

**Introduction**

In this bulletin we turn to an often overlooked but important challenge—the allocation of resources behind investment strategies. All asset managers face the problem of how to best allocate resources, be it analysts, computational power or physical resources. Assigning more resources to segments that have more names to cover is one straightforward way. Alternatively, return dispersion (i.e., cross sectional volatility)<sup>1</sup> reflects the opportunity set available to asset managers, and therefore may be another logical way. For CIOs who may consider assigning research resources via return dispersion, this article looks at the relationship between the size of different investment universes and the cross-sectional return dispersion.

**Global Mandates: Countries vs Sectors**

Figures 1 and 2 show the correlation between return dispersion (cap-weighted standard deviation) and universe size (i.e. breadth) across countries and Global Industry Classification Standard (GICS®) sectors respectively for roughly 10,000 securities (highest cap) in the Barra Global Equity Model as of June 2008.

**Figure 1: Return Dispersion (CSV) and Universe Size (Breadth) are Positively but Not Perfectly Correlated Across Countries**

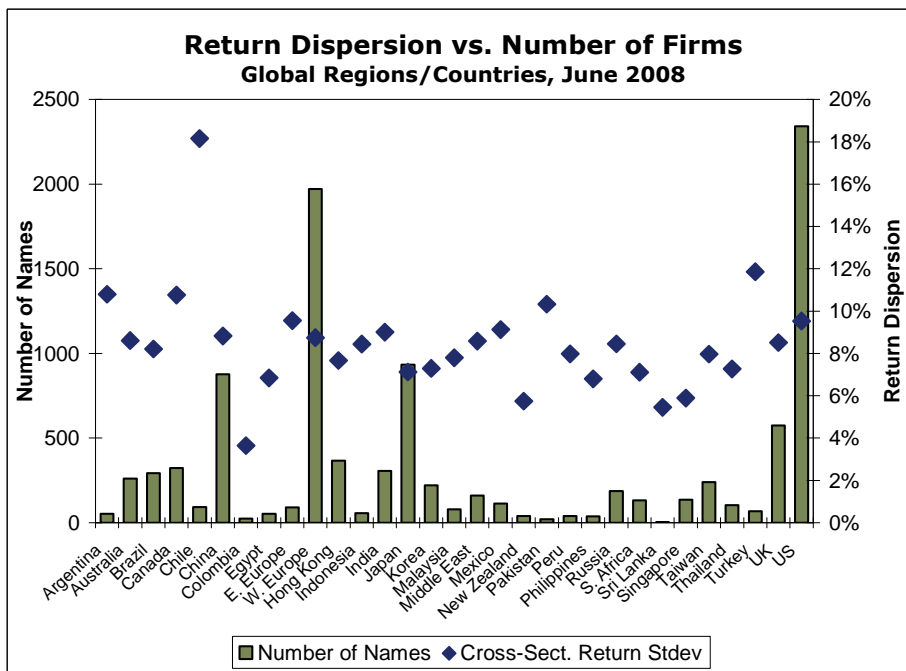
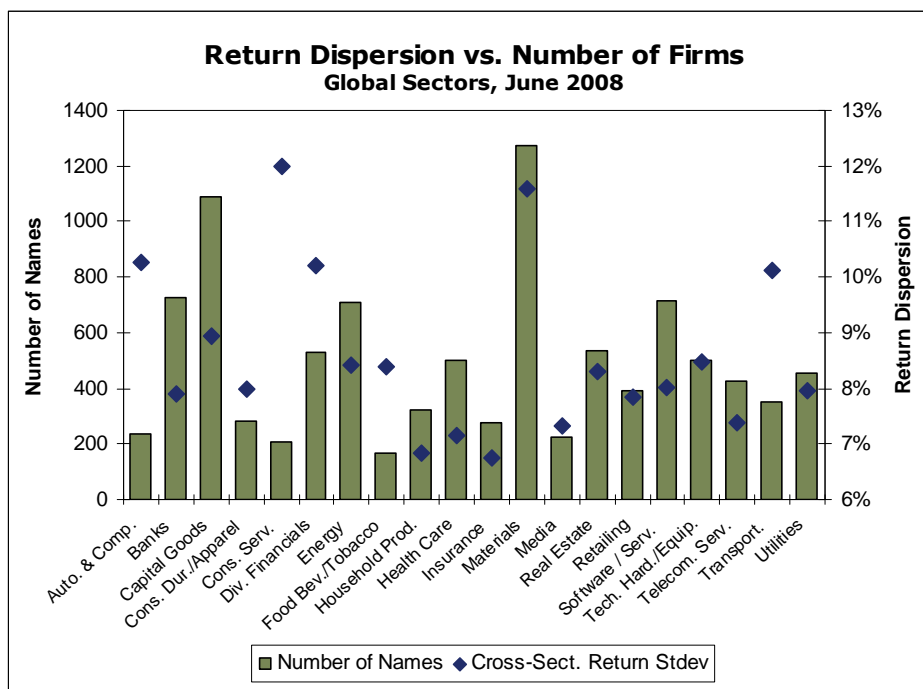


Figure 1 shows that correlation (about 0.07) is not high between return dispersion and the number of names. (For clarity, Western European, Eastern European, and Middle Eastern countries including GCC Countries are grouped together.) Some countries like Colombia exhibit relatively low return dispersion and breadth. Others like China exhibit a moderate level of dispersion and breadth. However, a few exhibit inconsistent metrics—Western Europe has

<sup>1</sup> The higher the cross sectional volatility, the bigger the potential gains, and the bigger the potential losses. For further discussion, see Nielsen, F. (2006), "Dynamic Volatility and Its Implications for Portfolio Management", MSCI Barra Horizon Newsletter.

relatively large breadth but low dispersion while Chile has relatively low breadth in comparison to its high dispersion.

**Figure 2: Return Dispersion (CSV) and Universe Size (Breadth) are Positively but Not Perfectly Correlated Across Sectors**



The same story holds for global sectors shown in Figure 2. Consumer Services for instance has a relatively small number of names compared to its relatively high return dispersion. In contrast, Health Care has low return dispersion though it is a medium-sized sector.

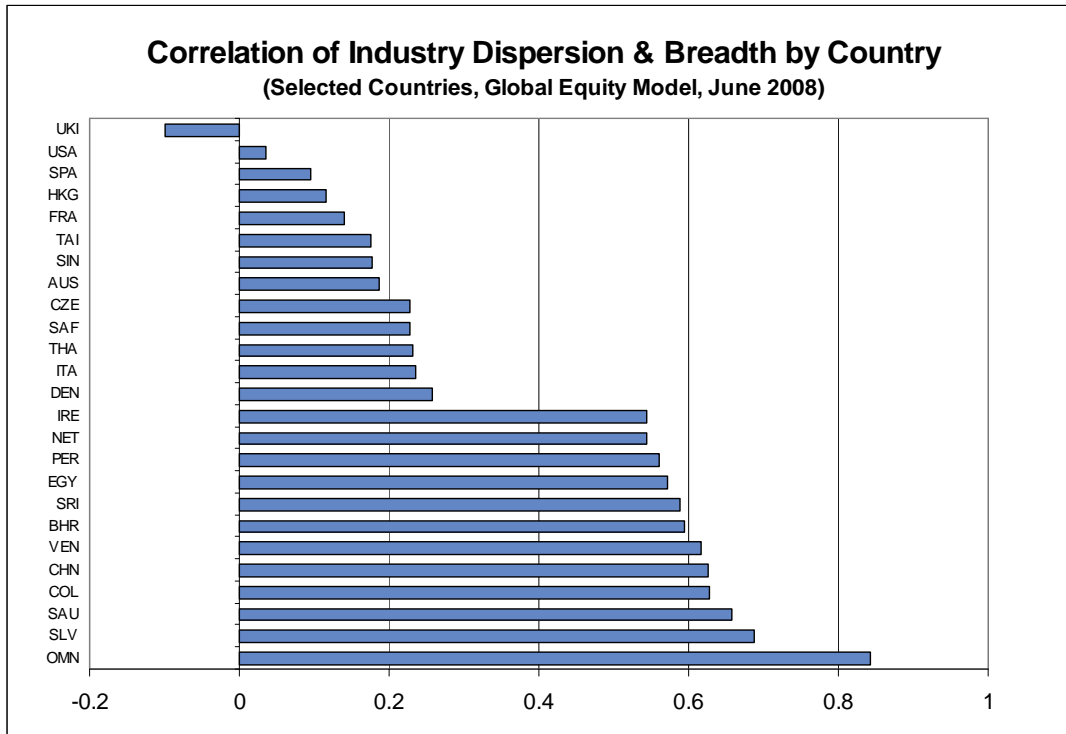
### Localized Mandates: Sectors by Country/Region

For each country, we calculate the correlation between the number of names by industry and the industry return dispersion as of June 2008.<sup>2</sup> Select countries<sup>3</sup> are shown in Figure 3 in order of descending correlation. Figure 3 illustrates a simple premise—for a CIO allocating resources across industries or sectors in a particular market, the less correlated the number of names is with return dispersion, the more difficult the job of balancing the two if that becomes an aim. The markets with the smallest correlations in Figure 3 are the UK, US, Spain, Hong Kong, France, and Taiwan. The markets with the largest correlations are China, Colombia, Saudi Arabia, Slovenia, and Oman.

<sup>2</sup> There are 45,647 stocks in the Barra GEM universe for this month. We eliminate all countries where there are less than 10 stocks.

<sup>3</sup> Shown are the highest and lowest correlations.

Figure 3: Correlations of Industry Dispersion & Breadth (Global Equity Model, GEM)



### Further Considerations

The figures above all use data as of June 2008. However, return dispersion can change quickly over time. This makes it somewhat challenging from a practical standpoint to use return dispersion as a metric for allocating resources. Since in practice moving resources around can take time, return dispersion as an allocation metric may only be appropriate for some country/industry segments.

In addition, there might be other criteria that can be used to help motivate the allocation. For instance, low idiosyncratic risk relative to other countries or sectors may suggest fewer resources. Some additional criteria that come to mind are correlations of investment segments, differences in style characteristics (e.g., similarities in stock momentum, volatility, and size, etc. across sectors or countries), benchmark weighting, accounting rules and macro-economic risk for countries, and specialized knowledge requirements (e.g. biotech) for industries.

### Summary

Here we highlight the challenge many asset managers are familiar with – how to allocate resources efficiently. In addition to the size of different investment segments and their breadth, CIOs may want to look at their return dispersion. Return dispersion and breadth may not necessarily be consistent. For those countries or industries where it is not, additional considerations may help guide the process.

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