



Putting International Small-Caps On the Map

The Case for Allocating to International Small-Cap Stocks

Our goal in this paper is to provide an introduction for asset allocators to the international small-cap asset class by detailing its attributes in terms of performance, volatility, correlation, and fundamentals.

Because asset allocators often compare international small-cap with international large-cap, we thought it was particularly important to examine the long-term relative performance of these two asset classes to highlight the regular frequency with which international small-caps outperformed their large-cap siblings.

Knowing that the risk/return trade-off is always relevant when analyzing different asset classes, we also include volatility comparisons which show that international small-cap's superior performance record came with less incremental volatility than many financial professionals might expect.

We then go on to examine how the two asset classes fared in different market environments, such as rising and falling equity markets and rising and falling interest rates periods, which showed that certain periods resulted in even wider positive relative return spreads for international small-caps.

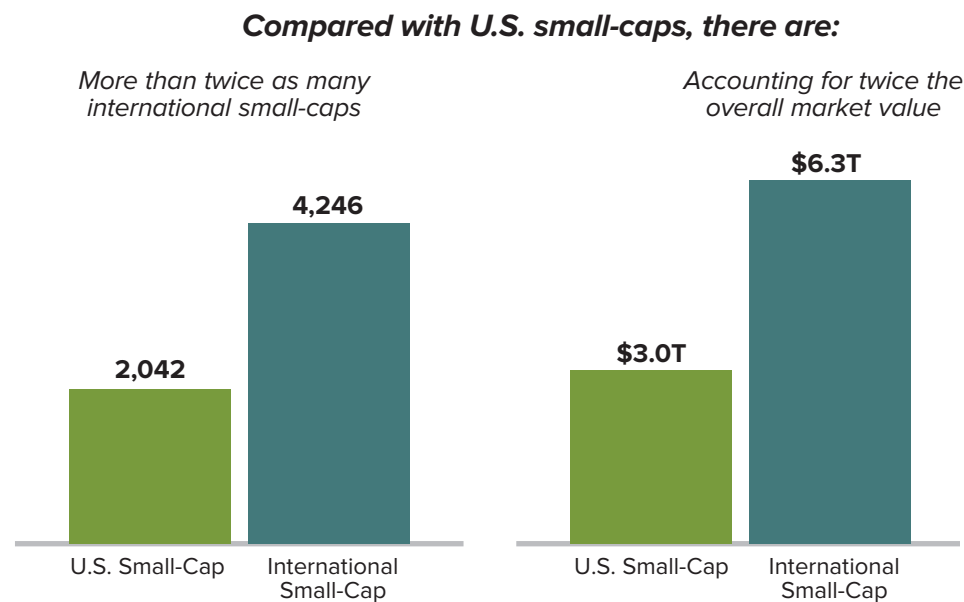


To enhance international small-cap's attractive attributes on a standalone basis, we demonstrate the benefits of adding the asset class to a global multi-asset portfolio. International small-caps have historically had a lower correlation to U.S. large-caps than either international large-caps or U.S. small-caps. This lower correlation allowed international small-caps to be additive on both an absolute and risk-adjusted return basis to a global multi-asset portfolio.

Finally, we look at some indicators that suggest, at least to us, why the current period offers a compelling and timely opportunity. We conclude by highlighting some fundamental factors that we believe make the asset class potentially fertile ground for active management.

Introducing a Large Opportunity in International Small-Caps

Considering that less than 1%¹ of mutual fund assets in the U.S. are invested in small-caps outside the U.S., we suspect that many asset allocators think of international small-caps (if they think of them at all) as a nearly indistinguishable subset of the large non-U.S. equity universe. If this is correct, international small-caps would seem to be facing an uphill climb toward recognition as an accepted asset class, much like their stateside cousins did more than two decades ago. However, the facts tell a story that should level that hill. Many asset allocators will be surprised to learn that the total market value of the companies in the MSCI ACWI ex USA Small Cap Index, our proxy for international small-caps, is twice as large as that market capitalization of the Russell 2000 Index.



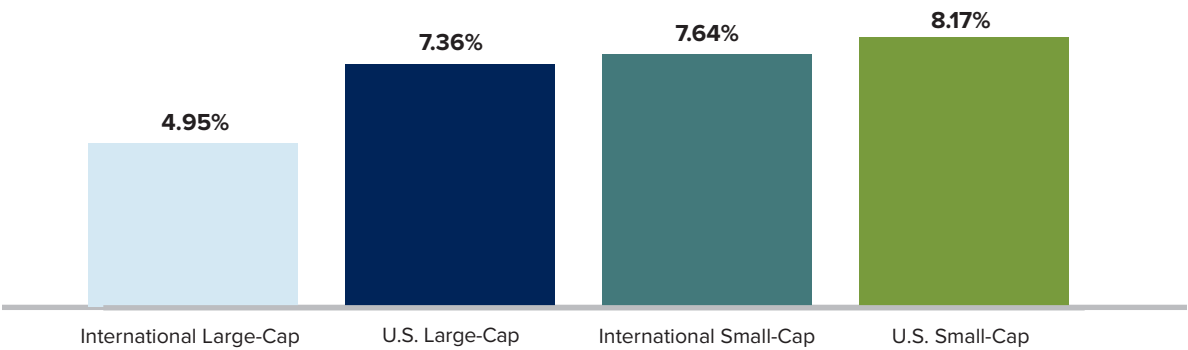
Source: FactSet as of 12/31/20 "U.S. Small-Cap" is represented by Russell 2000, and "International Small-Cap" by MSCI ACWI ex USA Small Cap.

¹Source: Morningstar

Strong Long-Term Relative and Absolute Performance

By market value alone, international small-caps would seem to merit consideration for inclusion in a globally diversified portfolio. However, their long-term performance record makes an even stronger case for inclusion as part of an overall equity allocation. (All of the results that follow begin with the first full month of performance for the MSCI ACWI ex USA Index on 5/31/94).

Averages of Monthly Rolling Annualized 10-Year Returns¹
From MSCI ACWI Index's First Full Month (Ended 5/31/94) through 12/31/20



Annualized rolling monthly 10-year returns for the international small-cap index exceeded the MSCI ACWI ex USA Large-Cap Index (our proxy for international large-cap stocks), and nearly matched its domestic counterpart in the Russell 2000. For additional context, we also looked at results for the large-cap Russell 1000 over these same periods.

Beyond this strong relative long-term performance record, international small-caps have additional attractive attributes that might be of particular relevance for asset allocators.

Lower Volatility and Attractive Risk-Adjusted Returns

Like their domestic peers, international small-caps have a reputation for high volatility. Even in the context of strong performance, more cautious asset allocators might not consider an investment for fear of taking on an unacceptable level of risk for their clients. The data, however, supports a very different conclusion.

In fact, international small-caps have lower volatility than U.S. small-caps and only marginally higher volatility than international large-caps, based on rolling 10-year standard deviation.

Attractive Risk/Return Trade-Off¹
Average of Monthly Rolling 10-Year Periods from 5/31/94 through 12/31/20



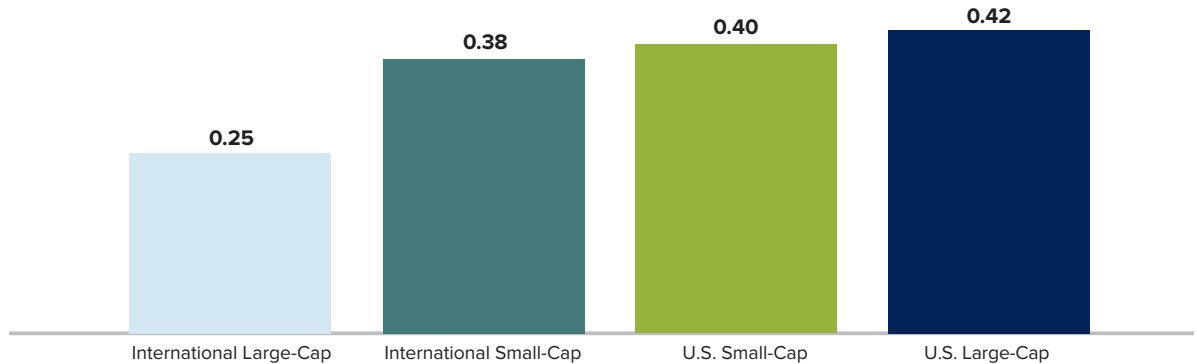
¹Past Performance is no guarantee of future results.

²“U.S. Large-Cap” is represented by Russell 1000, “International Large-Cap” by MSCI ACWI ex USA Large Cap, “U.S. Small-Cap” is represented by Russell 2000, and “International Small-Cap” by MSCI ACWI ex USA Small Cap.

Additionally, over this same rolling 10-year period, international small-caps had comparable risk-adjusted returns to U.S. large-caps and small-caps, as well as higher than international large-caps, as measured by Sharpe ratio.

Monthly Rolling Average Annualized 10-Year Sharpe Ratios

From Indexes First Full Month (Ended 5/31/94) through 12/31/20



When considering the volatility of the international small-cap index, we think it's useful to recall that it is composed of a globally diverse set of companies in 46 countries that rarely occupy the same place in their respective economic cycles. This geographic diversification helps to dampen the price volatility of any specific security, and in our view, compensates for the lower average market cap for the international small-cap index versus U.S. small-cap index. Also helping to potentially reduce volatility is the prevalence of dividend-paying companies. Approximately 87% of the companies in the international small-cap index paid dividends as of 12/31/20.¹

Historical Portfolio Benefits of Low Correlation

As one might expect, international small-caps have a lower correlation to U.S. larger-caps than either international large-caps or U.S. small-caps.

Correlation to U.S. Large-Cap

As of 12/31/20



Correlation of monthly returns from 5/31/94 through 12/31/20

To test the performance and volatility effects this lower correlation might have, we ran results for two hypothetical multi-asset portfolios. For each, we charted hypothetical returns (measured by the growth of \$10,000), standard deviation, and Sharpe ratio. Both portfolios were rebalanced quarterly and encompassed the same time period, 5/31/94-12/31/20.

¹There can be no assurance that companies that currently pay a dividend will continue to do so in the future.

Past performance is no guarantee of future results.

"U.S. Large-Cap" is represented by Russell 1000, "International Large-Cap" by MSCI ACWI ex USA Large Cap, "U.S. Small-Cap" is represented by Russell 2000, and "International Small-Cap" by MSCI ACWI ex USA Small Cap.

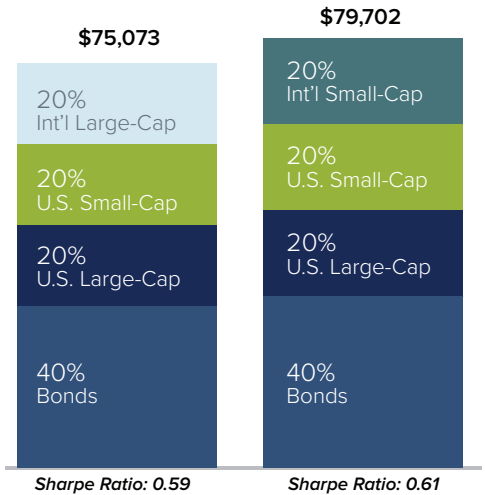
The first portfolio we constructed had 40% of its assets in bonds and 60% in stocks, with the latter allocated evenly among domestic large-caps, domestic small-caps, and international large-caps.

In the second portfolio, we made only one change—we swapped the international large-cap allocation for an allocation to international small-caps.

While both multi-asset hypothetical portfolios showed strong standard and risk-adjusted performance, the portfolio with the international small-cap allocation had higher absolute and risk-adjusted returns as well as lower volatility.

This is as strong an argument as we believe can be made in favor of allocating to international small-cap stocks.

Hypothetical Portfolios — Asset Allocation
Quarterly Rebalanced, From 5/31/94 through 12/31/20



"Bonds" are represented by Bloomberg Barclays US Aggregate, "U.S. Large-Cap" by Russell 1000, "U.S. Small-Cap" by Russell 2000, "Int'l Large-Cap" by MSCI ACWI x USA LC, "Int'l Small-Cap" by MSCI ACWI x USA SC. The above chart is shown for illustrative purposes only and does not reflect the past performance, or project the future performance, of any investment. The performance of an index, such as those used above, does not represent any particular investment as you cannot invest in an index.

The **Sharpe Ratio** is calculated for a specified period by dividing an investment's annualized excess returns by its annualized standard deviation. The higher the Sharpe Ratio, the better the investment's historical risk-adjusted performance.

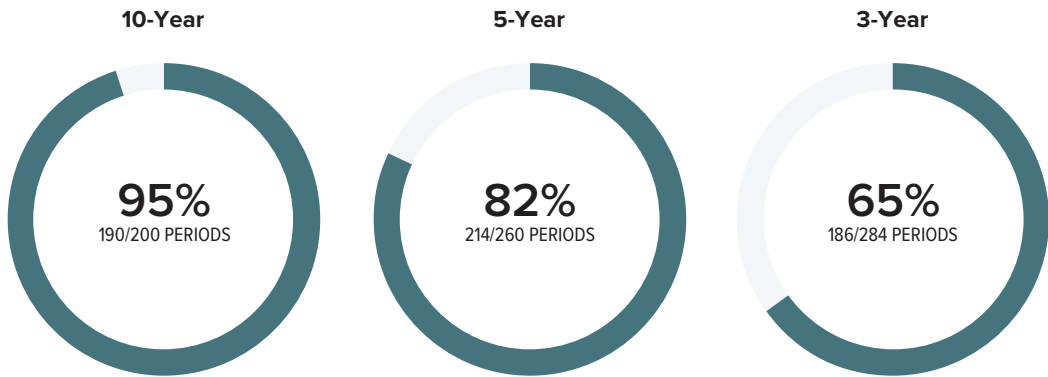
Persistence in Beating Large-Caps

Because many investors split their international equity allocation between small- and large-cap stocks, we think it's important to be aware of the longer-term relative performance history.

International small-caps have beaten their large-cap siblings in 65% of rolling three-year periods, 82% of rolling five-year periods, and 95% of rolling 10-year periods.

Batting Average of International Small-Cap vs International-Large Cap

MSCI ACWI x USA SC vs MSCI ACWI x USA LC Monthly Rolling Average Annual Return Periods from the Index Inception (5/31/94) through 12/31/20



Past performance is no guarantee of future results.

International Small-Cap Results in Different Environments

Analyzing monthly trailing one-year returns from 5/31/94-12/31/20, which consists of 308 periods, we found that while international small-caps outperformed large-caps over most rolling time periods, there were market conditions in which the performance spread was greater than others.

We first examined both positive and negative return periods for the international all-cap index to see how non-U.S. small-caps performed versus their large-cap peers. The result was a relative advantage for the international small-cap index in both negative and positive return periods for non-U.S. stocks. We then broadened our scope, examining returns for the international small- and large-cap indexes when the 10-year German Bund yield was rising and falling:

International Small-Cap vs International Large-Cap in Different Market Environments

MSCI ACWI x USA SC vs MSCI ACWI x USA LC Monthly Rolling Trailing 1-year Periods from 5/31/94 through 12/31/20

MARKET ENVIRONMENT		PERIODS INT'L SC BEAT INT'L LC	BATTING AVERAGE	INTERNATIONAL SMALL-CAP	INTERNATIONAL LARGE-CAP	AVG SPREAD
International Equity	Positive	132/202	65%	19.0%	17.0%	2.0%
	Negative	54/106	51%	-13.4%	-13.8%	0.3%
10-Year German Bund Yield	Rising	71/95	75%	22.1%	18.6%	3.5%
	Falling	115/213	54%	1.5%	1.0%	0.6%

Past performance is no guarantee of future results "International Equity" is represented by the MSCI ACWI ex USA IMI Index.

International small-caps outperformed their large-cap counterparts in both rising and falling rate environments, but the absolute return level and relative return spread were each significantly different. The best results for U.S. dollar investors came when German Bund Yields were rising, which is possibly due to three overlapping factors: bond yields usually rise when economies are improving, international small-caps have more cyclical exposure than international large-caps, and rising Bund Yields often occur in periods of U.S. dollar weakness, resulting in enhanced gains for U.S. dollar investors.

In each of the four scenarios shown above, the advantage went to international small-cap. We think the results of our research therefore present a strong argument for making a strategic allocation to this asset class.

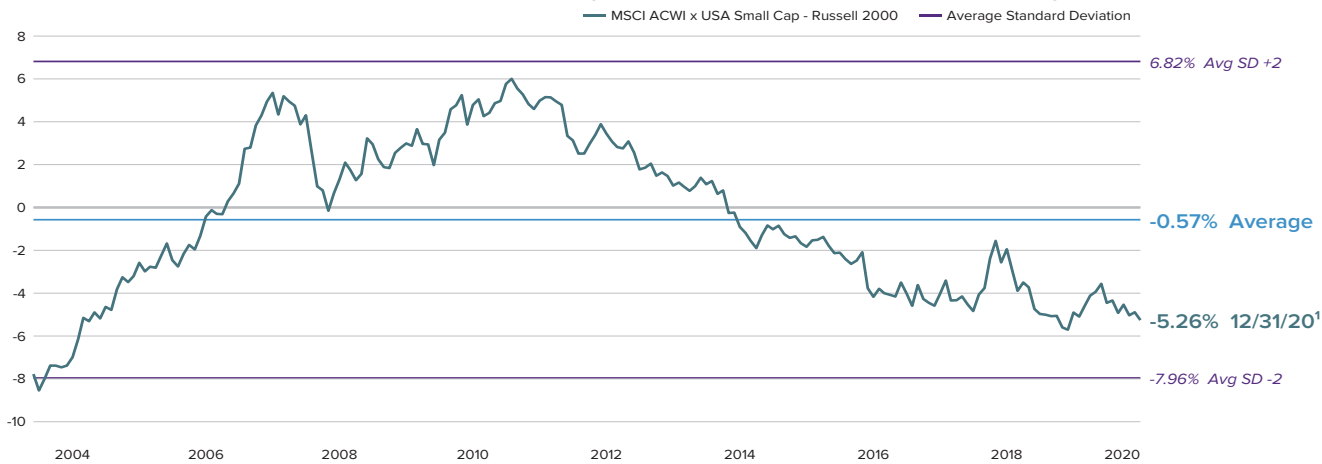


The Current Opportunity

Among the other compelling reasons to consider allocating to international small-caps is the timeliness of the opportunity. Over the long-term, international small-caps and U.S. small-caps have experienced rotating periods of outperformance with minimal long-term difference between the indexes. However more recently, international small-caps have underperformed which we think has increased the probability for future international outperformance.

International Small-Caps Poised for a Rebound?

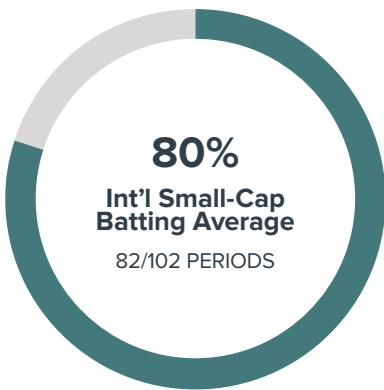
MSCI ACWI ex USA Small Cap vs Russell 2000 Annualized Trailing 10-Year Relative Return Spread from 5/31/94 through 12/31/20



¹The 10-year average annual total return through 12/31/20 was 5.95% for the MSCI ACWI ex USA Small Cap and 11.20% for the Russell 2000, -5.26% represents the difference.

When International Has Outperformed U.S.

Monthly Rolling Trailing 1-year Periods from the Index Inception (5/31/94) through 12/31/20



Average 1-Year Return for Int'l Small-Cap was 26.7% versus Int'l Large-Cap at 20.5%.

It's worth mentioning that when non-U.S. stocks as a group outpaced their domestic cousins, international small-cap outperformed their large-cap peers 80% of the time—and by an average spread of 6.2%—for all monthly rolling one-year periods from 5/31/94 through 12/31/20.

The historical data suggests, then, that relatively good periods for international stocks mean relatively better periods for international small-caps. So while there is no guarantee of the course of future returns, we think the long-term performance history of the two small-cap indexes suggests that a multi-year run for international small-caps is possible. In our view, this is especially relevant when evaluating the opportunity in non-U.S. small-caps.

Past performance is no guarantee of future results. "U.S." is represented by the Russell 3000 Index and "International" by the MSCI ACWI ex USA IMI Index. Int'l Large-Cap is represented by the MSCI ACWI ex USA Large Cap Index and "Int'l Small-Cap" by the MSCI ACWI ex USA Small Cap Index.

The Case for Active Management in International Small-Caps

Do the attractive attributes of international small-caps also offer the potential for active managers to improve on these results? We believe they do, based on the following:

A Large and Diverse Asset Class

There are more than twice as many international small-caps as domestic small-caps, providing ample opportunity for active managers to search for mispriced stocks. Further, international small-caps offer access to local, regional, and global businesses hailing from a diverse group of 46 countries.

An Inefficient Asset Class

About 30% of the companies in the MSCI ACWI ex USA Small Cap were receiving one or no sell-side analyst coverage versus 14% for those in the Russell 2000 as of 12/31/20.¹ This provides an active manager with a potentially sizable analytic advantage.

High ROIC Companies

Historical returns of the international small-cap index's high-profitability companies, based on ROIC, have markedly exceeded those for the index as a whole. The average annual total return for the top ROIC decile of non-U.S. small-cap stocks was 16.2% from 1/31/03²-12/31/20, compared to 10.0% for the overall index over the same period. This suggests to us that an active management approach focusing on companies with higher profitability and sustainability can enhance the potential for higher returns.³

Companies with Earnings

Loss-making international small-cap companies have historically lagged. In fact, companies with positive earnings have outperformed the international small-cap index, gaining 11.9% versus 10.0% on an average annual total return basis from 1/31/03-12/31/20. A manager who focuses on non-U.S. small-caps with established histories of earnings may therefore also be able to potentially enhance returns.



¹ Source: Factset

² January 2003 is the first month which Royce has access to fundamental data on MSCI indexes.

³ Return on Invested Capital is calculated by dividing a company's past 12 months of operating income (earnings before interest and taxes) by its average invested capital (total equity, less cash and cash equivalents, plus total debt, minority interest, and preferred stock). The portfolio calculation is a simple weighted average that excludes cash, all non-equity securities, investment companies, and securities in the Financials sector with the exceptions of the asset management & custody banks and insurance brokers sub-industries. The portfolio calculation also eliminates outliers by applying the inter-quartile method of outlier removal.

Historical Performance of Active International Small-Cap Funds

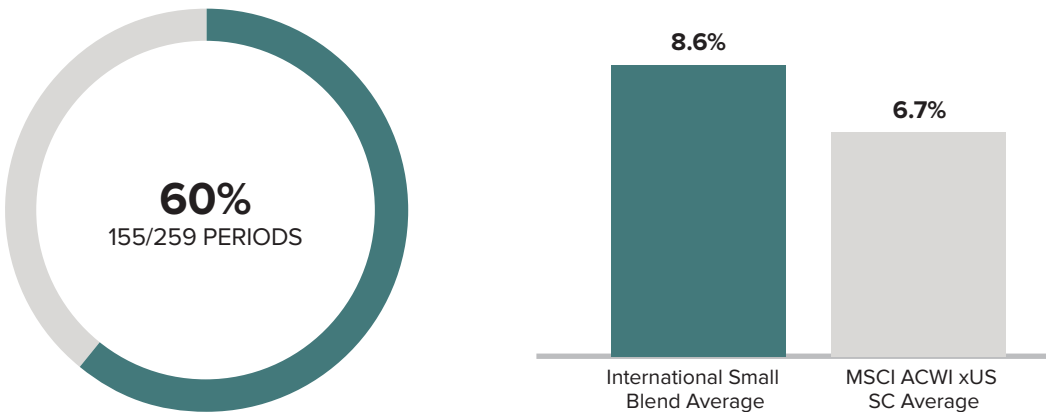
Our next step was to ask what history can tell us about the potential advantages for active management in the international small-cap space. We compared performance for the average international small-cap mutual fund, using Morningstar’s International Small/Mid Cap Blend average, to the MSCI ACWI ex USA Small Cap index over rolling five-year periods. The majority of the time, 60% of the 259 periods since the index’s inception in 1994, the average international small-cap blend fund beat the index with average annual five-year returns that were about 200 basis points higher net of all fees for the mutual funds. This shows that the actual relative performance history aligns with our research—both suggest that international small-caps may present a fruitful opportunity for active managers.

This research also shows that the universe of non-U.S. small-cap stocks is a fruitful starting point, giving active managers a number of opportunities to potentially prune the list of investment candidates.

Conclusion

We think that the combination of strong absolute and relative performance, low correlation to both international large-caps and U.S. small-caps, and strong results in a number of different market environments makes a very strong case for including international small-caps in a globally diversified portfolio. In our view, the timeliness of the opportunity serves to bolster an already compelling case. We suggest that asset allocators consider the potential advantages active management can offer within the asset class based on both the historical strength of certain fundamentals and the overall inefficiency of this large and diverse group of small-cap stocks.

U.S. Fund Foreign Small/Mid Blend Outperformed the MSCI ACWI ex USA Small Cap Index¹
Monthly Rolling Average Annual Return 5-Year Periods From 5/31/94 through 12/31/20



¹There were 83 US Fund Foreign Small/Mid Blend Funds tracked by Morningstar with at least five years of performance history as of 12/31/20. The performance data and trends outlined in this presentation are presented for illustrative purposes only. Past performance is no guarantee of future results. Historical market trends are not necessarily indicative of future market movements.
Source: Morningstar

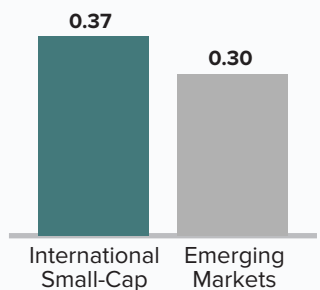
International Small-Caps vs Emerging Markets

While we believe that our research makes a clear and compelling case for an international small-cap allocation, we understand that some investors will also want to know how the asset class has fared relative to emerging market stocks. This may be of particular relevance given that emerging markets equities have a similar reputation to small-cap stocks for both high returns and high risk.

When we examined the history of these two asset classes, the results were consistent with our expectations. Emerging market companies mostly delivered slightly lower returns and they did so with considerably more risk. For example, based on rolling monthly five-year returns from 5/31/94–12/31/20, emerging market stocks returned 5.9% vs. 6.7% for international small-caps. In addition, the emerging

Sharpe Ratio

Average of Monthly Rolling 5-Year Periods from 5/31/94 through 12/31/20



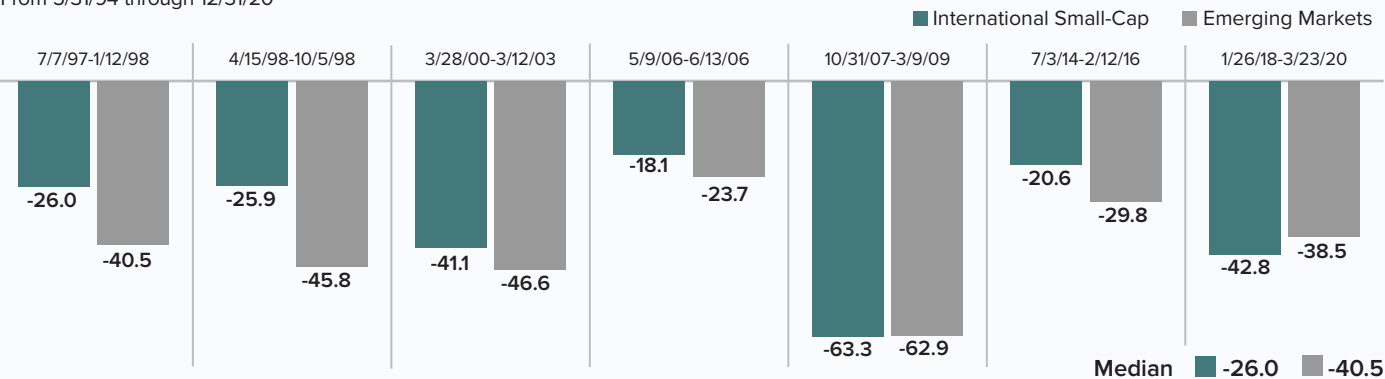
markets return came with significantly higher volatility—a standard deviation of 22.3% for emerging market stocks vs. 17.1% for international small-caps.

As one might guess, emerging market stocks’ combination of slightly lower returns with substantially higher volatility meant that international small-caps had a higher rolling monthly five-year risk-adjusted return.

The heightened risks of emerging market stocks manifested itself most vividly perhaps by having deeper declines during down markets. There were seven declines of 15% or more since the inception of the MSCI ACWI ex USA index. During these seven periods, the median decline for international small-cap stocks was 26.0% versus 40.5% for emerging market stocks—which declined more in five of those seven periods. These deeper declines could create challenges for investors trying to stay the course for as long as is needed to achieve their long-term objectives.

Down Market Performance Comparison

From 5/31/94 through 12/31/20

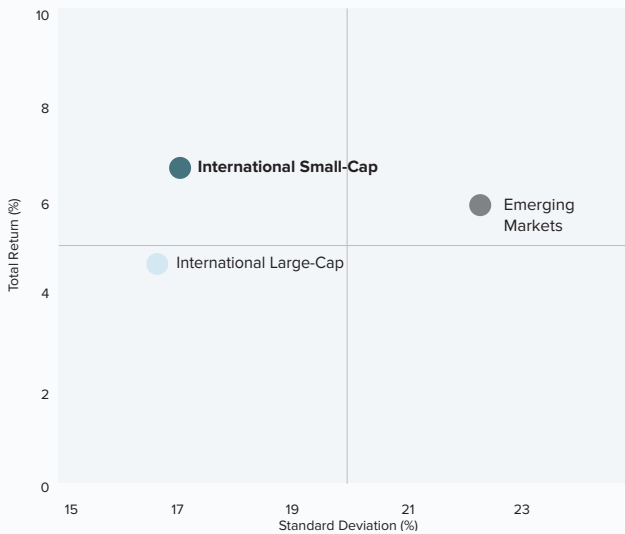


Overall, we suggest that a strategic allocation to international small-caps is an attractive option for asset allocators to consider—the asset class had significantly higher returns with modestly higher risk than international large-caps along with modestly lower returns but significantly lower risk than emerging market equities.

Past performance is no guarantee of future results. “International Small-Cap” is represented by the MSCI ACWI ex USA Small Cap and “Emerging Markets” by the MSCI Emerging Markets

International Small-Cap: Comparable Return and Lower Risk than Emerging Markets¹

Average of Monthly Rolling 5-Year Periods 5/31/94–12/31/20



¹Past Performance is no guarantee of future results.

“International Large-Cap” is represented by the MSCI ACWI ex USA Large Cap Index, “International Small-Cap” by the MSCI ACWI ex USA Small Cap Index, and “Emerging Markets” by the MSCI Emerging Markets Index.

The performance data and trends outlined in this presentation are presented for illustrative purposes only. Past performance is no guarantee of future results. Historical market trends are not necessarily indicative of future market movements.

Standard Deviation is a measure that quantifies the amount of variation or dispersion in a data set. Roughly 68% of the data values are within one standard deviation of the mean.

The Russell 2000 Index is an unmanaged, capitalization-weighted index of domestic small-cap stocks. It measures the performance of the 2,000 smallest publicly traded U.S. companies in the Russell 3000 Index. The Russell 1000 Index is an unmanaged, capitalization-weighted index of domestic large-cap stocks. It measures the performance of the 1,000 largest publicly traded U.S. companies in the Russell 3000 Index. Index returns include net reinvested dividends and/or interest income. Source: MSCI. MSCI makes no express or implied warranties or representations and shall have no liability whatsoever with respect to any MSCI data contained herein. The MSCI data may not be further redistributed or used as a basis for other indexes or any securities or financial products. This report is not approved, endorsed, reviewed or produced by MSCI. None of the MSCI data 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 MSCI ACWI ex USA Small Cap Index is an unmanaged, capitalization-weighted index of global small-cap stocks, excluding the United States. Index returns include net reinvested dividends and/or interest income. The MSCI ACWI ex USA Large Cap Index is an unmanaged, capitalization-weighted index of global large-cap stocks, excluding the United States. The MSCI Emerging Markets Index is an unmanaged, capitalization-weighted index of stocks in emerging markets countries. Index returns include net reinvested dividends and/or interest income. The Bloomberg Barclays US Aggregate Bond Index is an unmanaged, capitalization-weighted index of investment grade, U.S. dollar-denominated, fixed-rate taxable bonds. The performance of an index does not represent exactly any particular investment, as you cannot invest directly in an index. Frank Russell Company ("Russell") is the source and owner of the trademarks, service marks and copyrights related to the Russell Indexes. Russell® is a trademark of Frank Russell Company. Neither Russell nor its licensors accept any liability for any errors or omissions in the Russell Indexes and / or Russell ratings or underlying data and no party may rely on any Russell Indexes and / or Russell ratings and / or underlying data contained in this communication. No further distribution of Russell Data is permitted without Russell's express written consent. Russell does not promote, sponsor or endorse the content of this communication.

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What Makes Royce Distinctive?

Portfolio Manager Tenure

We have a seasoned staff of 18 portfolio managers

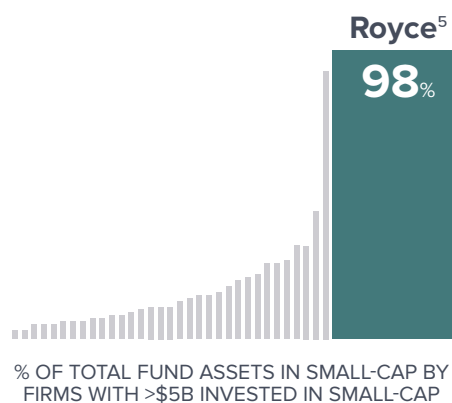


AVG YEARS OF MANAGER TENURE³

Small-Cap Specialists

34 firms have >\$5B in small-cap fund assets⁴

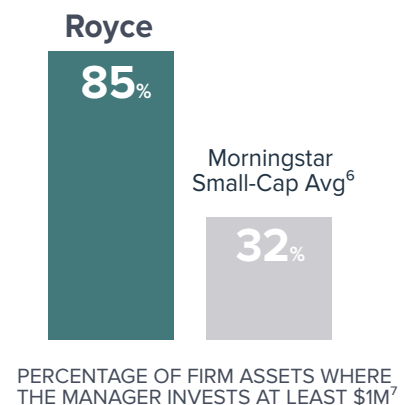
Only Royce has >95% AUM invested in small-cap



% OF TOTAL FUND ASSETS IN SMALL-CAP BY FIRMS WITH >\$5B INVESTED IN SMALL-CAP

Significant Portfolio Manager Commitment

Portfolio managers have substantial ownership in the strategies they manage



PERCENTAGE OF FIRM ASSETS WHERE THE MANAGER INVESTS AT LEAST \$1M⁷

Source: Morningstar

¹ Includes all U.S. small-cap open end Royce Funds as categorized by Morningstar (8 Funds as of 12/31/20). ² Includes all small-cap open-end mutual funds as categorized by Morningstar (499 Funds reported data as of 12/31/20). ³ Reflects the manager with the longest tenure on each fund including time spent as an assistant portfolio manager, co-portfolio manager or portfolio manager. ⁴ Includes Morningstar data of all open-end and closed-end equity funds domiciled in the U.S. as of 12/31/20, narrowing the list to include only those companies with at least one U.S. equity fund. From that group of 646 fund companies, products were included in at least one of the following categories: U.S. Fund Foreign Small/Mid Blend, U.S. Fund Foreign Small/Mid Growth, U.S. Fund Foreign Small/Mid Value, U.S. Fund Small Blend, U.S. CE Small Blend, U.S. Fund Small Growth, and U.S. Fund Small Value. This resulted in 244 firms with small-cap assets. We narrowed the list again to include only firms with more than \$5 billion in small-cap assets and more than \$10 billion in total assets, which resulted in 34 firms. ⁵ Includes all of the Royce Funds U.S. open-end, closed-end, and insurance funds as categorized by Morningstar (16 Funds as of 12/31/20). ⁶ Includes any fund company with at least one small-cap open-end mutual fund as categorized by Morningstar (220 fund companies reported data as of 12/31/20). ⁷ The percentage of mutual fund assets with manager investment of more than \$1 million shows the portion on an investment adviser's open-end mutual fund assets where at least one fund manager has invested more than \$1 million in fund shares.

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