PERSPECTIVES ON INTERNATIONAL SMALL-CAP STOCKS

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International small-capitalization stocks are a distinctive and valuable asset class, providing the investor with exposure to industries and companies that do not have close substitutes among the large-caps. Some of these companies will be the blue chips of tomorrow, just as most of today's leading global companies—including Microsoft, Wal-Mart, and Nokia—started out as small-cap stocks.[1] Naturally, as these stocks grew from small to large, investors who held them made a lot of money.

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Executive Summary

As an asset class, international small-capitalization stocks offer investors diversification benefits, as well as the potential for enhanced returns. In short, the rationale for international small-cap mirrors the one for domestic small-cap, while presenting a nearly $2 trillion market that should not be overlooked by investors. Indexing using an exchange traded fund is a low-cost strategy to implement and is a very sensible choice for many individual investors.

KEY ELEMENTS

- Researchers have long noted that domestic small-cap stocks have returns quite different—and on average, superior to—those of large-cap stocks. The same "small-cap effect" also exists internationally, where international small-cap has outperformed large-cap by 4.5% a year since 1999. Small-cap stocks may have higher—and, if not higher, certainly different—returns than large-cap because they represent different industries and companies than large-caps.
- International small-caps have a correlation of 0.83 with international large-cap—a small but significant diversification benefit—and an even lower correlation to the S&P 500.
- As of August 7, 2007, the 2,224 stocks in the MSCI EAFE Small Cap index had a total (not float-adjusted) capitalization of $1.825 trillion. Because of its sheer size, this nearly $2 trillion market should not be overlooked by investors.
- One could consider an allocation to international small-caps of 11.5% of total international equities, and this may be adjusted upward or downward depending on the investor's view of the attractiveness of the asset class.

In this article, we first review the case for small-cap stocks generally. We then show how small-cap investing makes sense in international markets, just as it does in the United States. We note that international small-caps represent a different mix of industries than international large-caps, and indicate how investors can use international small-caps to further diversify their portfolios and potentially enhance returns. Finally, we discuss reasons why an indexed approach to international small-cap investing is a cost-effective strategy.

THE SMALL STOCK EFFECT

The fact that small stocks had returns quite different than—and, on average, superior to—those of large-cap stocks was discovered in the late 1970s by researchers looking at data from the U.S., not because there was any special reason to believe that the small-stock effect was concentrated in that country, but simply because it is where the best kept data were located. Figure 1 compares the performance of the largest (S&P 500) and smallest stocks in the U.S. between 1926-2007, as noted initially by the famed researchers Roger Ibbotson and Rex Sinquefield in their 1982 book, *Stocks, Bonds, Bills and Inflation*.[2]

Four different patterns may be discerned from the exhibit:

- Small stocks had returns quite different from large stocks from 1974 onward, tending to go their own way rather than mimicking the returns of large stocks. This fact makes small-caps attractive from a diversification standpoint.
- Small-caps had, on average, considerably higher returns.
- The relative performance of small- versus large-caps moves in long waves, with small-caps outperforming for years on end, then large-caps outperforming, and so forth.
- Small-caps had more risk (variability).

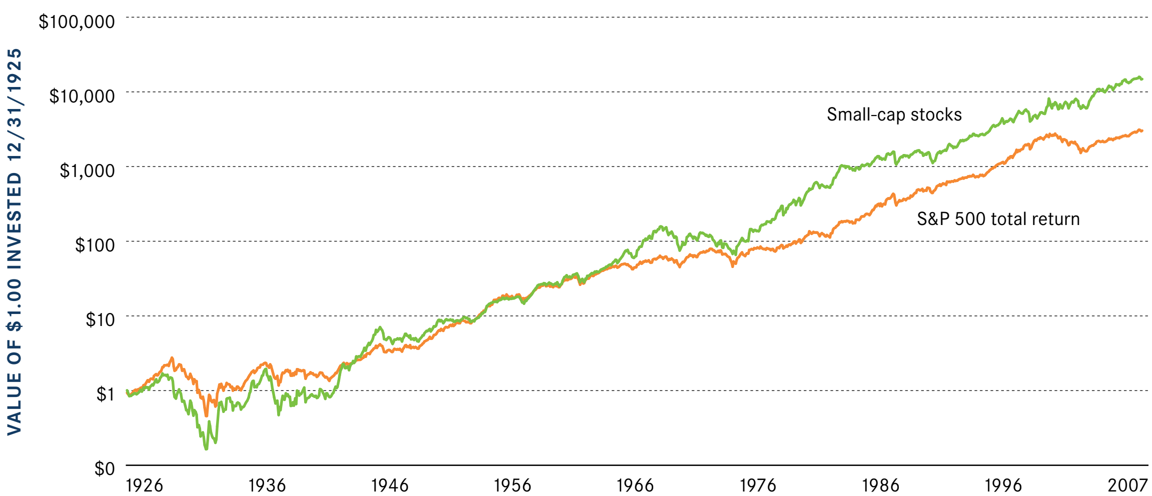
THE SMALL-CAP EFFECT INTERNATIONALLY

Investing in small-cap U.S stocks caught on fairly quickly after the effect was discovered, and was highly rewarding to investors in the 1980s; it fell short during the large-cap, growth-oriented markets of the 1990s, and then again boomed starting around 2000. These reasonably favorable results motivated researchers to ask whether a small-cap effect existed in non-U.S. markets. According to Clothier, Waring, and Siegel (1998),[3] early researchers found small-cap effects in Japan, the UK, and most (but not all) other developed-country markets. Bruce and Leahy (1993),[4] studying 17 non-U.S. markets between 1978–1991, found a positive small-stock premium in 13 of them, with an average return premium (calculated across all 17 countries on a cap-weighted basis) of 3.9% per year. This is a large return premium indeed, although the time period studied is quite short due to data limitations, so one can project the premium forward only with limited confidence.[5]

MSCI Barra, formerly Morgan Stanley Capital International, began to calculate small-cap indexes on a consistent basis across all developed non-U.S. markets in 1999. Figure 2 compares that organization's EAFE Small Cap Index with the performance of the large-cap EAFE and other asset classes, since that date. ("EAFE" signifies Europe, Australasia, and the Far East—that is, all non-U.S. developed-country markets

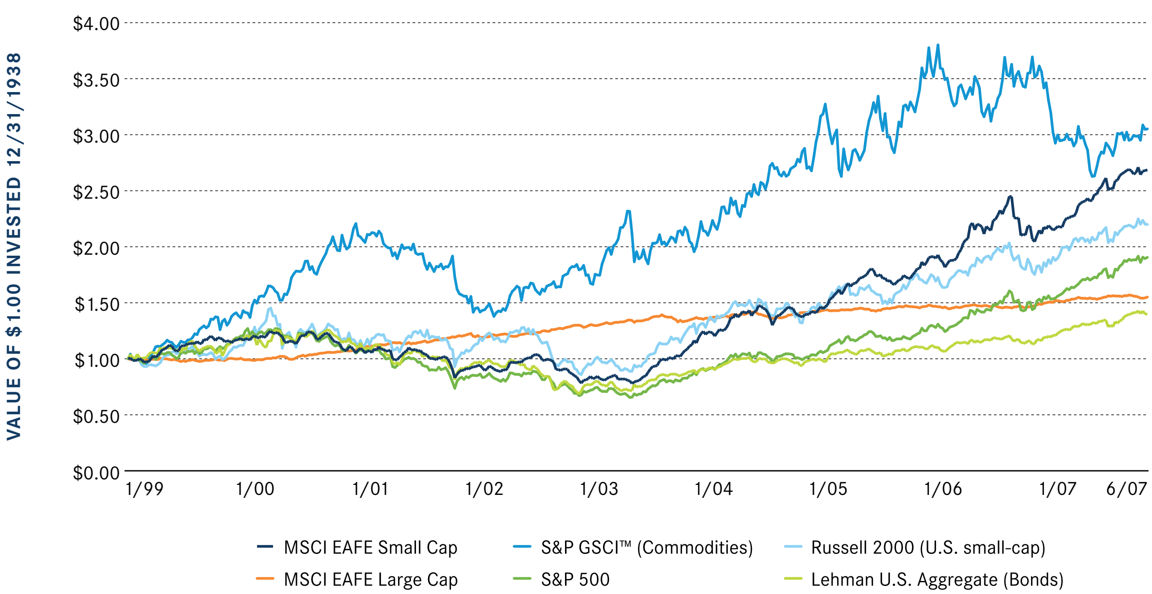
1. Nokia, with a market cap as low as $2.3 billion in 1994, is a bit larger than most of the stocks held in small-cap portfolios at the time, but it makes the point (as of September 26, 2007, its market cap is $145 billion).
2. While the small-cap index in Figure 1 represents the very smallest stocks in the U.S., the somewhat larger (but still small) stocks found in most small-cap portfolios have similar return patterns, although their return premium over large-caps is not quite as large. Ibbotson, Roger G., Rex A. Sinquefield. *Stocks, Bonds, Bills and Inflation: Historical Returns (1926–1987).* Association for Investment Management and Research, Charlottesville, VA, 1989.
3. Eric Clothier, Barton Waring and Laurence B. Siegel. "Is Small-cap Investing Worth It? Two decades of research on small-cap stocks." *Investment Insights,* Vol. 1, Number 5, December 1998.
4. Brian R. Bruce, and Peter G. Leahy. "Indexing International Small-cap Stocks." In Klein, Robert A., and Jess Lederman, eds., *Small Cap Stocks.* Chicago: Probus, 1993.
5. It is important to note that on December 3, 2007, MSCI will change the methodology they use to construct the MSCI International Small Cap Index. Currently, there is a 40% overlap between the components of the MSCI International Small Cap Index and the MSCI EAFE Index; after the changes are implemented in May 2008, there will be no overlap between the two indices. The data in this paper uses the index as constructed historically prior to the new methodology. Obviously, the diversification and potential higher return arguments are even stronger with the new methodology.

Figure 1
Uncovering the Small-Cap Effect: The U.S. Experience, 1926-2007



Source: BGI, using Ibbotson Association data.

Figure 2
Total Return Indexes of MSCI EAFE Small Cap and Other Major Asset Classes



Sources: BGI, MSCI Barra, S&P, Lehman, Russell.

except Canada.) Note that internationally, small-caps outperformed large-caps by about 4.5% per year, consistent with the earlier international studies and consistent with the U.S. Again, the time period studied is rather short, but it is encouraging to the small-cap investor.

Figure 3 shows the compound annual returns and risks of major asset classes, including international small-caps, as well as the correlation of each asset class with all the others. Note that international small-caps have a correlation of 0.83 with international large-caps. Thus international small-caps provide a small but significant diversification benefit, even for those investors who are already global investors. Note that, with a much lower correlation (0.46) to the S&P 500, international small-caps provide even greater diversification for investors who do not have international holdings, or who are underweighted in them.

Figure 3

Return, Risk, and Correlation of Major Asset Classes, 1999-2007

	MSCI EAFE SMALL CAP	MSCI EAFE	S&P 500	RUSSELL 2000	LEHMAN U.S. AGGREGATE	S&P GSCI
Compound annual return	12.2%	7.5%	3.6%	9.4%	5.4%	13.5%
Standard deviation	14.3%	15.1%	16.7%	20.5%	3.7%	22.2%
CORRELATIONS						
MSCI EAFE Small Cap	1.00	0.83	0.46	0.52	−0.04	0.17
MSCI EAFE Large Cap		1.00	0.70	0.66	−0.10	0.11
S&P 500			1.00	0.81	−0.10	−0.01
Russell 2000 (U.S. small-cap)				1.00	−0.16	0.04
Lehman U.S. Aggregate (bonds)					1.00	0.01
S&P GSCI™ (commodities)						1.00

Notes: Data cover 1/98–6/07. Standard deviation shown is annualized standard deviation of weekly returns. Correlations are based on weekly returns.

Sources: Bloomberg, MSCI Barra, Barclays Global Investors.

Index returns are for illustrative purposes only and do not represent actual iShares Fund performance. Index performance returns do not reflect any management fees, transaction costs or expenses. Indexes are unmanaged and one cannot invest directly in an index. Past performance does not guarantee future results.

Thus, there appears to be a global small-stock effect. Investors can participate in the non-U.S. component of this effect by investing in international small-caps. Note that the diversification argument (based on less-than-perfect correlation) and the superior-return argument (based on the higher historical, and possibly future, returns of small-caps) are entirely different. One need not believe that small-caps will have higher returns to justify holding them; that can be done purely on the strength of the diversification argument. If small-caps do have higher returns, then it is even more important to hold them.

SMALL-CAPS HAVE A DIFFERENT INDUSTRIAL MIX

Why might small-cap stocks have higher—and, if not higher, certainly different—returns?

One compelling reason is that small-caps represent different industries and companies than large-caps. Figure 4 compares the industrial composition of the MSCI EAFE Small-cap Index with that of the large-cap MSCI EAFE. Industries that have large economies of scale, such as finance, energy, and telecommunications have large weights in the large-cap index. Industries in which small companies may have an advantage, such as manufacturing, retailing and distribution ("consumer discretionary"), and basic materials have large weights in the small-cap index. Thus the two cap strata represent different segments of a country's economy. Both segments are important; one cannot be a fully participating investor in a country's economy without capturing all of these industrial sectors.

Figure 4
Sector Weights of the MSCI EAFE Small- and Large-Cap Indexes

SECTOR	WEIGHTS: MSCI EAFE Small Cap	WEIGHTS: MSCI EAFE
Consumer Discretionary	15.50%	10.40%
Consumer Staples	4.40%	7.80%
Energy	6.50%	10.50%
Financials	19.80%	25.20%
Health Care	8.25%	8.00%
Industrials	18.80%	10.80%
Information Technology	12.40%	10.50%
Materials	9.30%	7.30%
Telecommunications Services	1.30%	5.10%
Utilities	3.70%	4.30%
Total	100.00%	100.00%

Blue = MSCI EAFE Small Cap overweight relative to MSCI EAFE
Green = MSCI EAFE Small Cap underweight relative to MSCI EAFE

Data as of 6/29/07. Source: MSCI Barra.

In addition, international small-caps provide U.S. investors with increased exposure to the domestic market of a foreign country. For example, international small-caps give U.S. investors access to French firms that are not large and export oriented, but that sell in the French domestic market where economic cycles and consumer preferences are not harmonized with those of the U.S. This is an important economic attribute that U.S. small-caps do not provide and a reason why international small-caps are potentially better diversifiers than U.S. small-caps for U.S. investors.

SIZE OF THE INTERNATIONAL SMALL-CAP MARKET

As of August 7, 2007, the 2,224 stocks in the MSCI EAFE Small Cap Index had a total (not float-adjusted) capitalization of $1.825 trillion. Because of its sheer size, this nearly $2 trillion market should not be overlooked by investors.

This amount represents 11.5% of the total MSCI EAFE Investable Market Index capitalization and about 6.5% of the total capitalization of the global stock market, including the U.S. These proportions are sensitive to MSCI's choice of a cut-off point between small- and large-cap, and would be different with a different index provider.

OPTIMAL PORTFOLIO WEIGHTS

MARKET-CAP WEIGHTS

The easiest path to figuring out a portfolio weight for an asset class, especially one with significant market capitalization, is simply to hold the market-cap weight (so that international small-caps would be 11.5% of international equities or 6.5% of global equities). This approach assumes that the portfolio held by worldwide investors in aggregate is already optimal—in other words, that its components were selected by a process that takes into account consensus expectations about the returns, risks, and correlations of all asset classes.

A larger weight can be justified for investors who believe that the historical return premium of international small-caps over large-caps will persist. (It is unlikely that the current market-cap weights were established by investors who were fully aware of the size of this historical premium.) We would caution, however, that a high return premium projected indefinitely forward into the future can result in unrealistic valuations. We would support a more moderate premium.

OPTIMIZATION

Using a very conservative future return premium of zero (of international small-caps over large-caps), we ran an unconstrained optimization using the asset classes in Figure 3. We used the risk and correlation estimates from that exhibit, but assumed expected returns as follows[6] in Figure 5:

Figure 5

Return Assumptions for Optimization Scenario

MSCI EAFE Small Cap	8.50%
MSCI EAFE	8.50%
S&P 500	8.50%
Russell 2000	8.50%
Lehman U.S. Aggregate	5.25%
S&P GSCI™	6.00%

6. For a discussion of the formation of return expectations, see Grinold, Richard and Kenneth Kroner, "The Equity Risk Premium." *Investment Insights,* Barclays Global Investors, San Francisco, Volume 5, Issue 3. July 2002.
7. See in particular, Sharpe, William F. "The Arithmetic of Active Management," *Financial Analysts Journal,* January/February 1991.

Even with the zero small stock premium, international small-caps completely displace MSCI EAFE, taking up about two-thirds of the total global equity allocation—the rest is in the S&P 500. This result is due to the low risk of international small-caps relative to MSCI EAFE over the measurement period. These results are not credible, leading to the conclusion that optimization is not an ideal tool for interpreting inputs measured over such a short period. While we could increase the estimated risk of international small-caps, or constrain the optimization until we got sensible allocations, such an ad hoc approach is not scientific and we would not suggest relying on the outcome.

Thus, one could consider holding the market cap weights described above: the base-case allocation to international small-caps would be 11.5% of total international equities and this may be adjusted upward or downward depending on the investor's view of the attractiveness of the asset class.[7]

WHY AN INDEX FUND?

Some investors, who surmise that international small-caps are an inefficient market where active management may be fruitful, might wonder why we use an index fund for this asset class. However, even an inefficient market is a zero sum game for active managers trying to beat the cap-weighted benchmark. In other words, active manager returns will be distributed around the benchmark before fees and will be less than the benchmark, on average, after the considerable fees that one tends to see in this asset class. So one might as well index and save on costs.

Management fees are not the only costs minimized by an index strategy. Transaction costs in international small-caps are considerable, and such costs are kept low in an index fund because trading is limited to that needed to keep pace with changes in index constituents and reinvest income. There is no need to transact to reflect active management decisions.

Of course, index funds are not the only sensible investment strategy. Investment management is about maximizing expected return after fees, which is sometimes accomplished with traditional long-only active managers and more often with low-risk active managers (who, in addition, should be long-short) and index funds. There is a continuum of choices from indexed to very active and indexing is only position on the continuum. It is, however, a low-cost strategy to implement and is a very sensible choice for individual investors building portfolios out of asset classes using ETFs.

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