

# Russell Research

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## The Russell World Cap™ Index: The benchmark for the Institutional Investor

We believe there will be a sea change in U.S. investors' use of benchmark indexes to measure their equity exposures. The popular practice of "mix-'n'-match" – using one index provider's benchmark for domestic equity, and another's for international equity – is based on a traditional strategic asset allocation split, between domestic and international equity exposure, which is out of date. This paper makes the case for using the Russell World Cap Index (RWCI) as an equity benchmark. The RWCI has the virtue of closely matching the segments in which many U.S. institutional investors are already invested. At the same time, it facilitates travel further down the road to a fully global perspective.

### Introduction

Over the next few years, we believe there will be a sea change in U.S. investors' use of benchmark indexes to measure their equity exposures. The popular practice of "mix-'n'-match" – using two or more index providers' benchmarks for equity holdings – is based on a traditional strategic asset allocation split, between domestic and international equity exposure, which is out of date. The split originated in an historical environment of domestically focused companies, segmented economies and high levels of restrictions on foreign investments. For the most part, that environment no longer exists. Consequently, more and more investors and their consultants are viewing global equity as a single strategic asset class.

The journey to a fully global equity portfolio is a gradual one for most investors. "Home country bias" – having a much larger weight in U.S. equities than in the global market – has been eroding steadily for more than two decades, but the process still has a ways to go. Too, the habit of using a particular set of indexes can become entrenched. Change requires a catalyst, and the accelerating globalization of the opportunity set is just such a catalyst.

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This paper makes the case for using the Russell World Cap Index (RWCI) as an equity benchmark. The RWCI has the virtue of closely matching the segments in which many institutional investors are currently invested based on Russell's survey of U.S. Consulting Clients.<sup>1</sup> At the same time, it facilitates travel further down the road to a fully global perspective.

### The Russell World Cap Index (RWCI)

The RWCI was created with U.S. institutional investors in mind. Most U.S. investors already have U.S. large cap and small cap exposure when they decide to move to a global strategic weight. From our experience, these investors often only want to have a large cap exposure outside the U.S. while maintaining the U.S. small cap weight. Until now, the only way to match those preferences with a benchmark was with a mix-'n'-match approach, such as using the combination of the Russell 3000<sup>®</sup> Index plus MSCI EAFE (developed large cap Europe, Australasia, and the Far East) Index plus MSCI Emerging Markets (EM) Index, or the S&P 500 Index plus Russell 2000<sup>®</sup> Index plus MSCI EAFE Index plus MSCI EM Index.

The RWCI matches those preferences by carving out the global large cap plus U.S. small cap segments from the fully global Russell Global Index (RGI). Put another way, the RWCI is the result of trimming away from the RGI the small cap portions of non-U.S. developed and emerging markets. The RWCI is a single index with unique coverage that has the desirable characteristics of the more familiar Russell U.S. Indexes. Below, we discuss and compare some of those characteristics.

### The role of indexes as benchmarks

To lay the groundwork for this discussion, it is useful to review the role of an index in an investment program. An index serves as a proxy for actual assets in strategic asset allocation decisions. The choice of an index transforms a vague description, such as "U.S. stocks," into a very specific set of securities, such as those contained in the S&P 500 Index or the Russell 3000 Index. A market index is also used to measure whether a specific investment has delivered a better or worse return than that of the broader asset class. This allows the overall return to be attributed to two factors: general market movements, and the behavior of the specific investment. It is in this role that an index truly serves as a benchmark for performance measurement.

For active investing, benchmark indexes serve both to define the securities opportunity set and to gauge the chosen securities' subsequent performance. The active portfolio manager is expected to select securities primarily from among the constituents of the index. The extent to which securities are selected from outside the index becomes a basis for discussions about risk management and added return potential.

Exceeding the return of a benchmark index is almost always the objective of an actively managed portfolio. Thus it is desirable that the index represent the "opportunity cost" of forgoing the alternative of passively investing in the equity segment. An ideal benchmark would contain only stocks that are fully investable. Then the return to the manager's portfolio can be broken out to the benchmark return – what passive investing would likely have delivered – and the manager's excess return – the return active investing delivered above (or below) the passive return; i.e., the return attributable to the active manager.

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<sup>1</sup> Russell Consulting Client Universe (CCU): equally-weighted average of the aggregated segments of large institutional investors as of Russell index reconstitution date, June 2011.

Here are some desirable benchmark features, to which we will return in this paper:

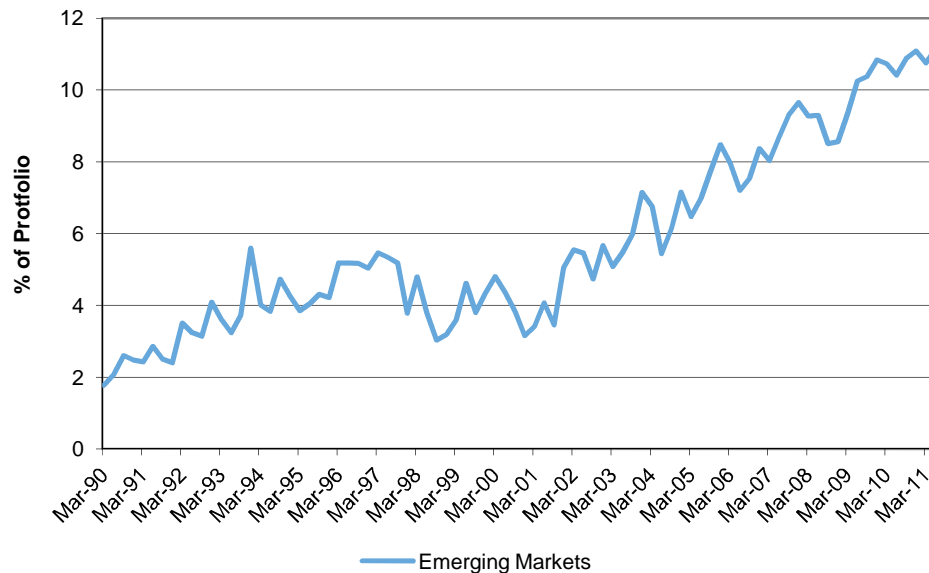
- The chosen benchmark should approximately match the preferences of the investor, reflecting rather than dictating strategic investment decisions.
- The chosen benchmark should facilitate rather than constrain an evolving strategic direction.
- Benchmarks should not have gaps and overlaps among indexes that can distort the effects of strategic decision making. Such distortion can cascade down through all levels of the investment process.
- Benchmarks should accurately reflect the passive return and risk characteristics of each equity segment and the overall equity portfolio.

### Catalysts for change

Markets around the world have become easier to access in recent years, a development that has dramatically broadened and deepened the opportunity set. Investors have expanded their portfolio exposures to include more countries, including emerging-markets countries, and smaller companies than in the past.

The most entrenched benchmark for international equities is MSCI's Europe Australasia and Far East (EAFE) Index, which excludes North America (the U.S. and Canada), emerging and frontier markets. The typical institutional equity portfolio as represented by the Russell CCU extends well beyond the EAFE index in emerging market coverage. Exhibit 1 shows the average portfolio exposure to emerging markets of active managers with Developed ex-US Large cap mandates in the Russell manager research database. The emerging-markets allocations in this representative universe have been steadily growing. These positions have become so commonplace that they are often in effect treated as part of a manager's mandate. This can have a profound impact on how excess return and risk is measured and assessed.

**Exhibit 1 / Emerging Market exposures in Developed ex-US Large Cap Active Manager Portfolios**

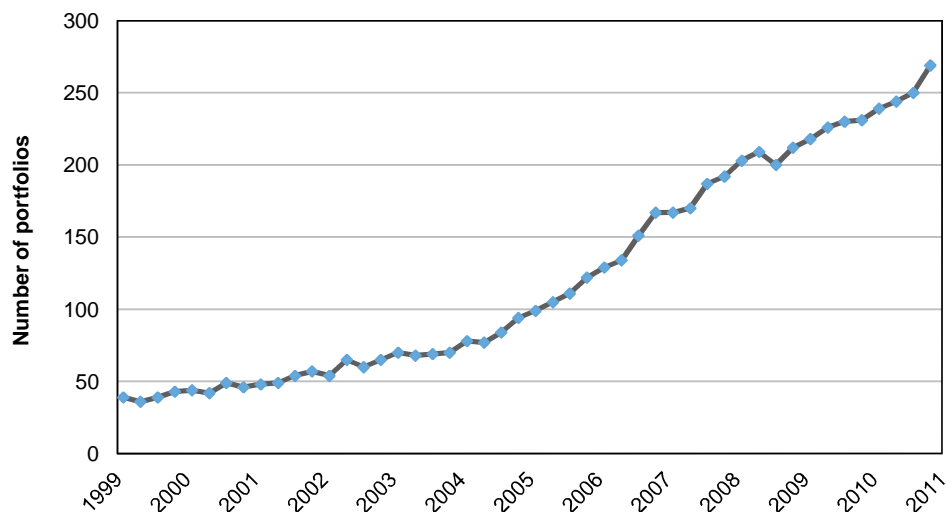


Source: Russell Investments Broad Global ex-US Large Cap Equity Portfolios as of June 30, 2011.

A related trend is that global equity mandates which include emerging markets and mid caps are gradually displacing the combination of U.S. and international (ex-U.S. developed) mandates. The increased integration of markets and availability of information has made it less costly for investment managers to ramp up the breadth and depth of research necessary for such global mandates. Exhibit 2 shows the exponential rise of global equity products in Russell's manager research universe.

A global mandate allows managers to view each equity position in the context of worldwide peers. This is especially relevant for making cross-country cap size, style and sector bets while managing for risk. Research has shown that sector risk and return has come to be at least as important as country factors in global equity universes.<sup>2</sup> Obviously, for investors constructing sector bets, it is far from optimal to view the automotive sector as being two disjoint pieces, one U.S. and the other international. The same goes for cap size and style risks.

### Exhibit 2 / Broad global large cap equity universe



Source: Russell Investments Broad Global Large Cap Equity Portfolios as of June 30, 2011.

Behavioral finance scholars tell us that home country bias is natural and universal. The closest and most familiar company names support a high comfort level, and can make the investor feel patriotic as well. Two recent studies surveyed the home country bias of mutual funds across 38 countries and both individual and institutional investors across 42 countries, respectively.<sup>3</sup> Both studies found that there is substantial home country bias in all countries; U.S. investors actually have one of the smallest biases.

<sup>2</sup> See David Garth (2011): "Global Equity Investing: Do Countries Still Matter?" *Accuvest Global Advisors*. See also Wenling Lin, Lisa Kopp, Phillip Hoffman and Mark Thurston (2004), "Changing Risks in Global Equity Portfolios," *Financial Analysts Journal* 60(1): 87–99.

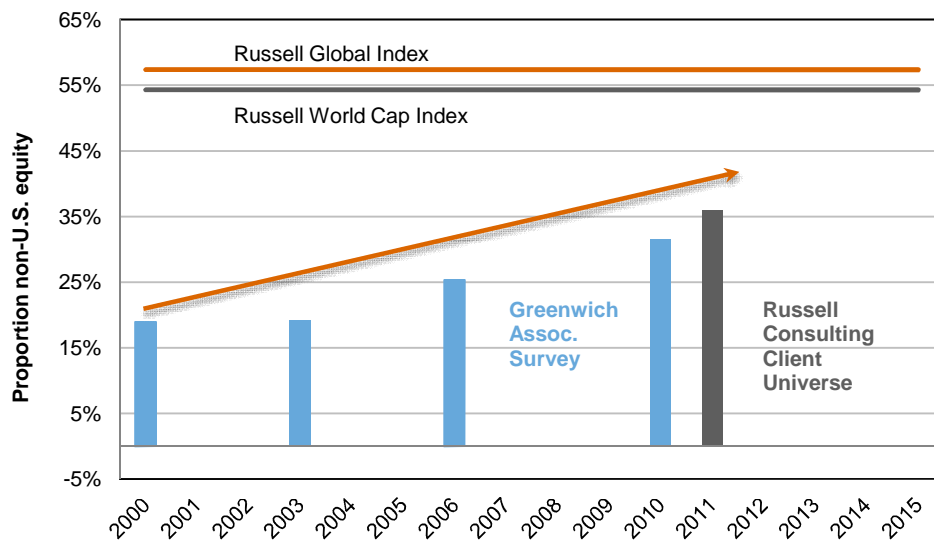
<sup>3</sup> Sie Ting Lau, Lilian Ng and Bohui Zhang (2010): "The World Price of Home Bias," *Journal of Financial Economics*, (97) 191–217; and Piet Sercu and Rosanne Vanpee (2007), "Home Bias in International Equity Portfolios: A Review," *Leuven School of Business and Economics*.

The potential cost of forgoing the opportunities for diversification benefits and return associated with international stocks has become abundantly clear to U.S. institutional investors. The results of surveys from the Russell CCU over the last two decades have seen a substantial increase in the percentage of non-U.S. stocks in the typical institutional portfolio.

Exhibit 3 demonstrates the accelerating evolution of non-U.S. equity exposure since 2000. The blue bars are from the annual Greenwich Associates Investment Management survey of U.S. institutional investors. The gray bar is from the Russell CCU. The CCU has historically been ahead of the rest of the U.S. in increasing international exposure, but the chart makes it clear that the wider universe surveyed by Greenwich Associates is catching up. This trend is expected to continue over several years until the non-U.S. weights in most investors' portfolios approach the non-U.S. parity weight in the global market.

Exhibit 3 also graphically shows two versions of what the non-U.S. parity weight might be. The fully global Russell Global Index (RGI) has 57% non-U.S. exposure. The Russell World Cap Index (RWCI) has 54% non-U.S. exposure. The difference is due to the exclusion of small cap non-U.S. stocks in the RWCI.

**Exhibit 3 / Non-U.S. equity has been trending upward among U.S. Institutional investors**



Sources: Greenwich Associates (893 portfolios in 2010) and Russell CCU (26 portfolios in June 2011).

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## Benchmarks and the evolution of equity investing

Equity investing in the U.S. has followed a steady evolution. Forty years ago, investors ventured only into the very largest of large cap U.S. stocks, as represented by the Dow Jones Industrial Average (DJIA) and, later, the S&P 500 Index. Then investors began exploring further down the cap tier within the U.S., first embracing the Russell 2000 small cap index in addition to the large cap S&P 500 Index. Among institutional investors, the S&P 500/Russell 2000 pairing gradually gave way to the Russell 3000 Index, a combination of the Russell 1000 Index largest cap stocks and the Russell 2000 Index covering approximately 98% of the U.S. opportunity set. While in the popular press the DJIA and the S&P 500 Index remain the most quoted U.S. indexes, in 2003 Russell's indexes surpassed them in terms of the number of institutional U.S. products benchmarked, and in 2005 surpassed them in dollar value of assets.<sup>4</sup>

Along the way, investors made forays into the large cap developed international market, where equities were often viewed as comprising their own asset class, distinct from U.S. equities. The MSCI EAFE Index became the entrenched benchmark of that segment. Now large cap emerging-markets exposure has also become commonplace. The evolution has yet to fully embrace small cap international, small cap emerging or frontier markets. That likely will eventually come to pass as well, if past momentum is any indicator.

The choice of benchmark is a key decision in total portfolio management and should be both in the flow of this evolution and reflective of the investor's preferences. Investor preferences vary over a wide range, but one way to get a sense of the dominant tendency of U.S. institutional investors is in looking at the Russell CCU database. There we find significant allocations to several segments of the global equity market: U.S. large cap, U.S. small cap, developed ex-U.S. large cap ("international") and emerging-markets large cap.<sup>5</sup> Most U.S. institutional investors have made only tentative explorations into the small cap segments of non-U.S. markets. Small cap is where home bias still predominates among institutional investors; reduction of the bias against non-U.S. small cap may well be the next step in the evolution of strategic asset allocation.

Exhibit 4 lines up the equity segments many U.S. institutional investors are actually in with those offered by a variety of indexes. These indexes are of three types. "World" indexes generally include all developed large cap markets. They may or may not include emerging markets or U.S. small cap exposure. "Global" indexes cover all segments, including emerging markets and small cap, with the only exclusions being, possibly, frontier and microcap markets. The mix-'n'-match indexes are popular constructions used by investors who benchmark U.S. mandates to Russell indexes and non-U.S. mandates to MSCI indexes.

Exhibit 4 illustrates that the Russell World Cap Index is the only index whose segments closely match the segments of most clients in the CCU database. The others either have too many segments or too few. The MSCI World Index has no U.S. small cap or emerging markets, and the MSCI All Country World Index has emerging markets, but no U.S. small cap. The two global indexes cover several more segments than most investors currently have exposure to. Finally, of the two mix-'n'-match benchmarks, one excludes emerging markets, and both exclude Canada. Excluding Canada is the least of the problems with mix-'n'-match, as we shall see in the following sections.

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<sup>4</sup> Russell Indexes. *U.S. Equity Indexes: Institutional Benchmark Survey*. 2010

<sup>5</sup> For the purposes of this analysis, we define a significant segment allocation as greater than 2% capitalization weight.

## Exhibit 4 / Segments of the global equity universe

	Russell Consulting Client Universe	WORLD INDEXES			GLOBAL INDEXES		MIX-'N'-MATCH	
		Russell World Cap Index	MSCI World Index	MSCI ACWI	Russell Global Index	MSCI ACWI IMI <sup>6</sup>	R3000 + MSCI EAFE	R3000 + MSCI EAFE + MSCI EM
U.S. Large Cap	•	•	•	•	•	•	•	
U.S. Small Cap	•	•			•	•	•	
Canada Large Cap	•	•	•	•	•	•		
Canada Small Cap					•	•		
Developed ex-NA LC	•	•	•	•	•	•	•	
Developed ex-NA SC					•	•		
Emerging LC	•	•		•	•	•	•	
Emerging SC					•	•		

Sources: Russell CCU 26 large US institutional investors, June 2011; MSCI web site, June 2011; Russell web site, June 2011.

### The trouble with mix-'n'-(mis)match benchmarks

The globalization of equity portfolios has created problems for mix-'n'-match benchmarks. Portfolio risk analysis requires apples-to-apples comparisons across the cap size, sector, country and style exposures of the whole equity portfolio. But different index providers have different criteria for cap size cutoffs, sector definitions, and even country and regional classifications. This makes whole portfolio risk analysis difficult and inaccurate as well.

### Slow rabbit, or fast rabbit?

In greyhound racing, a mechanical rabbit sets the pace around the track to accelerate the dogs' speed and keep them moving in the right direction. All else equal, it is in an investor's interest to have such a "fast rabbit" – the highest-performing index – whether that investor is passively or actively invested. This is perhaps rather obvious in passive investing, where whatever vehicle is chosen for matching the index – a mutual index fund, an ETF, or directly purchased index constituents – the higher-performing index will produce the best portfolio returns. The need for a fast rabbit may be less obvious in active investing, and so requires more discussion.

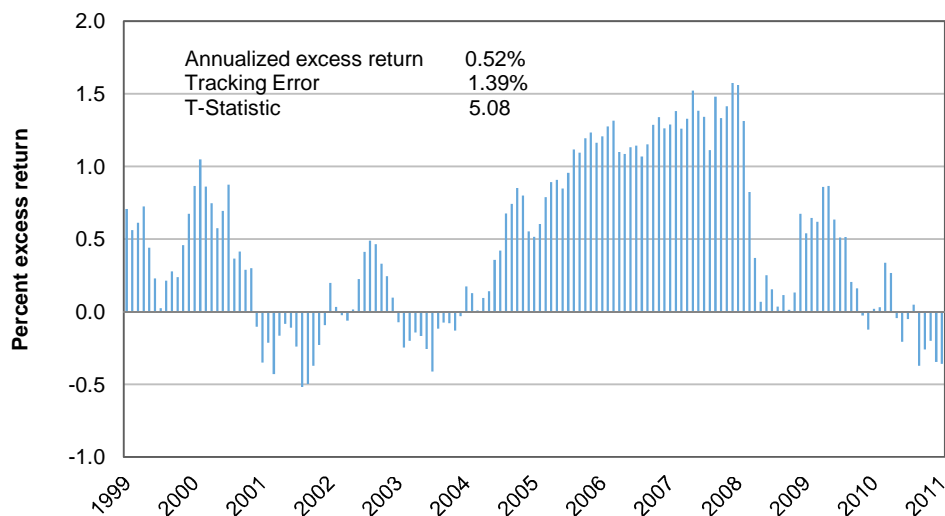
Active investors use benchmark indexes to both define the universe within which the active manager is mandated to operate and to judge the performance of the manager. Investors hire active managers to achieve excess return of the portfolio over its benchmark. Excess return over an appropriate benchmark is the ultimate measure of the special skill and insight of the active manager, or at least it should be. But if the benchmark is a very *slow* rabbit – that is, if it underperforms alternative indexes representing the same universe – then some of that excess return may not be attributable to the manager's skill at all, but rather to the slowness of the rabbit. The investor is then left paying active management fees without knowing how much skill actually came with those fees.

In that context, we turn to the popular mix-'n'-match benchmark that includes the Russell 3000 Index for U.S. exposure, MSCI EAFE Index for non-U.S. developed markets exposure and MSCI EM for emerging markets exposure. This corresponds to the segments that many institutional investors prefer. To create a counterpart to the RWCI, we use the weights of 64%, 28% and 8%, respectively, which match the average allocation in the Russell Consulting Client Universe as of June 2011.

<sup>6</sup> MSCI ACWI IMI is a mouthful that stands for Morgan Stanley Capital International All-Country World Index Investible Markets Index. It includes small cap in all regions. MSCI ACWI has no small cap.

Exhibit 5 plots the rolling three-year annualized excess return of the RWCI over this mix-'n'-match benchmark. In theory, the two benchmarks should produce roughly the same returns over a long period of time, with low tracking error with respect to each other. Instead, we find that the excess return is positive and statistically significant.

**Exhibit 5 / Rolling 3-year annualized excess return of the Russell World Cap Index over the “mix-'n'-match” benchmark of Russell 3000 Index + MSCI EAFE Index + MSCI Emerging Markets Index**



Sources: Russell Investments and Bloomberg (MSCI), July 1996 – June 2011.  
 Past performance is not indicative of future results. Indexes are unmanaged and cannot be invested in directly.

One might argue that we have stacked the deck by overweighting the U.S. in the mix-'n'-match benchmark during a period when non-U.S. equities outperformed. But if instead we use the RWCI weights to construct a mix-'n'-match benchmark consisting of 46% Russell 3000 Index, 41% MSCI EAFE Index and 13% MSCI EM Index, then the annualized excess return actually increases to 0.67%, and is also statistically significant.

One could also argue that an even fairer comparison would use the RWCI weights for the mix-'n'-match benchmark as they changed over time. But this leads us to a much more relevant point, for we are not arguing that Russell indexes can be counted on to outperform MSCI or any other provider's indexes going forward. Rather, we argue that a mix-'n'-match benchmark can create a “rabbit” that is too slow, or even too fast; and that the weights employed are among the problems. Which weights should one use: Russell's weights, MSCI's weights, some blend of the two, or the investor's portfolio allocation weights? This becomes even more complicated in the case of the combination of the S&P 500 Index, Russell 2000 Index, and MSCI EAFE Index, another popular mix-'n'-match benchmark: now one has three providers' sets of weights to contend with. The choices made will profoundly affect how risk and performance are evaluated.

The bulk of the performance differential between providers is due to the differences in index construction methodology. Gaps and overlaps result. The too-slow rabbit of today may turn into the too-fast rabbit of tomorrow. Our argument is that the rabbit with the right speed is the one that is based on a single index provider, and that follows uniform and consistent rules for securities selection and weighting.

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## The RWCI and strategic direction

A benchmark should reflect the preferences of the investor, as we have said. But that benchmark should reflect not only where the investor is now, but also the direction in which the investor might grow. According to the latest Greenwich Associates survey, most institutional investors are invested in the same segments as covered by the RWCI, but have an average of around 32% total non-U.S. exposure.<sup>7</sup> That contrasts with 54% non-U.S. weight in the RWCI. However, the momentum of equity investing suggests that increasing non-U.S. exposure is the direction in which the institutional investor is likely to head. This is supported by recent research showing substantial diversification benefits with increased non-U.S. exposure.<sup>8</sup> Thus the RWCI is a benchmark that facilitates strategic evolution, and one that investors will not soon outgrow.

Looking even farther down the road, a strong case can be made for small cap emerging markets' having compelling diversification benefits and upside potential.<sup>9</sup> That would call for a fully global benchmark, such as the Russell Global Index. If this is where things are eventually going – and we believe it is – then the RWCI can be seen as an intermediate step, providing a smooth transition to a fully global perspective by using the same uniform rules-based and transparent methodology.

## Practical impediments

At this stage, the reader may be thinking that switching from a mix-'n'-match benchmark to a single provider's family of benchmarks is a nice idea, but that there are practical issues which must be considered. The most obvious issue is the sheer inconvenience of altering plan, fund and manager benchmarks. There are direct costs associated with portfolio restructuring, and a fair amount of staff time will be expended in the effort.

Familiarity is a factor as well. A mix-'n'-match benchmark combining the S&P 500 Index, Russell 2000 Index and MSCI EAFE Index has three component benchmarks that are very well known individually and thus may be attractive for that reason. Active managers may also prefer the familiar. This creates a chicken-and-egg situation, where products are not offered against a different index because there is insufficient perceived demand, and where investors hesitate to switch indexes because insufficient numbers of products are managed to the new indexes. The same chicken-and-egg dynamic can also apply to commercially available analytical tools and custodial data services.

The resulting inertia in benchmark choice has led to entrenchment of particular indexes in segments of the equity space – a kind of balkanization of the opportunity set. Change will likely come gradually as the costs associated with a potentially inaccurate estimation of global risk and reward factors increase and become more obvious, and investors eventually meet the challenges posed by inertia and the costs of change.

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<sup>7</sup> Greenwich Associates, *Market Trends 2010*, January 2011. The survey covers 893 defined benefit plans, defined contribution plans and investment pools.

<sup>8</sup> Chun-Hung Chen, Tom Goodwin and Wenling Lin (2011): "What Matters in International Equity Diversification?" Available at <http://ssrn.com/abstract=1894346>.

<sup>9</sup> Chen, Goodwin and Lin, *op. cit.*

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## Which single index provider?

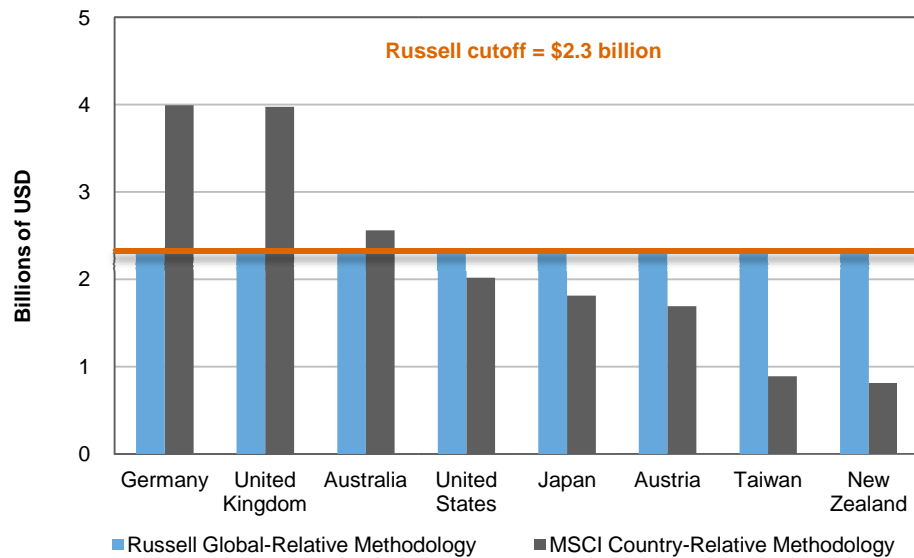
So far, we have been making the case that investors' use of entrenched mix-'n'-match benchmarks is likely to be supplanted by use of index families from a single provider. But once the decision is made to adopt a single family of indexes, how to determine which provider's index family that should be? Here we briefly summarize the case for the Russell family in general, and the RWCI in particular, by repeating some points we've already made and adding a couple of new ones.

- The RWCI is designed to match the equity segments U.S. institutional investors are typically already in; yet there is plenty of room to grow in the direction of more non-U.S. exposure without exceeding benchmark limits.
- As home country bias against non-U.S. small cap fades, the RWCI provides a smooth and relatively painless transition to the fully global Russell Global Index.
- The costs associated with moving to an all-Russell family of benchmarks will likely be less than the costs involved in moving to any other provider. This assertion is based on the fact that the majority of institutional investors already use the Russell indexes for their U.S. segments.<sup>10</sup> The Greenwich survey indicates that on average the U.S. weight in institutional portfolios is 68%. Thus, less than a third of the typical portfolio would have to undergo a transition. Adopting any other provider's benchmarks will likely necessitate transitioning the majority of the portfolio's mandates.
- There are sharp differences in the ways Russell and all other index providers divide small cap from large cap. MSCI defines a small cap stock as one in the bottom 15% of the cap scale within each country. Russell applies a 10%–15% cutoff globally. Exhibit 6 illustrates the difference between creating cap breaks that are country-relative versus global-relative. MSCI's country-relative approach can result in anomalous cases, as when a stock previously classified as small cap becomes large cap (or vice versa) when its country classification changes. More seriously, when country-relative large cap and small cap segments are rolled up to regional and global cap indexes, the result is a mixed bag of inconsistent cap level groupings. The problem is exacerbated with a mix-'n'-match benchmark. The measurement of small cap risk from these groupings can only be noisy and imprecise. The Russell practice of imposing a global cutoff ensures that a stock classified as small cap or large cap will retain the same classification in any country, sub-region or worldwide universe.

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<sup>10</sup> Russell Indexes. *U.S. Equity Indexes: Institutional Benchmark Survey*. 2010

## Exhibit 6 / Breaks between small cap and large cap by country



Source: Actual Russell cutoffs and simulated MSCI cutoffs, June 2011. Simulated MSCI cutoffs were computed by sorting companies in the Russell universe in descending order by capitalization and then summing. The 85<sup>th</sup> capitalization percentile is the capitalization of the company whose cumulative capitalization equals, or exceeds but is nearest to, the 85<sup>th</sup> percentile. The 2011 Russell Global Index reconstitution portfolio as of 5/31/2011 was used as the starting universe. Our MSCI proxy is based upon imposing this 85<sup>th</sup> percentile breakpoint as the dividing line between large and small cap within each country.

- The RWCI employs Russell's style methodology, extending its U.S. classification algorithm to the global equity space. This ensures a rigorous and accurate measurement of style risk. Too, Russell has recently added a stability metric – the third dimension of style™ – to value and growth. This innovation, unique to Russell, shows promise as a useful tool in turbulent markets.<sup>11</sup>

### Conclusions – what direction for the U.S. investor?

We believe the era of mix-'n'-match benchmarks is drawing to a close for many of the reasons outlined in this paper. The need to accurately monitor cross-country cap, sector and style risks is probably the most compelling case for switching to a single family of indexes with one set of rules.

The nature of the opportunity set outside the U.S. is changing rapidly, while the U.S. universe is relatively settled and adequately covered by the Russell family of U.S. indexes. The logical place to change is where benchmarks are not fully effective in capturing the changing landscape. To keep up with this dynamic environment, we believe it makes sense to expand the Russell family of U.S. indexes into non-U.S. investment territory, rather than going the other way by expanding MSCI non-U.S. indexes into U.S. territory.

Looking at the present and going forward as well, we believe the Russell World Cap Index – part of the Russell Global Index family – imparts essential flexibility to investors' handling of further expansions into non-U.S. exposure while reflecting current institutional practice.

<sup>11</sup> Dave Hintz (2010): "The Third Dimension of Style: Introducing the Russell Stability Indexes," *Russell Research* (December).

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