

SMALL, SMID, OR MID?

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EXECUTIVE SUMMARY

For many investors, their US equity lineup includes a dedicated small cap allocation as a complement to a more sizable US large cap allocation, with no specific allocation to mid cap or smid cap equities. We argue that smid cap investing can provide all the benefits of small and mid cap investing, as well as a few not provided by either investment. Smid cap investing offers a broader opportunity set, marginally lower index concentration, one additional lever (size) to tactically alter the portfolio, and the ability to let winning holdings run further. These potential benefits may lead to a superior performance experience. However, we would not necessarily suggest replacing an existing small cap strategy with a smid cap strategy, but it might be worthwhile to inquire whether an expanded smid cap mandate is offered by the manager.

INTRODUCTION

When investors consider US equities, they are confronted with multiple decisions not necessarily present with equity investments outside the US. Due to its sheer size and diversity, along with the influences of academia and sales departments alike, the US equity market was dissected many years ago along two primary dimensions — size and style. This paper takes a closer look at one dimension — size, which is designated by market capitalization — and seeks to make a merit-based assessment of each of three somewhat distinct, but not universally defined, size categories (small cap, smid cap, and mid cap) as possible complements to US large cap equities.

Let's frame the narrative by asking three primary questions:

- 1. What are the practical defining parameters for the three size categories being considered?
- 2. Is there a case to be made for investing in more than one of these categories (that is, they are adequately differentiated) to complement large cap?
- 3. If investing in just one of these segments is sufficient, does one have more merit than the others?

SMALL, SMID, AND MID CAP DEFINITION

While defining these categories seems like it should be a relatively straightforward exercise, different investment managers, investment consultants, and index providers determine these three size segments according to their own parameters. Some estimate that large cap stocks are approximated by the largest 70% of the market, mid cap is the next 20%, and small cap is the smallest 10% (smid, by default, is the smallest 30%). Others have very specific cutoffs. For example, mid cap stocks are those with market capitalizations above \$2 billion but below \$10 billion (or above \$3 billion but below \$15 billion). Alternatively, smid cap is

"While defining these categories seems like it should be a relatively straightforward exercise, different investment managers, investment consultants, and index providers determine these three size segments according to their own parameters."

sometimes defined as the small and mid cap segments taken together, while some truncate the smid cap range on either the high or low ends to form a subset of the combined small and mid cap spaces. Further blurring the cap segment discussion is that some large cap US equity strategies invest in companies squarely in the small cap neighborhood (down to \$1 billion, for example), which would clearly incorporate mid cap. The end result is a patchwork of overlapping cap ranges rendering our categorization efforts somewhat ineffective in conveying the intended information.

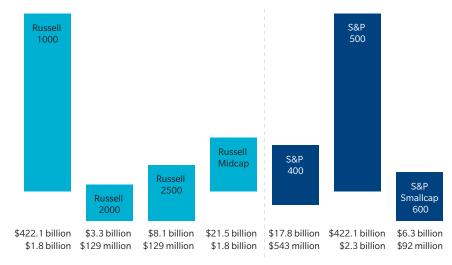
Russell Investments, which dominates the style and size differentiated US equity index market, has its own methodology. At the time of its annual mid-year reconstitution, Russell stacks all US stocks from largest to smallest. The large, mid, and small cap segments are contiguous and composed of the largest 200, next 800, and next 2,000 stocks, respectively. Collectively, these three segments constitute the broad market Russell 3000 Index. At the same time, smid cap is the smallest 2,500 stocks within the broad benchmark. The lower end of the small and smid cap range is identical, but the Russell Midcap Index extends higher than the smid cap proxy (Russell 2500 Index).

Because Russell fixes the number of stocks in each benchmark during its annual reconstitution, the market cap endpoints for each segment float freely and are influenced by the prevailing market environment. For example, stocks that are considered small cap have, over time, seen a rise in the market cap range (more than doubling over the past five years). From 1996 to 2006, the market capitalization of the largest company in the Russell 2000 Index doubled from \$1 billion to \$2 billion. Maybe more illustrative is the effective increase in the upper end of the Russell indexes in just over six months since the 2013 reconstitution. The largest market caps in the Russell Midcap, 2500, and 2000 Indexes, as of December 31, 2013, have swelled to \$29.1 billion, \$10.8 billion, and \$5.3 billion, respectively. A more frequent rebalancing would somewhat mitigate this, but the point is that defining small, smid, and mid cap stocks consistent with Russell is an exercise that needs to be conducted periodically, especially during dramatically moving markets. Even if a single categorization model can be agreed upon for defining cap ranges (using Russell, for example), it may have only fleeting relevance at certain times.

Standard & Poor's (S&P) also manufactures size-oriented US equity indexes. The mid cap offering is the S&P 400 Index and the small cap offering is the S&P 600 Index. Relative to Russell, the S&P indexes are less diversified in terms of number of holdings. Instead of including all stocks in a size range, S&P uses a committee to select a group of stocks that are representative of each capitalization segment. This results in an active stock selection component to the construction of these indexes. Also, S&P indexes have significant overlap in terms of cap ranges but no holdings overlap (Russell

is different, to a certain extent, on both counts). The lesser-known S&P 1000 is a smid cap combination of the 400 and 600 indexes. However, while the S&P 400 is roughly equivalent to the Russell Mid Cap Index in terms of market cap range, the S&P 600 is more closely aligned with the Russell 2500 Index. Figure 1 provides a comparison of certain Russell and S&P indexes as of May 31, 2013.

FIGURE 1: MARKET CAP COMPARISON



Source: Russell/S&P

While there is no definitive or universal definition for small, smid, and mid cap, reasonably good and practical proxies for defining the spaces are shown below in Figure 2. However, as mentioned previously, these categories are highly dependent on the current market environment and subject to change.

FIGURE 2: MARKET CAP BREAKPOINT PROXIES

	Mid cap	Small cap	Smid cap	
Maximum market cap	\$15 billion	\$3 billion	\$15 billion	
Minimum market cap	\$3 billion	\$100 million	\$100 million	

Source: Mercer

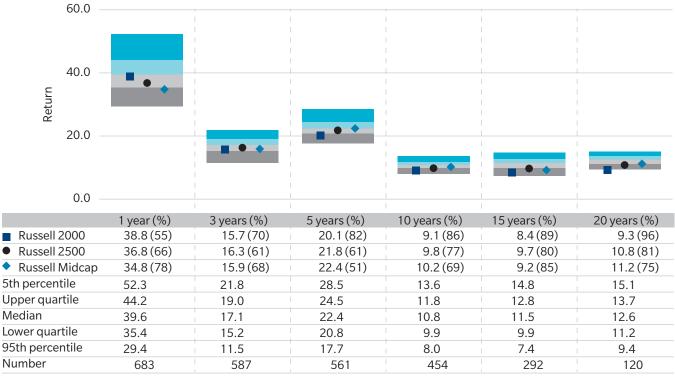
ARE THE SEGMENTS TRULY DIFFERENTIATED?

The differences between small, smid, and mid cap categories can be quantified, as shown in Figure 2; however, these somewhat arbitrary size segments are not sufficient enough to conclude that the segments are truly differentiated. Let's turn our attention to other differences between the segments to see if there is a better way to make a differentiation case. First, we will look at performance.

The Russell Midcap Index has generally outperformed the Russell 2500 Index, which, in turn, outperformed the Russell 2000 Index over various periods through year-end 2013 (that is, 5-year, 10-year, 20-year, 30-year, and so on). Over the past 20 years, the annualized return differential between the best- and worst-performing segments was meaningful at approximately 200 basis points (11.2% vs. 9.3%), but the mid cap advantage compared to smid caps was only 40 basis points. Over the past three-year period, the annualized return differential between the best and worst performer was less meaningful, at 60 basis points (16.3% vs. 15.7%) and favored smid cap. Consequently, it looks like the performance advantage enjoyed by the midcap index has waned in recent years as seen in Figure 3.

FIGURE 3: RETURN ANALYSIS OVER 1, 3, 5, 10, 15, AND 20-YEAR TRAILING PERIODS

Return in US\$ (before fees) over 1 year, 3 years, 5 years, 10 years, 15 years, and 20 years ending December 2013 Comparison with the US equity small + mid universe (percentile ranking)

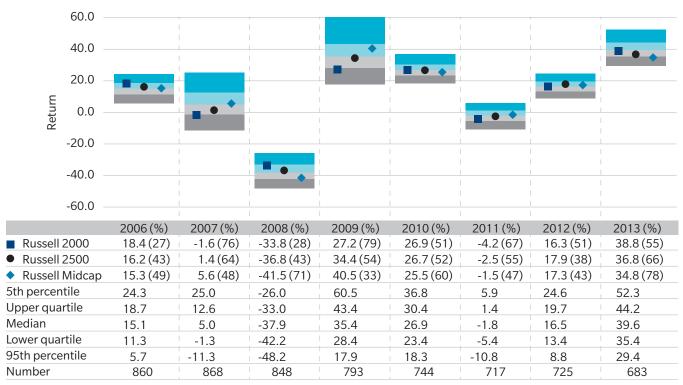


Source: Mercer MPA

Trailing-year performance comparisons, however, can be skewed by outlier periods and a common end point. Figure 4 looks at performance through the lens of individual calendar years and rolling periods instead. The Russell Midcap Index and the Russell 2000 Index have been taking turns as the performance leader from year to year over the past several years, with the Russell 2500 Index falling in the middle. The lone exception was 2012, when the Russell 2500 Index led the pack. From this perspective, it is easier to conclude that these market segments are highly correlated, and performance does not provide a compelling argument in support of the position that they are truly distinct. At the same time, the calendar year performance comparison also supports the case that one segment has not been superior to the others — at least over the intermediate term (the past eight calendar years).

FIGURE 4: CALENDAR YEAR PERFORMANCE 2006-2013

Return in US\$ (before fees) over last 8 calendar years ending December 2013 Comparison with the US equity small + mid universe (percentile ranking)



Source: Mercer MPA

"Can other factors help make a differentiation case?" Figure 5 looks at rolling-period excess returns for each of the three indexes relative to the large cap proxy (Russell 1000 Index). While there are intermediate term deviations, reflecting the lower volatility of mid cap (higher volatility of small cap), the three benchmarks end up with roughly the same return pattern and end point over an extended period (30 years) and correlations are obviously high.

FIGURE 5: ROLLING PERIOD — EXCESS RETURNS VS. RUSSELL 1000 INDEX

Russell 2000, Russell 2500, Russell Midcap

Rolling 3-year excess return vs. Russell 1000 in US\$ (before fees) over 30 years ending December 2013



Taking all that into consideration, there does not appear to be a strong differentiation case to be made based solely on performance. Can other factors help make a differentiation case? One argument suggests there are notable differences among the segments, especially small cap versus mid cap, across a diverse set of factors, such as market efficiency, alpha potential, and capacity.

Figure 6 summarizes many of the most common factors used to differentiate these two segments.

FIGURE 6: MOST COMMON DIFFERENTIATORS BETWEEN MID AND SMALL CAP

Mid cap

Mid cap companies tend to have ...

- Better management depth and longer operating histories.
- Better operating margins and a higher-quality universe.
- A nice balance between stability and growth potential.
- More global exposure and the benefits of scale.

Mid cap investing ...

- Features better liquidity and greater asset capacity.
- Has lower transaction costs and lower management fees.
- Is most often ignored by institutional investors.
- Has outperformed small cap investing over the long term.

Small cap

Small cap companies tend to have ...

- Less Wall Street coverage and are more idiosyncratic.
- A tendency to be more likely to be targets of M&A activity.
- Higher growth potential but more volatility.
- Less exposure outside the US.
- More single-product exposure.

Small cap investing ...

- Is arguably a less efficient market segment.
- May allow for more alpha-generating opportunity.
- Generally offers modestly more actively managed portfolios.
- Is marginally less correlated with large cap investing.

"Based on these differences, a reasonable case can be made that the segments are differentiated, at least at the extremes (mid vs. small)."

From an operational standpoint, there are also meaningful differences between small and mid cap investing. Figure 7 highlights the fact that liquidity is harder to find as investors move down the capitalization range, as daily trading volumes are lower. Likewise, the level of sell-side analyst coverage can be less significant in the small cap space than in the mid cap space, contributing to the level of efficiency in each market segment but also accounting for some of the differences in trading volume.

FIGURE 7: LIQUIDITY AND EFFICIENCY AS OF MARCH 2014

	Median daily share volume (000's) past 12 months	Average price per share past 12 months	Median number sell- side ratings
Russell 2000	3,873	\$28.84	6
Russell 2500	6,158	\$34.90	8
Russell Midcap	46,663	\$62.95	16

Source: Bloomberg, Style Advisor

Based on these differences, a reasonable case can be made that the segments are differentiated, at least at the extremes (mid vs. small). However, two or more separate investments may not be necessary to get the combined benefits derived from small and mid cap investing.

WHICH SINGLE SEGMENT WORKS BEST ON A STANDALONE BASIS?

For many investors, their US equity lineup includes a dedicated small cap allocation as a complement to a more sizable US large cap allocation, with no specific allocation to mid cap or smid cap equities. This is generally based on the premise that large cap and small cap portfolios will inevitably encroach on the mid cap space, thereby providing mid cap coverage without an explicit allocation. However, this approach may be less than optimal given its potential under-representation to stocks in the middle. Including a dedicated mid cap manager provides one solution, but adding a slightly nuanced strategy (given the small cap investment already in place) to what is likely an already overly diversified lineup (including multiple investments in several other distinct asset classes) is mostly unappealing. Instead, we believe it may be beneficial to swap out small cap, forego mid cap, and utilize smid cap. In doing so, we believe better coverage can be achieved without any proliferation in the number of separate investments.

We argue that smid cap investing can provide all of the benefits of small and mid cap investing, as well as a few not provided by either investment, including:

- A broader opportunity set.
- Marginally lower index concentration.
- One additional lever (size) to tactically alter the portfolio.
- The ability to let winning holdings run further.

One logical question, then, is whether investing in a combination of large cap and smid cap strategies provides adequate coverage of the investable US equity universe. To answer this question, let's start with a look at index market capitalization data. Figure 8 provides the quintile breakpoints, as of December 31, 2013, for each of five Russell indexes representing the all cap, large cap, mid cap, small/mid cap, and small cap US equity spaces. Despite the structured exclusivity between the Russell 1000 and the Russell 2000, one could argue that the positioning of the Russell 2500 best complements that of the top heavy Russell 1000, while either the Russell Midcap or the Russell 2000 leaves a coverage gap when paired with the Russell 1000 (on the low end for Russell Midcap and on the high end for Russell 2000).

FIGURE 8: MARKET CAP QUINTILE BREAKPOINTS AS OF DECEMBER 31, 2013

(in billions)	Russell 3000	Russell 1000	Russell Midcap	Russell 2500	Russell 2000
1st and 2nd	172	183	16.8	5.7	2.7
2nd and 3rd	71	80	12.7	4.2	1.9
3rd and 4th	27	35	8.2	2.8	1.3
4th and 5th	9	14	5.2	1.5	0.8

Source: Mercer MPA

SAMPLE PORTFOLIO TEST

With this in mind, let's look at actively managed portfolios. We identified a sample of 10 highly rated active portfolios across four categories to see how they were invested relative to the Russell 3000 index market cap quintiles from Figure 8. We selected highly rated strategies that, in the aggregate, had roughly equivalent tracking errors relative to their respective benchmarks to help ensure that the limitations of a small sample size were not exacerbated by a bias in selection. The average predicted tracking error for our three possible complementary groups (mid cap, smid cap, and small cap) were 5.0%, 5.0%, and 5.3%, respectively. Figure 9 reflects the average allocation to each quintile for each group of 10 sample strategies.

"It ... supports the idea of having a streamlined US equity manager lineup."

FIGURE 9: AVERAGE QUINTILE ALLOCATION PERCENTAGES AS OF DECEMBER 31, 2013

	Large cap core	Mid cap core	Smid cap core	Small cap core	
1st	14	0	0	0	
2nd	24	0	0	0	
3rd	26	2	0	0	
4th	25	30	10	2	
5th	11	68	90	98	

Source: Mercer MPA

Fully recognizing the limitations of these data (a limited sample size as of one point in time), it is still illustrative. Note that the mid cap, smid cap, and small cap core strategies all primarily live in the bottom quintile(s) of the all cap universe, where large cap strategies are naturally underrepresented. The observed overlap effectively lessens the differentiation among active portfolios relative to what might be expected, given the perceived mutual exclusivity between midcap and small cap. It also supports the idea of having a streamlined US equity manager lineup.

POTENTIAL DRAWBACKS

There are two potential drawbacks of note to pairing large cap with smid cap in lieu of investing in dedicated mid cap and/or small cap strategies. First, according to our calculations, the average management fee for a separate account investment of a given size was surprisingly higher for smid cap (0.94%) than either mid cap (0.66%) or small cap (0.85%). Second, Figure 10 indicates that rolling one-year and three-year excess returns generated over the past 20 years by actively managed smid cap strategies (before fees) are essentially the same as they are for actively managed mid cap strategies and less than what actively managed small cap strategies were able to achieve.

FIGURE 10: AVERAGE EXCESS RETURNS (GROSS OF FEES) THROUGH DECEMBER 31, 2013

Excess returns	Active mid cap	Active smid cap	Active small cap	
Rolling 1-year	1.14%	1.15%	2.58%	
Rolling 3-year	1.34%	1.39%	2.83%	

Source: Mercer MPA

CONCLUSION

The performance of US small cap, smid cap, and mid cap stocks is highly correlated (and almost equally robust in recent years), and this is at least somewhat exacerbated by the lack of a universal categorization scheme to define each space. Consequently, we find it difficult to recommend that investors invest in all three categories, particularly those who already have very diversified portfolios. The bottom line is that the inclusion of a dedicated mid cap strategy is not likely to provide enough incremental benefits to warrant an additional investment. Nonetheless, the mid cap segment has its merits, as does the small cap segment, and we believe that the benefits of both can be captured with a single dedicated smid cap investment. Moreover, employing a single investment strategy with the latitude to move between small and mid cap names, as it sees fit, may lead to a superior performance experience. Manager skill still trumps any advantages of a broader opportunity set or increased flexibility enjoyed by smid cap mandates, but we find the arguments supporting smid cap investing to be superior to small or mid cap investing on a standalone basis.

APPENDIX

December 31, 2013

UNITED STATES DOLLAR		Russell 1	000 Index	Russell 2000 Index		Russell 2500 Index		Russell Midcap		
Composition Summary										
Portfolio	Total portfolio size		19T		1.6 7T		3.78T		5.8TT	
Size of companies — # holdings/% equity Russell 3000	Large capitalization	77.11 and above	50	41.7%	0	0.0%	0	0.0%	0	0.0%
	Medium/Large cap.	22.27—77.11	150	28.7%	0	0.0%	0	0.0%	17	6.6%
break points	Medium capitalization	7.65—22.27	300	18.9%	0	0.0%	34	6.9%	289	58.5%
	Medium/Small cap.	3.03-7.65	416	9.5%	84	15.3%	473	50.2%	415	311%
	Small capitalization	3.03 and below	99	1.2%	1920	84.7%	2017	42.9%	99	3.8%
	Unclassified		0	0.0%	0	0.0%	0	0.0%	0	0.0%
	Market cap. — Standard v average — S billion	veighted	100%	109	100%	179	100%	3.76	100%	1159
Economic sectors —	Technology		119	15.60%	295	14.34%	355	11.99%	99	11.68%
# holdings/% equity Based on Russell Sector	Health care		100	12.38%	293	13.27%	337	10.51%	74	10.47%
Scheme	Consumer discretionary a	and services	178	15.06%	288	14.39%	375	15.69%	148	18.76%
	Consumer staples		50	7.87%	65	3.40%	76	2.57%	34	5.41%
	Integrated oils		0	0.00%	0	0.00%	0	0.00%	0	0.00%
	Energy		74	9.60%	113	5.33%	145	5.59%	54	6.46%
	Materials and processing		72	427%	128	7.21%	172	8.26%	60	6.69%
	Producer durables		135	11.64%	248	14.29%	323	15.18%	111	13.15%
	Autos and transportation		0	0.00%	0	0.00%	0	0.00%	0	0.00%
	Financial services		228	18.59%	503	23 80%	641	24.96%	192	21.07%
	Utilities		59	4.99%	71	3.98%	100	525%	48	6.33%
	Other		0	0.00%	0	0.00%	0	0.00%	0	0.00%
Characteristic Summary										
Portfolio characteristics	Portfolio P/E		99%	19.9	93%	33.6	94%	27.8	97%	24.4
	Portfolio P/E excluding ne	eg. earnings	95%	19	74%	22.4	80%	21.7	89%	216
	Portf. P/E-I/B/E/S 1yr fore	ecast EPS	96%	16.3	69%	19.6	78%	18.3	90%	18
	Portfolio price/book Price/Cash flow Portfolio price/sales LT. growth forecast — I/B/E/S medians 1 year EPS forecast — I/B/E/S medians Return on equity — 5 year average EPS growth — 5 years EPS variability —10 years Beta (vs. R3000) Number of holdings		100%	2.68	99%	2.38	99%	2.4	100%	271
			99%	12.8	97%	182	97%	16	98%	14.3
			98%	18	96%	1.6	97%	1.6	97%	17
			99%	11.3	90%	13.2	93%	12.8	97%	12.5
			95%	9.9	74%	13.8	82%	12.3	91%	11.7
			90%	17.3	78%	8	81%	10.1	86%	13.5
			84%	11.4	48%	11.6	57%	11.3	70%	11.3
			91%	48.5	69%	97.1	75%	84.9	85%	69.7
			91%	1.02	84%	1.33	84%	1.31	86%	1.18
				1015		2004		2524		820

Source: Russell/Mellon Analytical Services, LLC

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