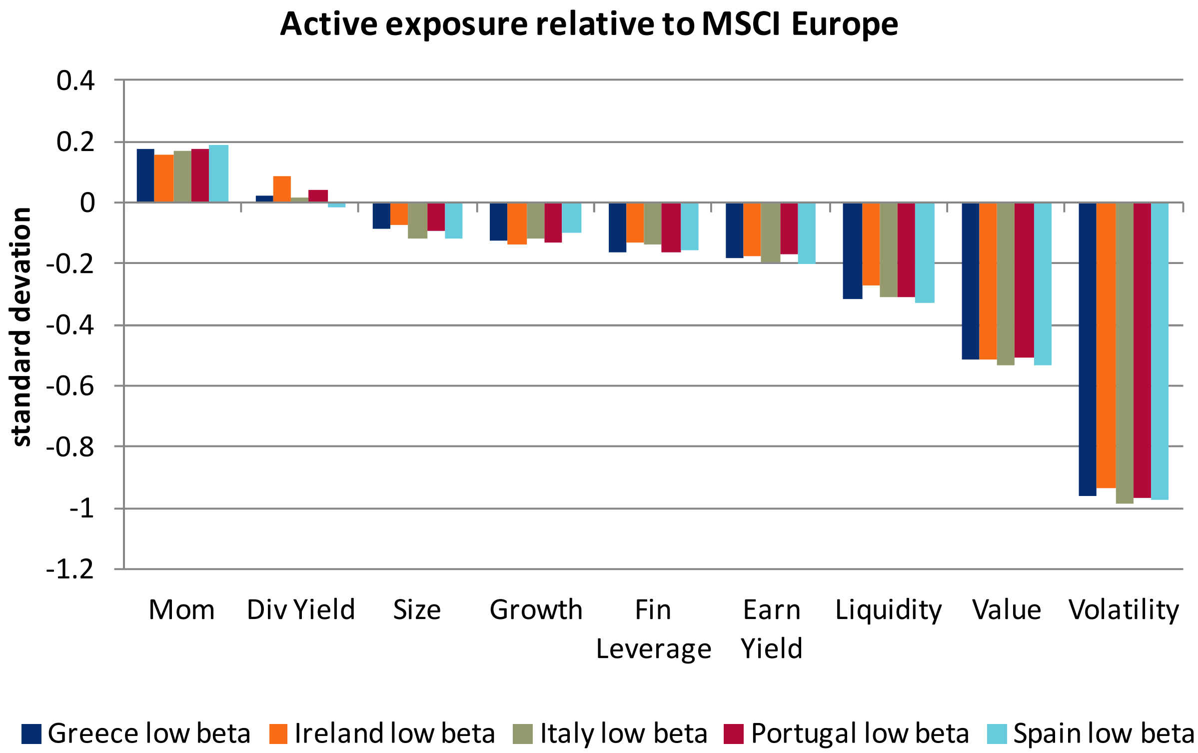
[4] The Core Eurozone region contains Austria, Finland, France, Germany, and the Netherlands. The Troubled Eurozone region contains Greece, Ireland, Italy, Portugal, and Spain. The Rest of Europe region contains Belgium, Denmark, Norway, Sweden, and Switzerland. The UK forms a region on its own.

Figure 5: Average Active Exposure of Cap-Weighted Low Beta Portfolios to Sectors, January 2010 – June 2012.



Looking at style exposures in Figure 6, we can again notice the relative homogeneity of the distribution, meaning that the right style factor tilts could potentially reduce risk from the troubled countries as a whole. The most significant tilt in these portfolios is the negative tilt to the Volatility, Value, and Liquidity factors, and we can also observe a relatively less significant positive tilt to the Momentum factor. A negative tilt to the Volatility factor is a typical requirement of a low risk portfolio. The Value factor also became riskier relative to its long-term average since 2009, hence the negative tilt in the low beta portfolio.

Figure 6: Average Active Exposure of Cap-Weighted Low Beta Portfolios to Style, January 2010 – June 2012.



Conclusion

The sovereign debt crisis in Europe is far from being resolved, with the equity markets of countries at the center of Europe's sovereign financial crisis remaining fragile. Potential exposure to shocks in the troubled countries remains a primary concern for investors. Using the Barra Europe Equity model (EUE3), we followed a process for attempting to identify stocks that may be less exposed to market moves in these countries.

We found that the least sensitive stocks to individual markets shared a number of intuitive common characteristics. Low beta portfolios constructed out of these stocks had an overweight to the UK, Belgium and Switzerland. They were also overweight in defensive sectors, such as Consumer Staples, Health Care, and underweight in cyclical sectors, such as Financials and Energy. Finally, these stocks also showed significant negative exposure to the Volatility and Value factors.

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