INTERNATIONAL INVESTING AND THE SMALL COUNTRY EFFECT

Summary

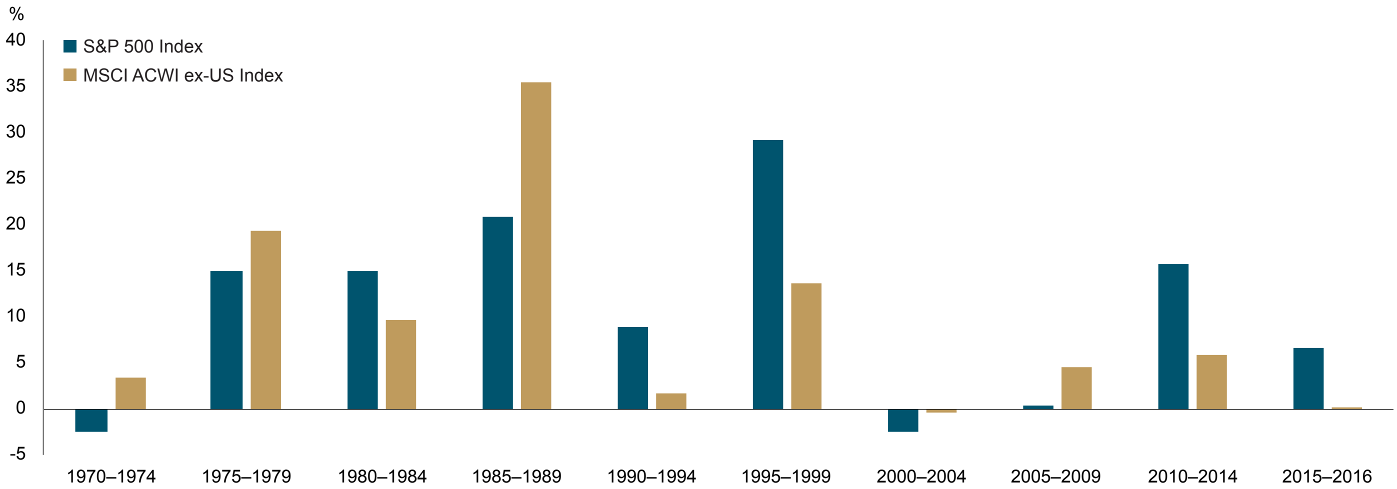
- Research has shown that, when investing in foreign stocks, smaller countries (as measured by market capitalization) tend to outperform their larger peers; this is referred to as the *small country effect.*
- Investment strategies that attempt to closely track cap-weighted indexes can end up with a large-country bias given that the index is "top-heavy" (concentrated in larger countries).
- The small country effect is independent of the *firm-size effect* (small company premium); research has shown that smaller countries tend to outperform across the capitalization spectrum.
- We believe multi-factor investing can provide investors with the opportunity to outperform over the long term in both domestic and international markets; in this process, in addition to tilting portfolios toward characteristics such as value, momentum and profitability, exposure to small countries can provide an additional return benefit.

Over the 10-year period ending in 2015, US equity mutual funds have experienced $834 billion in net outflows, compared to $643 billion of net *inflows* into international funds.[1] As of the end of 2016, foreign equities accounted for approximately 48% of global market capitalization as measured by the MSCI All-Country World Index, and represented 77% of the 10,000 developed and emerging market companies with a market capitalization greater than $200 million. Despite the trend in flows and the size and breadth of foreign markets, however, US investors allocated approximately 79% of their portfolios to domestic equities last year.[2] This phenomenon, known as *home bias,* is also observed in other developed countries such as the United Kingdom and Canada.

Possible reasons for home bias include a feeling of familiarity with the companies in one's local market and the belief that one's home country will outperform other regions. In recent years, performance may be to blame for Americans shying away from foreign stocks: from the end of 2009 to the end of 2016, the S&P 500 Index returned a cumulative 131%, while international[3] and emerging[4] stocks gained only 32% and 4%, respectively. We do not advocate abandoning foreign stocks simply due to a period of underperformance, however. As the chart below illustrates, US and foreign stocks pass through cycles of relative performance similar to those of other asset classes such as REITs, bonds, and commodities. If we view the past 45 years of global market returns in 5-year increments, in fact, we observe international stocks outperforming the US market more than half the time (five out of the nine periods).

[1] 2015 Investment Company Institute Factbook
[2] See personal.vanguard.com/pdf/ISGGAA.pdf
[3] MSCI EAFE Index
[4] MSCI Emerging Markets Index

Exhibit 1: US vs. International Stock Returns Over 5-year Periods
S&P 500 vs. MSCI ACWI ex-US Index



Sources: Gerstein Fisher Research, Standard & Poor's, MSCI

As factor-based investors, we believe a disciplined multi-factor approach focusing on security characteristics such as value[5], momentum[6] and profitability[7] are of paramount importance when selecting stocks. Most passive strategies consist of hundreds of holdings where the bulk of the weight is allocated to the largest companies while providing only slight factor tilts. This type of strategy provides investors with scale but can significantly erode returns. A heavy large-cap bias can prevent strategies from exploiting higher returning small- and mid-cap areas of the market. In the active management space, we often find that managers also skew heavily towards the largest companies and fall short of providing adequate diversification considering the size of the opportunity set. When it comes to global investing, investors should understand a manager's country allocation policy and ensure that it considers the tradeoffs inherent in investing in different countries. Gerstein Fisher research has found that an effective approach to country allocation is to exploit what is known as the *small country effect*,[8] or the tendency for small countries to outperform their larger counterparts.

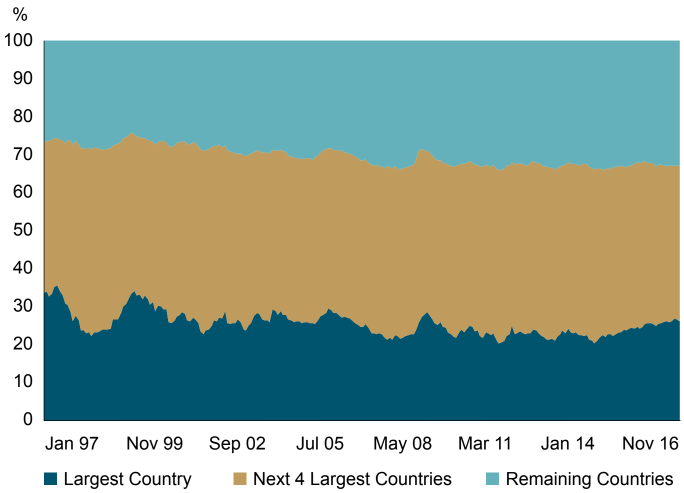
In this paper, we examine international markets and address why we believe the small country effect is important. We explore whether the small country effect is analogous to buying small companies, which tend to also outperform over the long run. Finally, we look at active and passive management and contrast our approach with other available offerings, illustrating why we believe Gerstein Fisher's factor-based approach offers a compelling balance between diversification and return.

The Challenge of the Cap-Weighted Index

As investment managers, our goal is to generate excess returns via a disciplined, repeatable process. We define International All Stocks as the universe of developed international stocks with a market capitalization greater than $200 million. The international universe we use encompasses 19 developed countries. One of the benefits of international investing is to give investors exposure to the economies of different countries, which can provide diversification benefits to a US-centric portfolio. The challenge with using a capitalization-weighted index to achieve this is that benchmarks are very top-heavy. To illustrate this, we construct monthly cap-weighted portfolios that are divided into: 1) the largest country's weight, 2) the sum of the next four largest countries' weights, and 3) the sum of the remaining 14 countries' weights.

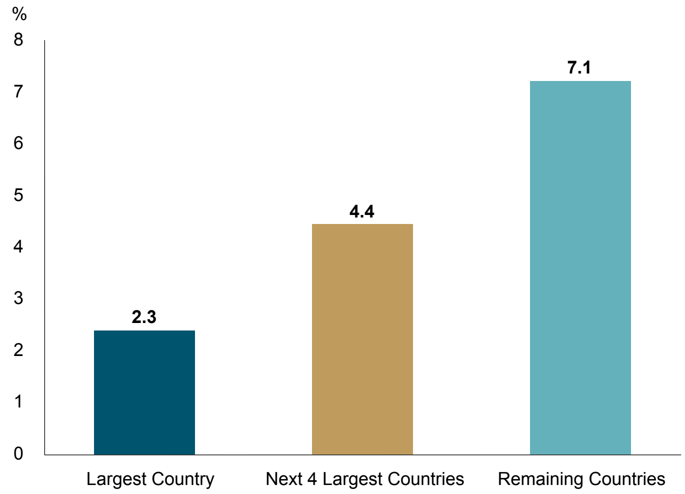
[5] Value defined as Price/Book and Price/Earnings
[6] Momentum defined as 12-month relative strength
[7] Profitability defined as Asset Turnover, Gross Profit, Gross Margin and Return on Assets
[8] See gersteinfisher.com/gf_article/should-you-tilt-your-equity-portfolio-to-smaller-countries/

Exhibit 2: Weight Distribution by Country Size
1997–2016



Sources: Gerstein Fisher Research, MSCI

Exhibit 3: Return Distribution by Country Size*
1997–2016



* MSCI EAFE Index countries
Sources: Gerstein Fisher Research, MSCI

From January 1997 to December 2016, the largest country in the developed international world (Japan, which has consistently ranked as the largest country in our data set) accounted for approximately 25% of the International All Stocks universe, while the next four largest countries accounted for an average of 44% (see Exhibit 2). The trend over the long run has been for larger countries to represent less of the index as small markets have grown in size. As of the end of December 2016, the top five countries represented about 67% of the market, underscoring the difficulties of achieving adequate diversification–one of the major benefits of international investing–using an index-based approach.

Do Small Countries Outperform Larger Countries?

A strategy that underweights large countries such as Japan and overweights small countries like Austria or New Zealand can provide greater diversification than foreign indexes owing to the latters' top-heavy nature. But, are investors compensated with higher return for undertaking a small country bias in their portfolios? To answer this question, we perform a simple test creating cap-weighted portfolios rebalanced annually based on the three country groupings defined earlier.

As seen in Exhibit 3, in moving from small countries to larger countries, the return declines. Over the past 20 years, the 14 smallest countries have outperformed the largest country in the market, returning an annualized 7.1% versus 2.3%. Small countries also outperform the next four largest countries by approximately 2.7%. Not surprisingly, small countries exhibit higher annualized volatility than larger ones at 18% versus 17.1%. This is likely due to having fewer firms listed on their markets, which reduces diversification. Despite the slightly higher volatility, the smallest countries have higher risk-adjusted returns, with a Sharpe ratio of 0.28, while the largest and next four largest markets have Sharpe ratios of 0.02 and 0.14, respectively.

The wide return spread between small and large countries suggests there are significant benefits derived from a country allocation policy that systematically overweights small markets. We believe small markets outperform due to their small investor bases comprised mainly of local market participants. In a paper written by Fisher, Shah and Titman[8] examining the small country effect, the authors show that analyst coverage is more limited in small countries. The lack of attention by sell-side analysts contributes to reduced investment interest, providing evidence for this hypothesis.

[8] See gersteinfisher.com/gf_article/should-you-tilt-your-equity-portfolio-to-smaller-countries/

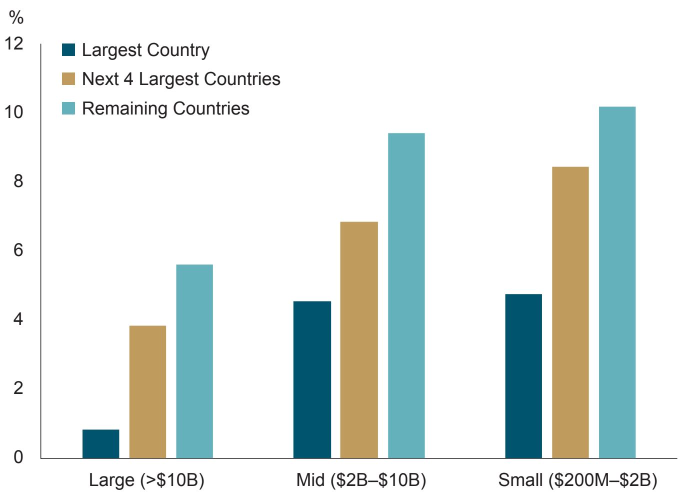
Are the Small Country Effect and Firm-Size Effect the Same Thing?

One of the most well researched market factors is what is known as the *firm-size effect*, or the tendency for small capitalization stocks to outperform large stocks, which was first documented by Banz in 1981[9]. Given the likelihood that small country equity markets have a greater proportion of small cap companies, we wanted to examine the interaction between the small country effect and firm size.

Exhibit 4 shows that, in all three capitalization ranges within International All Stocks, the returns of small countries exceed those of their larger counterparts. Within the large cap bucket, the largest country portfolio returns only 0.82% over the 20-year time frame while the next four largest countries and the remaining 14 countries return 3.8% and 5.5%, respectively. A similar return spread is observed in the mid and small cap spaces, demonstrating that the small country and firm-size effects are independent. The wide and consistent dispersion between stocks in various cap buckets across the country size spectrum indicates there is a significant advantage to allocating to small countries regardless of the capitalization of companies within them.

Exhibit 4: Return Distribution by Country Size and Firm Size*

1997–2016



* MSCI EAFE Index countries

Sources: Gerstein Fisher Research, MSCI EAFE Index countries

Active, Passive, and Multi-Factor Approaches

We believe multi-factor investing can provide investors with the opportunity to outperform over the long term. A process that hones in on key characteristics such as value, momentum, and profitability is extremely important when selecting stocks. Also, as the previous sections show, exposure to small countries can provide an additional return benefit. Finally, given the breadth of the international investing universe, diversification is a key element to complementing a US-centric portfolio. In Exhibit 5, we compare the Gerstein Fisher Multi-Factor International Growth Fund (GFIGX) with other comparable international active managers on the dimensions of market capitalization exposure and number of holdings, which we use as a proxy for diversification.

Exhibit 5: GFIGX – Smaller and More Diversified Than Peers

	Number of Holdings	Average Market Capitalization
Gerstein Fisher Multi-Factor International Growth	226	$14 Billion
Foreign Large Growth Category	123	$25 Billion

Sources: Gerstein Fisher Research, Morningstar

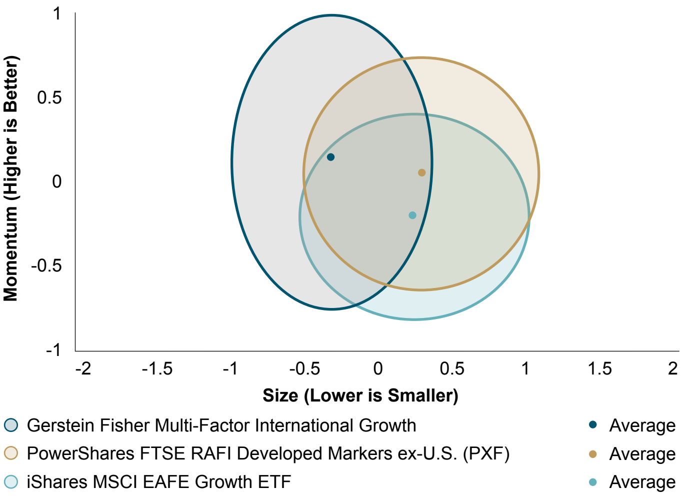
Using data from Morningstar for 94 foreign large growth funds as of January 31, 2017, Exhibit 5 shows that the average foreign large growth fund has 123 securities with an average market capitalization of $25 billion. By contrast, GFIGX has 226 holdings with an average market capitalization of $14 billion. Looking more closely at the data, GFIGX ranks 11th out of 94 funds on average market capitalization (ranked small to large) and 16th on number of holdings (ranked most to least). GFIGX allocated 57% to the five largest countries versus 70% for the benchmark, the MSCI EAFE Growth index. Looking like the benchmark in the international space can significantly reduce the diversification benefits of overseas investing given that, as we learned earlier, cap-weighted indices are heavily skewed toward only a few countries. The bulk of active managers in the space are managing more-concentrated portfolios while tilting heavily to the large and mega cap space, which can hinder returns as demonstrated in the previous sections.

[9] See business.unr.edu/faculty/liuc/files/BADM742/Banz_sizeeffect_1980.pdf

With the proliferation of passive strategies, a common concern is that factor investing will cease to be profitable as the signals are arbitraged away. This was addressed in a recently published paper by Blitz[10] in which the author analyzed factor exposures in the ETF space. The study concluded that, in aggregate, factor exposures are not meaningful with only market exposure remaining, debunking the myth that factor strategies are becoming crowded. Another interesting takeaway is that the ETF market is broadly underexposed to the momentum factor – a key selection criterion in Gerstein Fisher strategies.

In Exhibit 6, we can contrast Gerstein Fisher's approach with the index and other passive approaches.[11] We plot market cap versus momentum as the dimensions on the chart. The dot in the center of each ellipse represents the momentum and market capitalization "score"[12] for the portfolio, while the entire circle represents 75% of the portfolio's weight. GFIGX uses momentum as the primary stock selection criterion. The strategy exhibits 60% higher momentum exposure than the passive ETF(PXF) and significantly higher momentum than the MSCI EAFE Growth ETF, that has negative exposure to high momentum stocks. The starkest difference between the approaches is the market cap range – the MSCI EAFE Growth ETF has an average market capitalization of $56 billion. While cap-weighted indices and passive strategies can provide investors with scale, they can significantly hinder return potential due to their skew toward larger countries.

Exhibit 6: Style Grid – Gerstein Fisher vs. Passive



Sources: Gerstein Fisher Research, MSCI

Gerstein Fisher's goal is to deliver investment strategies that are rooted in a disciplined, explainable approach that consistently focuses on characteristics of companies or, in the case of international markets, countries, that have proven to deliver outperformance over the long run. These views have been shaped by both academic and proprietary research. In addition, we believe in providing an intelligent alternative to pure active or passive management that balances diversification with return potential.

[10] See papers.ssrn.com/sol3/papers2.cfm?abstract_id=2912287
[11] See Disclosures
[12] The number of standard deviations from the mean a data point is

One cannot invest directly in an index.

Diversification does not assure a profit or protect against a loss in a declining market.

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MSCI All-Country World Index: The MSCI ACWI captures large and mid cap representation across 23 Developed Markets (DM) and 23 Emerging Markets (EM) countries.

S&P 500 Index: The index includes 500 leading companies in the U.S. and captures approximately 80% coverage of available market capitalization.

MSCI Eafe Index: The MSCI EAFE Index is an equity index which captures large and mid cap representation across Developed Markets countries* around the world, excluding the US and Canada.

MSCI Emerging Markets Index: The MSCI Emerging Markets Index captures large and mid cap representation across 23 Emerging Markets (EM) countries.

MSCI ACWI ex-US Index: The MSCI ACWI ex USA Index captures large and mid cap representation across 22 of 23 Developed Markets (DM) countries (excluding the US) and 23 Emerging Markets (EM) countries.

MSCI EAFE Growth Index: The MSCI EAFE Growth Index captures large and mid cap securities exhibiting overall growth style characteristics across Developed Markets countries around the world, excluding the US and Canada.

Price/Book: Compares a stock's market value to its book value

Price/Earnings: Compares a stock's market value to its earnings

12-Month Relative Strength: Measured as the 12-Month return of a stock

Sharpe Ratio: A measure that indicates the average return minus the risk-free return divided by the standard deviation of return on an investment.

Standard Deviation: A quantity calculated to indicate the extent of deviation for a group as a whole

Please keep in mind that there are significant differences between mutual funds and ETFs such as differing investment objectives, costs and expenses, liquidity terms and tax features.

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