

Introduction

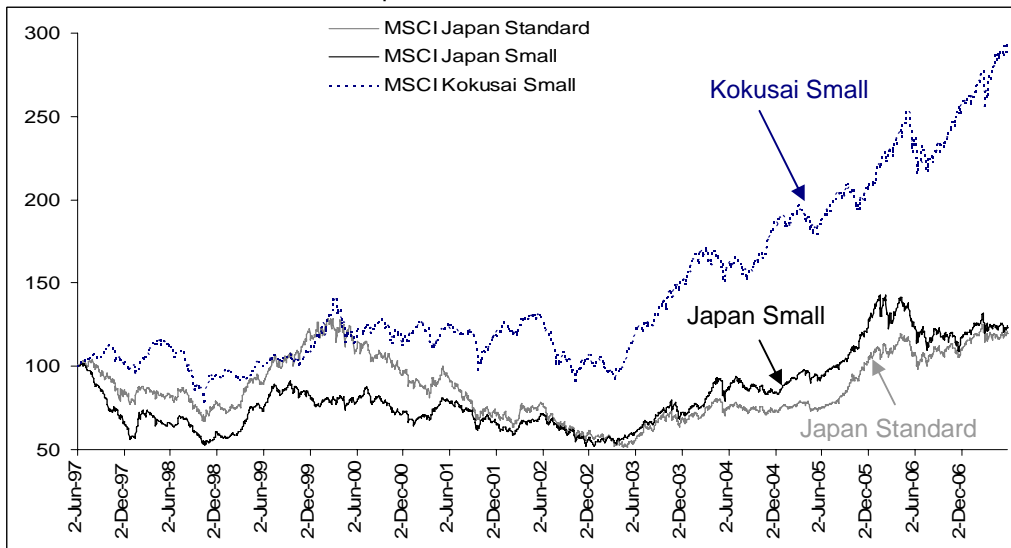
For many years, the equity allocation of Japanese institutional investors has typically been split between domestic and international assets and tended to be concentrated in large and mid cap stocks. Given the constant challenge for investors to optimize the asset allocation mix to produce better risk-adjusted returns, one increasingly popular option has been to venture into small cap stocks. In fact, small caps have already attracted a lot of attention in the US, where institutional assets invested in international small cap have more than tripled in the last five years.¹ Earlier this year, Japan's Government Pension Investment Fund (GPIF) also announced plans to start diversifying into small-cap stocks.

This note examines the performance and risk characteristics of small cap stocks, both within and outside Japan, compared with their large and mid cap counterparts. We find that foreign small caps have had attractive risk/reward ratios. Domestic small caps, however, have not yielded the same large return premium though they have outpaced domestic large/mid caps in certain periods. This suggests that there may be benefits for institutional investors to consider a dynamic tactical allocation between domestic and foreign small caps.

Ten-Year Performance Comparison

We use the MSCI Japan Small Cap Index to represent Japan small cap stocks and the MSCI Japan Standard Index for large and mid caps combined. In the World ex Japan equity space, the MSCI Kokusai Small Cap Index is used to represent foreign small cap stocks. The ten-year histories of these indices are shown in Figure 1, with all indices rescaled to 100 at the start of the period. Exhibit 1 shows that there are significant performance differentials for small cap stocks, particularly foreign small cap, relative to the Japan large & mid cap stocks.

Exhibit 1: Performance of Small Cap Stocks



Source: MSCI Barra.

¹ Client Memorandum, Implementation challenges in International Small Cap, InterSec, February 2006.

What if we adjust return for risk? Table 2A shows the risk-adjusted performance or Sharpe ratio. While the Sharpe ratio over the entire 10-year period is similar, the MSCI Japan Standard Index saw significantly better risk-adjusted return in recent years.

Exhibit 2A: Performance Figures for MSCI Japan Standard and Small Cap Indices

	RETURN		RISK		Sharpe Ratio	
	Japan	Japan	Japan	Japan	Japan	Japan
	Standard	Small	Standard	Small	Standard	Small
Last 3 Years (Annualized)	17.1%	12.7%	13.2%	14.8%	1.30	0.85
Last 5 Years (Annualized)	9.5%	11.8%	14.4%	15.8%	0.66	0.74
Last 10 Years (Annualized)	2.1%	2.2%	16.8%	20.0%	0.12	0.11

Source: MSCI Barra. Data used from May 31, 1997 to May 31, 2007.

Table 2B shows the corresponding statistics for stocks in the MSCI Kokusai Small Cap Index versus their larger counterparts in the MSCI Kokusai universe. The figures indicate better performance for foreign small caps, which have outperformed foreign large/mid cap stocks over all subperiods even on a risk-adjusted basis.

Exhibit 2B: Performance Figures for MSCI Kokusai Standard and Small Cap Indices

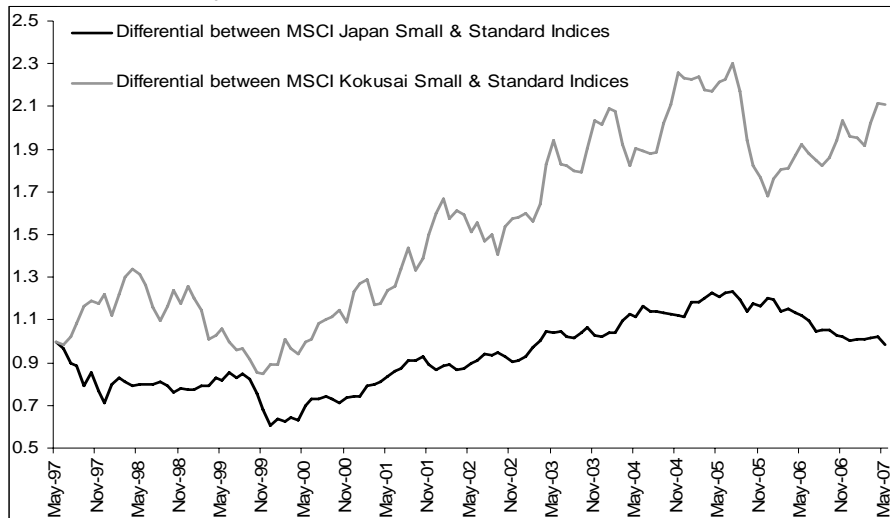
	RETURN		RISK		Sharpe Ratio	
	Kokusai	Kokusai	Kokusai	Kokusai	Kokusai	Kokusai
	Standard	Small	Standard	Small	Standard	Small
Last 3 Years (Annualized)	4.2%	17.4%	16.4%	20.2%	0.26	0.86
Last 5 Years (Annualized)	-2.4%	9.8%	16.4%	20.0%	-0.15	0.49
Last 10 Years (Annualized)	6.7%	8.3%	15.2%	17.8%	0.44	0.47

Source: MSCI Barra. Data used from May 31, 1997 to May 31, 2007.

Analysis of the Small Cap Premium

Next, we analyze the performance differential in greater depth from a time-series perspective. We focus on the small cap premium, which is the excess return of small cap stocks over that of large/mid cap stocks, as measured by the MSCI indices, shown in Exhibit 3. As we saw previously, there has been a visible performance differential between the large/mid cap stocks and small cap stocks domestically and internationally. The small cap premium in the Kokusai space has been significantly higher than that of the Japan market. The small cap premium in Japan however has been relatively more stable. The degree of variation over time for the Kokusai small cap premium suggests that dynamically changing the allocation between small and mid/large caps could have provided a significant alpha source.

Exhibit 3: Small Cap Premium Over Last 10 Years

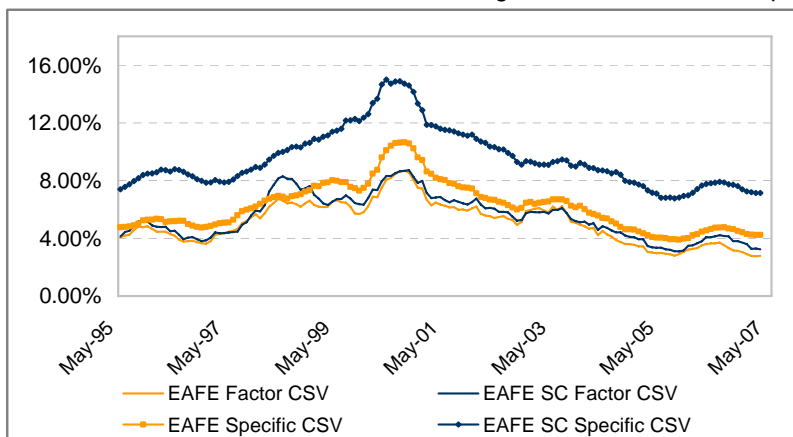


Source: MSCI Barra.

Small Cap Investing: Different Characteristics?

While there seem to be potential benefits from small-cap investing for Japanese investors, the challenges of managing small cap portfolios and their risk may be less straightforward. In particular, the sources of return and risk for both foreign and Japan small cap stocks are likely to be different from their large/mid cap counterparts. For instance, recent research based on MSCI EAFE Standard versus Small Cap Indices reveals that small cap stocks exhibit quite different sources of return from large/mid caps² (Exhibit 4). Not only are small cap returns more dispersed cross-sectionally, they depend much less on common factor sources of return than large caps. Moreover, the country allocation decision remains relatively more important for small cap return dispersion.

Exhibit 4: Provisional MSCI EAFE and EAFE SC Rolling 12 Month Factor and Specific CSV



² See Nielsen, F. "International Small Cap – A Distinct Asset Class?" *Journal of Indexes* Nov/Dec 2007.

We also compare the valuation ratios of the different segments. Exhibit 5 shows that small cap valuation characteristics can differ significantly from their standard (large/mid cap) counterparts. For example, ROE (return-on-equity) and Short-term forward-looking earnings per share are quite different between the small cap stocks and their standard counterparts. Both Japan and Kokusai small cap stocks exhibit much stronger forward EPS growths versus the large/mid cap counterparts. However, for ROE, Japan small cap stocks lag behind their larger peers while Kokusai small caps are higher than their large counterparts, thus highlighting important differences between small cap stocks in Japan compared to the rest of the world.

Exhibit 5: Average Valuation Ratios of Small Cap Versus Large/Mid Cap Stocks, based on MSCI Japan and Kokusai Indices

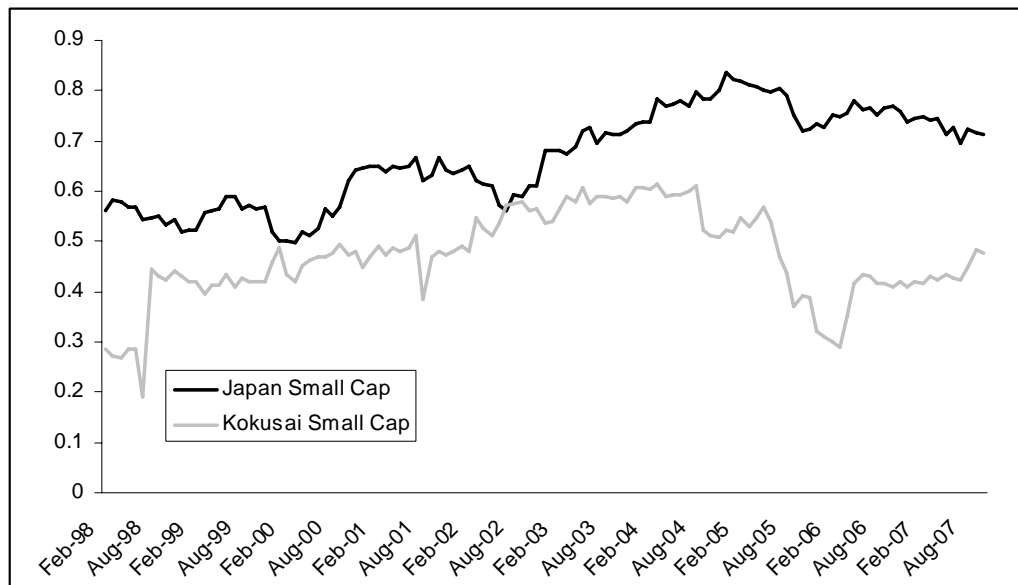
	P/BV (Price to Book Value)	P/E (Price to Earnings)	P/E Fwd (Forward Price to Earnings)	Yield	ROE (Return-on-Equity)	g (Growth)	Long Term Historical EPS G	Short Term Fwd EPS G
Japan	1.9	19.5	16.2	1.3	9.7	7.1	26.0	11.3
Japan Small Cap	1.4	22.9	16.2	1.4	6.0	4.0	21.8	24.3
Kokusai	2.8	16.2	14.4	2.2	17.1	10.9	20.4	10.1
Kokusai Small Cap	2.3	20.6	17.6	1.6	11.2	7.6	21.5	20.6

Source: MSCI Barra, Data as of Oct 31, 2007

Diversification Impact

Apart from the risk/return profile and asset characteristics of small cap, correlation between asset segments is also an important consideration in making the asset allocation decision. Therefore, to analyze the diversification effect of adding small-cap stocks to a portfolio of Japanese large and mid cap equities, we examine the correlations between each of the two small-cap indices and the MSCI Japan index. Exhibit 6 shows that for the entire 10-year period, the correlation between Japan Small Cap Index and MSCI Japan was 0.67 while that between Kokusai Small Cap Index and MSCI Japan was 0.47. These correlations indicate that adding small caps to a portfolio of large and mid-sized stocks can potentially produce better risk-adjusted return, thus moving the efficient frontier upwards.

Exhibit 6: Rolling 36-month Correlations with MSCI Japan Index



Source: MSCI Barra.

Conclusion

With small caps in Japan and around the world increasingly attracting attention from investors, this note compares their return and risk characteristics against large and mid cap stocks from the perspective of a Japanese investor.

First, our performance measures at the aggregate index level indicate that the small cap effect does exist in the Japan domestic market, but it is cyclical and not consistent over time. This suggests that an ability to time the market could be an important and integral part of passively allocating to Japanese small caps (if the investment horizon is not long-term). This dynamic allocation may require frequent asset allocation adjustments in order to capitalize the performance differentials. On the other hand, in the case of international (Kokusai) small caps, risk-adjusted performance has been consistently better than large/mid caps in the same space. If the Kokusai small cap premium persists, passive investment in this universe could continue to be attractive to investors.

Second, evidence from individual-asset characteristics in the Japan and international small cap space suggests that the sources of return and risk may be quite different. Thus, active managers who must search for alpha opportunities within these universes may find that strategies that work well in large/mid cap stocks are not necessarily portable to the small cap space. Moreover, risk characteristics for small cap portfolios, whether they be solely Japan small caps or include foreign small caps, will likely also be quite different to their large cap counterparts. Careful strategy design and risk management will be important for active managers who wish to capitalize on the growing popularity of small cap investing.

Contact Information

clientservice@mscibarra.com

Americas

Americas	1.888.588.4567 (toll free)
Atlanta	+ 1.404.949.4529
Boston	+ 1.617.856.8716
Chicago	+ 1.312.706.4999
Montreal	+ 1.514.847.7506
New York	+ 1.212.762.5790
San Francisco	+ 1.415.576.2323
Sao Paulo	+ 55.11.3048.6080
Toronto	+ 1.416.943.8390

Europe, Middle East & Africa

Amsterdam	+ 31.20.462.1382
Cape Town	+ 27.21.683.3245
Frankfurt	+ 49.69.2166.5325
Geneva	+ 41.22.817.9800
London	+ 44.20.7618.2222
Madrid	+ 34.91.700.7275
Milan	+ 39.027.633.5429
Paris	0800.91.59.17 (toll free)
Zurich	+ 41.1.220.9300

Asia Pacific

China Netcom	10800.852.1032 (toll free)
China Telecom	10800.152.1032 (toll free)
Hong Kong	+ 852.2848.7333
Singapore	+ 65.6834.6777
Sydney	+ 61.2.9220.9333
Tokyo	+ 813.5424.5470

www.mscibarra.com

Notice and Disclaimer

- This document and all of the information contained in it, including without limitation all text, data, graphs, charts (collectively, the "Information") is the property of MSCI Inc. ("MSCI"), Barra, Inc. ("Barra"), or their affiliates (including without limitation Financial Engineering Associates, Inc.) (alone or with one or more of them, "MSCI Barra"), or their direct or indirect suppliers or any third party involved in the making or compiling of the Information (collectively, the "MSCI Barra Parties"), as applicable, and is provided for informational purposes only. The Information may not be reproduced or redisseminated in whole or in part without prior written permission from MSCI or Barra, as applicable.
- The Information may not be used to verify or correct other data, to create indices, risk models or analytics, or in connection with issuing, offering, sponsoring, managing or marketing any securities, portfolios, financial products or other investment vehicles based on, linked to, tracking or otherwise derived from any MSCI or Barra product or data.
- **Historical data and analysis should not be taken as an indication or guarantee of any future performance, analysis, forecast or prediction.**
- **None of the Information constitutes an offer to sell (or a solicitation of an offer to buy), or a promotion or recommendation of, any security, financial product or other investment vehicle or any trading strategy, and none of the MSCI Barra Parties endorses, approves or otherwise expresses any opinion regarding any issuer, securities, financial products or instruments or trading strategies. None of the Information, MSCI Barra indices, models or other products or services is intended to constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such.**
- The user of the Information assumes the entire risk of any use it may make or permit to be made of the Information.
- NONE OF THE MSCI BARRA PARTIES MAKES ANY EXPRESS OR IMPLIED WARRANTIES OR REPRESENTATIONS WITH RESPECT TO THE INFORMATION (OR THE RESULTS TO BE OBTAINED BY THE USE THEREOF), AND TO THE MAXIMUM EXTENT PERMITTED BY LAW, MSCI AND BARRA, EACH ON THEIR BEHALF AND ON THE BEHALF OF EACH MSCI BARRA PARTY, HEREBY EXPRESSLY DISCLAIMS ALL IMPLIED WARRANTIES (INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF ORIGINALITY, ACCURACY, TIMELINESS, NON-INFRINGEMENT, COMPLETENESS, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) WITH RESPECT TO ANY OF THE INFORMATION.
- Without limiting any of the foregoing and to the maximum extent permitted by law, in no event shall any of the MSCI Barra Parties have any liability regarding any of the Information for any direct, indirect, special, punitive, consequential (including lost profits) or any other damages even if notified of the possibility of such damages. The foregoing shall not exclude or limit any liability that may not by applicable law be excluded or limited.
- Any use of or access to products, services or information of MSCI or Barra or their subsidiaries requires a license from MSCI or Barra, or their subsidiaries, as applicable. MSCI, Barra, MSCI Barra, EAFE, Aegis, Cosmos, BarraOne, and all other MSCI and Barra product names are the trademarks, registered trademarks, or service marks of MSCI, Barra or their affiliates, in the United States and other jurisdictions. The Global Industry Classification Standard (GICS) was developed by and is the exclusive property of MSCI and Standard & Poor's. "Global Industry Classification Standard (GICS)" is a service mark of MSCI and Standard & Poor's.
- The governing law applicable to these provisions is the substantive law of the State of New York without regard to its conflict or choice of law principles.

© 2007 MSCI Barra. All rights reserved.

About MSCI Barra

MSCI Barra is a leading provider of investment decision support tools to investment institutions worldwide. MSCI Barra products include indices and portfolio analytics for use in managing equity, fixed income and multi-asset class portfolios.

The company's flagship products are the MSCI International Equity Indices, which are estimated to have over USD 3 trillion benchmarked to them, and the Barra risk models and portfolio analytics, which cover 56 equity and 46 fixed income markets. MSCI Barra is headquartered in New York, with research and commercial offices around the world. Morgan Stanley, a global financial services firm, is the majority shareholder of MSCI Barra.