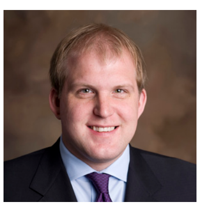
T.RowePrice®
INVEST WITH CONFIDENCE

PRICE PERSPECTIVE®
September 2017

In-depth analysis and insights to inform your decision-making.

Som Priestley, CFA
Multi-Asset Solutions Strategist



Jason A. White
Portfolio Specialist, International Equity

Global Investing

DIVERSIFYING INTERNATIONAL EQUITY ALLOCATIONS WITH SMALL-CAP STOCKS

EXECUTIVE SUMMARY

- International small-cap equities represent a wide, evolving, and generally underinvested opportunity set compared with traditional international equity universes represented by benchmarks such as the Morgan Stanley Capital International Europe, Australasia, and Far East (MSCI EAFE) Index and the MSCI All Country World Index (ACWI) ex USA.

- Over longer time periods, international small-cap equities historically have provided attractive absolute and risk-adjusted returns relative to other major international equity classes. The asset class also presents additional portfolio diversification opportunities, as it has shown relatively low correlation with other equity markets and features country and sector exposures that differ considerably from traditional international equity benchmarks.

- The international small-cap space features wider breadth than the traditional international equity benchmarks. The MSCI ACWI ex USA Small Cap Index, for example, includes more than 4,300 companies compared with just 926 in the MSCI EAFE Index.[1] This breadth—as well as the relatively idiosyncratic nature of international small-cap returns—may provide significant opportunities for active managers to add value through stock selection.

- Analyst coverage of the international small-cap universe is still relatively limited, and the asset class historically has shown greater variability of regional and economic sector returns compared with traditional international benchmarks. These traits also could potentially enhance the ability of active managers to add value.

- Our analysis suggests that, over the five years ended 30 June 2017, combining an international equity mandate tied to the MSCI ACWI ex USA Index and an international small-cap mandate in a 80/20 mix could improve both absolute and risk-adjusted returns relative to a traditional international allocation. Over the 10 years ended 30 June 2017, absolute returns could be improved.

International small-cap stocks represent a large, compelling, but surprisingly underutilized opportunity set for global equity investors. The MSCI EAFE Small Cap Index includes more than 2,260 stocks available for investment, while the MSCI ACWI ex USA Small Cap Index offers more than 4,300 companies.[1] All told, international small-cap stocks make up almost 70% of the investable international equity universe, yet there are only 148 institutional investment

[1]As of 30 June 2017.

strategies active in the international small-cap universe versus 362 in the MSCI ACWI ex USA space.[2]

In our view, including international small-cap equities in an institutional portfolio not only has the potential to improve diversification, but also could enhance the opportunity for long-term returns by providing exposure to smaller, more idiosyncratic companies that are more closely tied to the economic environment in their country and/or region. While many global large-cap firms generate a significant portion of their revenues internationally, smaller companies are much more reliant on their local economies to generate earnings and thus may enhance geographic diversification.

Figure 1 compares some of the key characteristics of the major traditional international benchmarks with the MSCI ACWI ex USA Small Cap Index and the MSCI EAFE Small Cap Index.[3]

FIGURE 1: **Comparison of Selected International Equity Benchmarks**

All Data as of 30 June 2017

Index	Description	Index Holdings	Median Market Cap ($U.S. Millions)	Dividend Yield (%)	Countries in Index
MSCI EAFE	Free-float-adjusted market capitalization-weighted index designed to measure the equity market performance of developed markets, excluding the U.S. and Canada.	926	7,326.7	3.07	21 developed
MSCI ACWI ex USA	Free-float-adjusted market capitalization-weighted index designed to measure the equity market performance of developed and emerging markets.	1,863	4,782.8	2.88	22 developed and 24 emerging
MSCI ACWI ex USA Small Cap	Free-float-adjusted market capitalization-weighted index designed to measure the small-cap equity market performance of developed and emerging markets.	4,319	484.0	2.28	22 developed and 24 emerging
MSCI Emerging Markets	Free-float-adjusted market capitalization-weighted index designed to measure the equity market performance of emerging markets.	843	2,747.2	2.34	24 emerging
MSCI EAFE Small Cap	Free-float-adjusted market capitalization-weighted index designed to measure the small-cap equity market performance of developed markets, excluding the U.S. and Canada.	2,262	701.2	2.30	21 developed

Source: MSCI; data analysis by T. Rowe Price.

ATTRACTIVE RETURNS AND LOW CORRELATIONS

Overall, international small-cap stocks (as measured by the MSCI ACWI ex USA Small Cap Index) have performed well over a variety of market cycles and time periods. The benchmark outperformed the MSCI ACWI ex USA Index and the MSCI Emerging Markets (EM) Index over the 3-, 5-, and 10-year periods shown in Figure 2. Note that the MSCI ACWI ex USA Small Cap Index posted higher annualized returns than the MSCI EM Index over those periods, but with considerably less volatility.

FIGURE 2: **Selected Equity Index Returns and Standard Deviations**

Returns in U.S. Dollars, as of 30 June 2017

	Annualized Return				Standard Deviation		
International Indexes	1-Year	3-Year	5-Year	10-Year	3-Year	5-Year	10-Year
MSCI ACWI ex USA	21.00%	1.27%	7.70%	1.59%	12.29%	11.48%	19.08%
MSCI ACWI ex USA Small Cap	20.76	3.68	10.41	3.28	12.14	11.43	20.54
MSCI Emerging Markets	24.17	1.44	4.33	2.25	15.83	14.28	23.29
U.S. Indexes							
Russell 3000	18.51%	9.10%	14.58%	7.26%	10.48%	9.72%	15.68%
Russell 1000	18.03	9.26	14.67	7.29	10.30	9.57	15.43
Russell 2000	24.60	7.36	13.70	6.92	15.17	13.76	20.05

Sources: MSCI and Russell; data analysis by T. Rowe Price.
Past performance is not a reliable indicator of future performance.

It is true that U.S. equity benchmarks, including U.S. small-cap benchmarks, outperformed international small-cap equities over the 3-, 5-, and 10-year periods shown in Figure 2—although with varying degrees of relative risk. However, the relatively low correlations between the international small-cap equity universe and other equity markets, including U.S. equities, still justify including international small-cap stocks in an institutional portfolio, in our view.

Evidence of this diversification potential can be found in the fact that over the 10 years ended 30 June 2017, the MSCI ACWI ex USA Small Cap Index showed a lower correlation (0.86) with

[2]Based upon the combined number of securities in the MSCI ACWI ex USA Small Cap Index (4,319) and the MSCI ACWI ex USA Index (1,863) as of 30 June 2017. Product count is based on eVestment calculations as of 22 Aug 2017.
[3]We selected the MSCI ACWI ex USA Small Cap Index as the primary benchmark for this analysis because of its long track record and broad popularity with investors.

U.S. large-cap stocks than did the MSCI ACWI ex USA Index (0.90). In fact, of the five other asset classes shown in Figure 3, international small-cap's lowest correlation over that 10-year period was with U.S. small-cap (0.77).

DIFFERENTIATED COUNTRY AND SECTOR EXPOSURES

Another potential diversification opportunity stems from the fact that country and economic sector exposures in the international small-cap asset class vary widely from traditional larger-cap international benchmarks. Figure 4, for example, shows relative exposure differentials between the MSCI ACWI ex USA Index and the MSCI ACWI ex USA Small Cap Index across six major non-U.S. equity regions—Continental Europe, the UK, Asia ex Japan, Japan, Canada, and the emerging markets.

Sector exposures within the MSCI ACWI ex USA Small Cap Index also vary considerably from the MSCI ACWI ex USA Index (Figure 5). As of 30 June 2017, the former provided more exposure to cyclical sectors, such as industrials and business services, consumer discretionary, and information technology, while the latter was more heavily weighted toward defensive sectors such as consumer staples, health care, and utilities.

These variations in country and sector exposures have resulted in significantly different performance patterns for each index as was evident in 2015 calendar-year performance, when the MSCI ACWI ex USA Small Cap Index returned 2.95%, while the MSCI ACWI ex USA Index returned -5.25%.[4]

A BROADER OPPORTUNITY SET

A primary argument for investing in international small-cap equities is the larger opportunity set the asset class provides for active portfolio management, and thus the greater potential it offers for managers to generate excess returns.

FIGURE 3: **Index Correlations**

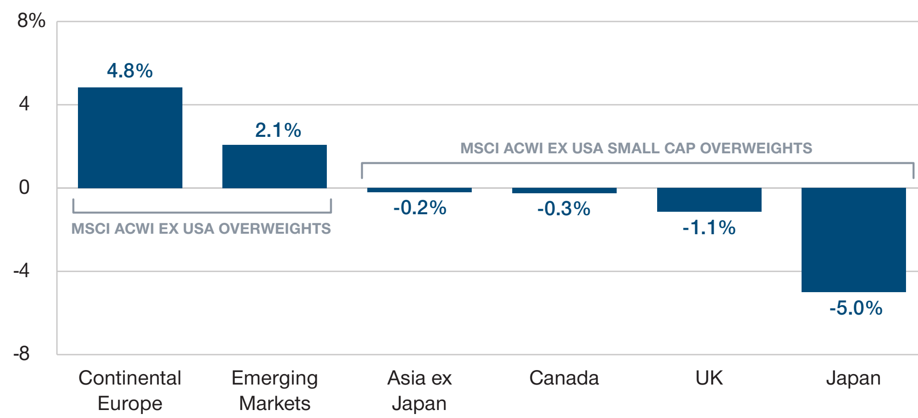
10 Years Ended 30 June 2017

Index	MSCI ACWI ex USA Small Cap	MSCI ACWI ex USA	MSCI EM	Russell 1000	Russell 2000	Russell 3000
MSCI ACWI ex USA Small Cap	**1.00**					
MSCI ACWI ex USA	0.97	**1.00**				
MSCI Emerging Markets	0.93	0.94	**1.00**			
Russell 1000	0.86	0.90	0.81	**1.00**		
Russell 2000	0.77	0.79	0.72	0.92	**1.00**	
Russell 3000	0.86	0.89	0.80	1.00	0.94	**1.00**

Sources: eVestment Alliance, MSCI, and Russell; data analysis by T. Rowe Price.

FIGURE 4: **Relative Index Country Weights**

MSCI ACWI ex USA Index Minus MSCI ACWI ex USA Small Cap Index
In Percentage Points, as of 30 June 2017



Source: MSCI; data analysis by T. Rowe Price.

FIGURE 5: **Relative Index Sector Weights**

MSCI AWCI ex USA Small Cap Index Minus MSCI ACWI Ex USA Index, as of 30 June 2017

Sector	MSCI ACWI ex USA Small Cap	MSCI ACWI ex USA	Small-Cap Differential (% points)
Consumer Discretionary	15.62%	11.25%	4.37%
Consumer Staples	6.55	9.92	-3.37
Energy	3.41	6.29	-2.88
Financials	10.48	23.33	-12.85
Health Care	6.93	8.14	-1.21
Industrials and Business Services	20.16	12.01	8.15
Information Technology	12.02	10.77	1.25
Materials	10.71	7.56	3.15
Real Estate	10.14	3.20	6.94
Telecommunication Services	1.14	4.40	3.26
Utilities	2.84	3.13	-0.29

Source: MSCI; data analysis by T. Rowe Price.

[4]Source: MSCI.

FIGURE 6: **Equity Manager Information Ratios***

15 Years Ended 30 June 2017

	International Developed	International Small-Cap	Emerging Markets
High	1.08	1.52	0.98
5th Percentile	0.82	0.88	0.78
25th Percentile	0.47	0.66	0.55
Median	**0.27**	**0.46**	**0.35**
75th Percentile	0.08	0.16	0.18
95th Percentile	-0.18	-0.20	-0.09
Low	-0.52	-0.28	-0.28

FIGURE 7: **Equity Manager Excess Returns***

15 Years Ended 30 June 2017

	International Developed	International Small-Cap	Emerging Markets
High	4.45%	7.15%	10.23%
5th Percentile	2.83	4.33	4.52
25th Percentile	1.75	2.65	2.51
Median	**1.07**	**1.78**	**1.41**
75th Percentile	0.30	0.89	0.77
95th Percentile	-0.63	-0.90	-0.47
Low	-2.14	-2.88	-1.10

*Source: eVestment Alliance. Source for all data and calculations is eVestment Alliance. Data are self-reported by investment management firms. Excess return is the median of the excess returns reported by each manager. Information ratio is calculated by eVestment ex-post. "International Developed" includes eVestment's EAFE and ACWI ex USA large-cap universes. "International Small-Cap" includes eVestment's EAFE and ACWI ex USA small-cap universes. "Emerging Markets" includes eVestment's emerging markets equity universes. Copyright© 2017 eVestment Alliance, LLC (eVestment). All rights reserved. **Past performance is not a reliable indicator of future performance.**

The theory behind this thinking is formulated in the Fundamental Law of Active Management, which holds that an active manager's information ratio (IR) can be calculated by multiplying his or her information coefficient (a measure of investment skill) by the square root of the number of independent bets that he or she can make in a portfolio.[5] The practical conclusion derived from this formula is that a higher IR can be achieved either through superior investment skill or greater portfolio breadth. While identifying truly skilled active managers is a difficult task, identifying managers who benefit from greater breadth of opportunity is not.

Figures 6 and 7 provide empirical evidence for the benefits of investment breadth. Over the 15 years ended 30 June 2017, the median international small-cap manager (who enjoyed the greatest breadth) generated both a higher excess return and a higher IR than either the median international developed or the median EM manager.

FIGURE 8: **Five-Year Risk and Return Results**

As of 30 June 2017

Source: MSCI; data analysis by T. Rowe Price.
Past performance is not a reliable indicator of future performance.

FIGURE 9: **10-Year Risk and Return Results**

As of 30 June 2017

Source: MSCI; data analysis by T. Rowe Price.
Past performance is not a reliable indicator of future performance.

LONG-TERM PERFORMANCE: POTENTIAL BENEFITS AND CONCERNS

Figures 8 and 9 demonstrate that adding international small-cap exposure to an international large-cap allocation (represented by the MSCI

[5]See Richard C. Grinold, "The Fundamental Law of Active Management," *The Journal of Portfolio Management*, Vol 15, Spring 1989.

ACWI ex USA Index) historically had the potential to improve both absolute and risk-adjusted returns. This is due to the higher absolute returns posted by international small-cap stocks over time, as well as their previously discussed diversification benefits.

However, international small-cap equities (represented by the MSCI ACWI ex USA Small Cap Index) historically have been sensitive to the same broad return factors as U.S. small-cap stocks. These sensitivities suggest that international small-cap could underperform international large-cap in the following market and/or economic environments:

- Poor trading liquidity or worsening credit conditions
- Decreased investor appetite for risk
- Declining global and/or local economic activity, including a slowdown in merger and acquisition activity or a reduction in initial public offerings
- Periods of high market volatility

While these factors generally have been headwinds for international small-cap stocks in the past, each market environment is unique and must be analyzed and understood on its own terms. Investors should also recognize that even under normal conditions, international small-cap equities are subject to market risk, as well as the risks associated with unfavorable currency exchange rates and political or economic uncertainty abroad.

CONCLUSIONS

International small-cap stocks historically offered attractive returns, with relatively low correlations to U.S. equity benchmarks and country and sector exposure weights that differ significantly from larger-cap international benchmarks. The traits suggest that international small-cap allocations may offer significant opportunities to improve portfolio diversification.

Excess returns and information ratios for active international small-cap managers also suggest that the greater breadth of the international small-cap universe compared with traditional international benchmarks—as well as the relatively idiosyncratic, stock-specific nature of international small-cap returns—may enhance the ability of active managers to add value through security selection.

Despite these potential benefits, institutional investors overall have been relatively slow to include international small-cap allocations in their portfolios, even as other nondeveloped and/or non-large-cap equity assets, such as U.S. small-caps and emerging market stocks, have gained popularity.

For these and the other reasons outlined in this paper, we suggest that investors may want to consider including a dedicated international small-cap mandate in their non-U.S. equity allocations.

INVEST WITH CONFIDENCE®

T. Rowe Price focuses on delivering investment management excellence that investors can rely on—now and over the long term.

To learn more, please visit troweprice.com.

201709-258353