



ADVANCED INVESTMENT PARTNERS

100 Main Street Suite 301  
Safety Harbor, FL 34695  
TEL (727) 799-3671 (888) 248-8324 FAX (727) 799-1232

---

## **How Much SMidCap Exposure?: A Re-Examination**

**Jon E. Quigley, CFA  
John Bright, CFA**

**December 2010**

## How Much SMidCap Exposure?

by

Jon Quigley, CFA

John Bright, CFA

Small- to mid-cap stocks (smidcaps) have had an extended period of outperformance since 1999. The outsized returns delivered by this market cap segment have attracted considerable attention, and many wonder if it's too late to add exposure to smaller stocks. Below, we offer a few items for your consideration in determining how much exposure to smid-cap stocks one should maintain.

### **Historical Risk/Return and Correlation**

Historically, smaller stocks have higher expected return and higher risk than their large-cap counterparts. Because they do not carry a perfect correlation with large stocks, adding small caps to your portfolio may enhance return and reduce overall risk. Modern Portfolio Theory tells us an optimal portfolio is one which offers the best risk/return profile. Using that notion, an optimal mix may be 70% large-cap and 30% smid-cap stocks.

- Over the past 32 years, the small/midcap (*SMidCap*) Russell 2500 Index has posted an annualized return of 13.81%, versus the S&P 500's annualized return of 11.94%. (*For reference, the Russell 2000 Index has returned 12.83% per annum.*)
- The annual standard deviation of the Russell 2500 Index return over the same period is 18.66%, versus 15.56% for the S&P 500. (*For reference, the annualized standard deviation of the Russell 2000 is 20.06 %.*)

	<b>Ann. Ret.</b>	<b>Ann. Risk</b>
<b>S&amp;P 500</b>	<b>11.94%</b>	<b>15.56%</b>
<b>Russell 2500</b>	<b>13.81%</b>	<b>18.66%</b>
<b>Russell 2000</b>	<b>12.83%</b>	<b>20.06%</b>

Source: Standard & Poor's, Russell Mellon, AIP Research

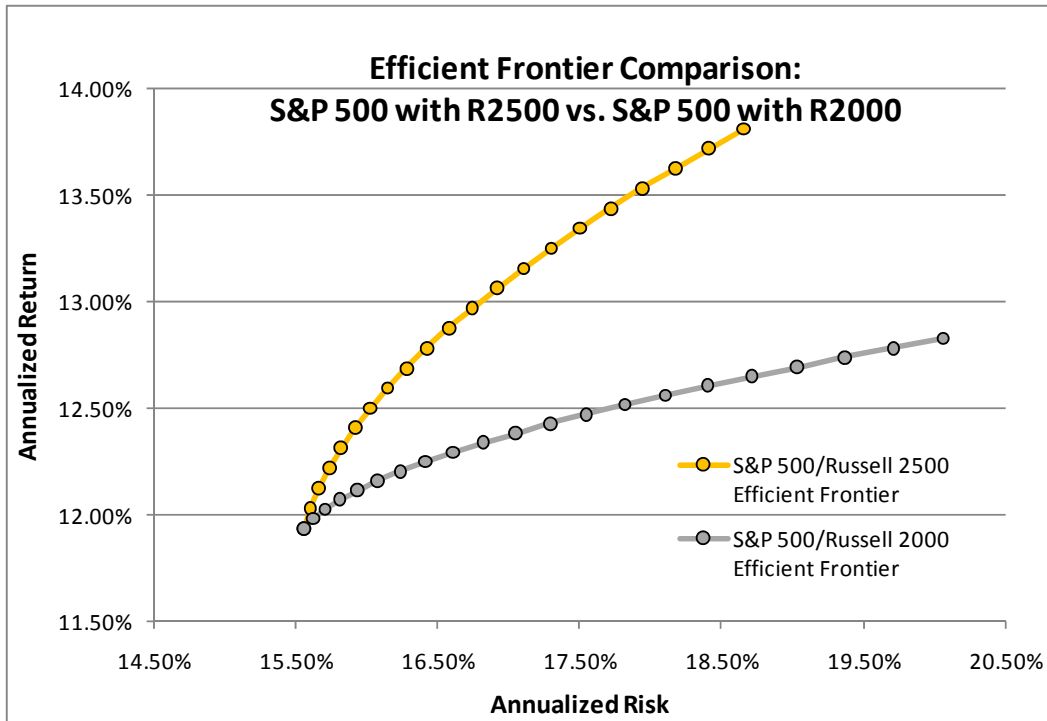
- The Russell 2500 Index has a correlation with the S&P 500 of 0.88, and a near-perfect correlation of 0.99 with the Russell 2000:

<b>2010 Update</b>			
	<b>S&amp;P 500</b>	<b>Russell 2500</b>	<b>Russell 2000</b>
<b>S&amp;P 500</b>	1.00		
<b>Russell 2500</b>	0.88	1.00	
<b>Russell 2000</b>	0.83	0.99	1.00

Source: Standard & Poors, Russell Mellon, AIP Research

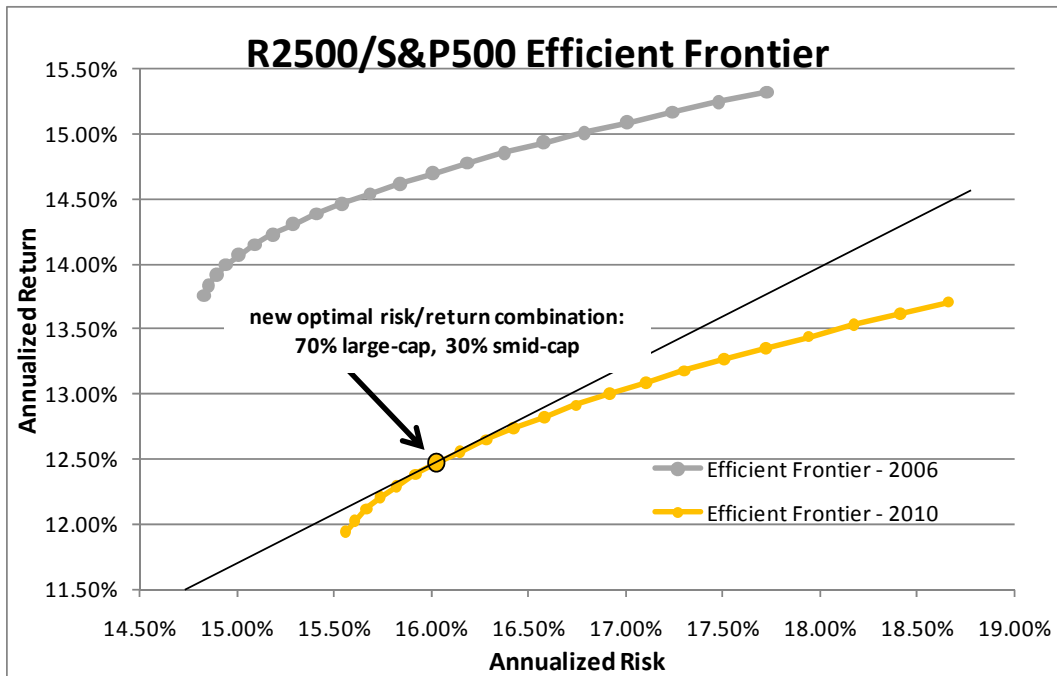
### Efficient Frontier and Optimal Asset Allocation

Because of the Russell 2500 Index' superior returns to both the Russell 2000 Index and the S&P 500 Index, and the benchmark's less-than-perfect correlation with the large-cap S&P 500 Index, a blended portfolio of large- and smid-cap stocks dominates both a pure large-cap portfolio and a blended portfolio of large-cap and small-cap stocks:



Source: Standard & Poors, Russell Mellon, AIP Research

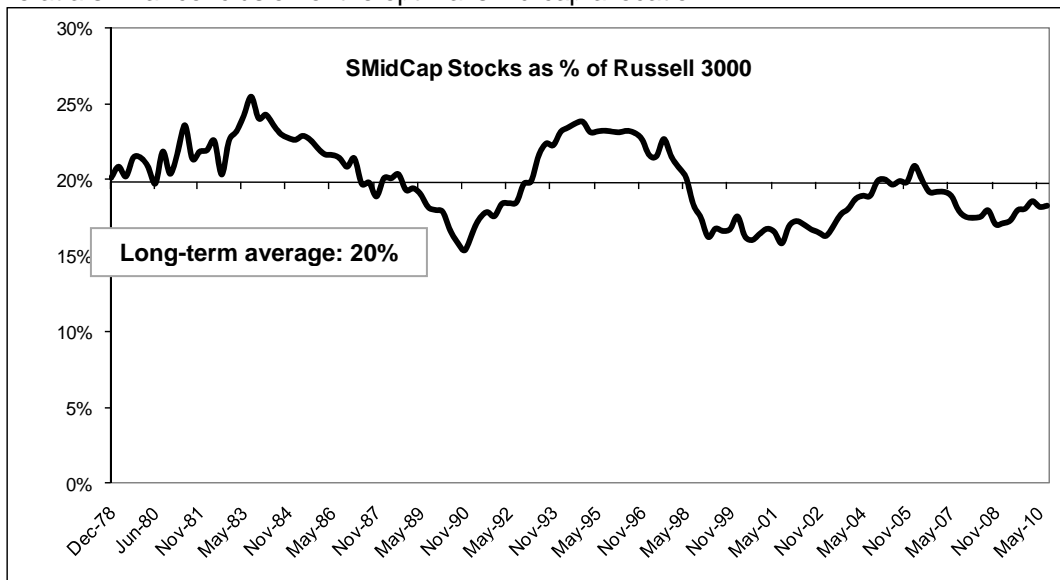
Finally, given the above, we search for the optimal blend of large-cap and smid-cap stocks. The scattergram below identifies the risk and return profiles of large-cap and smid-cap blends, with the smid-cap exposure increasing from 0% to 100% in increments of 5%:



Source: Standard & Poors, Russell Mellon, AIP Research

**Market-Cap Representation**

The Capital Asset Pricing Model (CAPM) and the Efficient Market Hypothesis, meanwhile, tell us that we should use market exposure as our guideline in determining proper exposure to an asset class. We measured the total market capitalization of the Russell 3000 Index and the Russell 2500 Index over the past 127 quarters. By dividing the latter into the former, we can determine what percentage of the Russell 3000 consists of smid-cap stocks. Employing this approach, we arrive at a similar conclusion of the optimal smid-cap allocation:

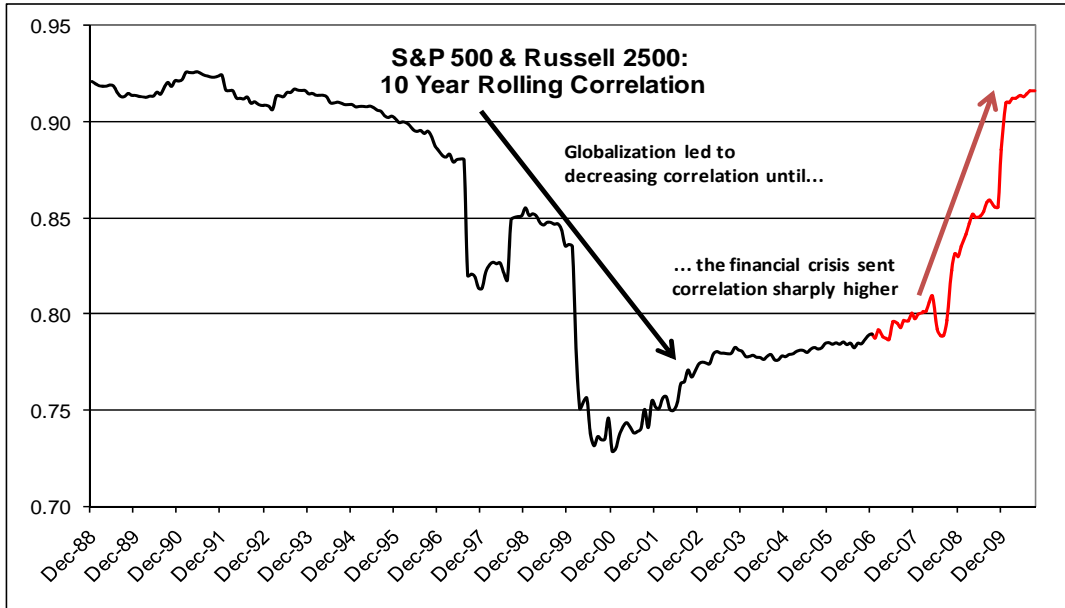


Source: Russell Mellon, AIP Research

**Increasing Benefits of Diversification**

As globalization increases, performance of larger stocks and smaller stocks may diverge, given that large companies derive significant revenue from overseas, small stocks significantly less. Above, we referenced the fact that over the past 32 years, the correlation between the S&P 500 and the Russell 2500 Index is 0.86. However, as the global economy became increasingly integrated, this correlation had generally been decreasing. As such, the benefits of diversifying

among large- and mid-cap stocks were also increasing. Recently, however, we were reminded that in times of crisis, correlation among asset classes tends to move towards one:



Source: Standard & Poors, Russell Mellon, AIP Research

**Benefits of Neglect**

There has been considerable research regarding the performance of “neglected”, or under-followed, firms. Lower levels of analyst coverage are associated with higher returns, regardless of firm size. Several theories have been put forth to explain this effect. Investors may be willing to pay a higher price for stocks which have a recognized “brand”, despite the fact that future returns may be lower. Another theory is that news may be incorporated less slowly for under-followed stocks, and thus they are more prone to the impact of long-term price momentum. A third theory posits that less-followed firms are simply less-efficiently priced (and more volatile), and therefore may offer higher returns. Under each of these theories, neglected stocks outperform stocks with greater analyst coverage.

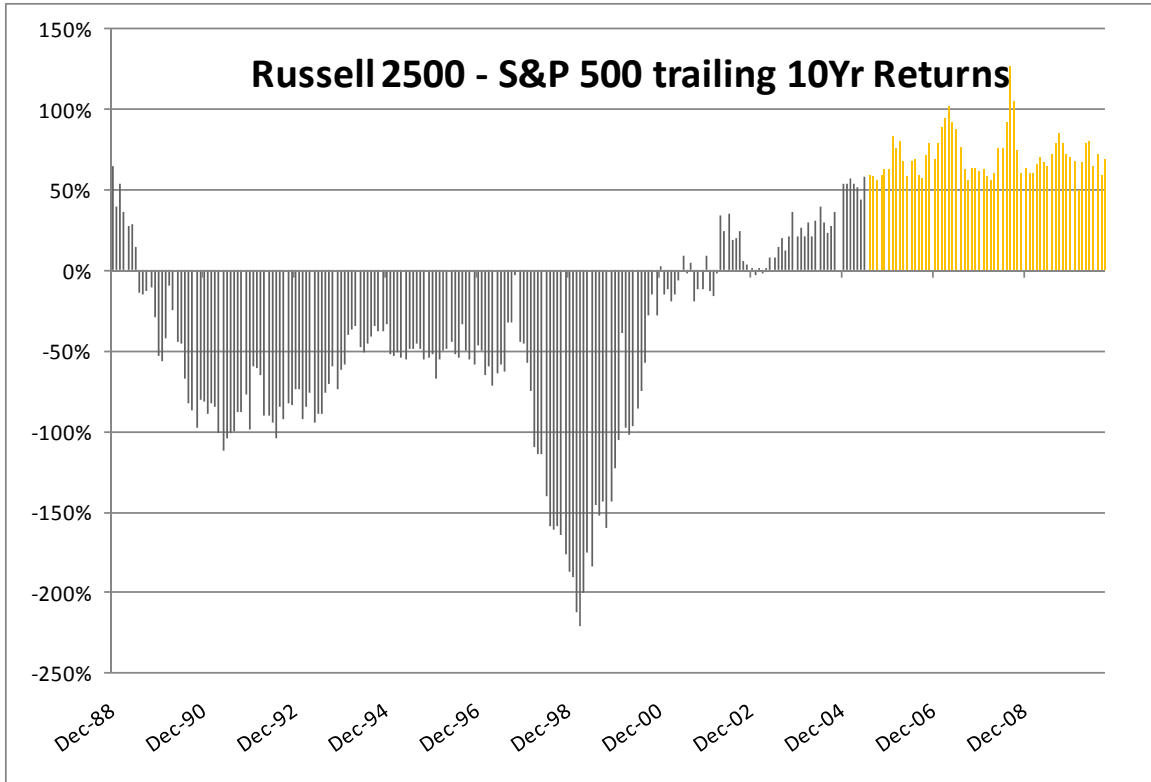
Average Analysts' Coverage	
S&P 500	15.6
Russell 2500	5.6

Source: Standard & Poors, Russell Mellon, IBES, AIP Research

We see mid-cap companies have about 60% fewer analysts covering their stock than large-cap companies, leading to greater stock price inefficiencies.

**Size Rotation**

As presented below, the performance swings between large-cap outperformance and small-cap outperformance can be significant in magnitude. While mid-caps have outperformed significantly over the past 8-10 years, the magnitude of their outperformance is not nearly equal to the magnitude and duration of outperformance recorded by large-caps during the 90's.



Source: Standard & Poors, Russell Mellon, AIP Research

**Loss Likelihood and Time Decay**

We've already shown that when viewed separately, smid-cap stocks are slightly more risky than large-cap stocks. We've also demonstrated that combining smid-caps with large-caps leads to a better risk/return profile for investors. Another way of potentially decreasing the risk of smid-cap stocks is through increasing the holding period. While smid-caps have greater risk, they may also have greater return potential. Thus, by increasing the duration of the holding period, the greater return potential slowly overwhelms the impact of higher volatility/greater risk.

<b>Loss Probability:</b>	<b>S&amp;P 500</b>	<b>FR2500</b>
<b>1 Year</b>	21.4%	23.0%
<b>3 Year</b>	15.9%	10.1%
<b>5 Year</b>	14.0%	3.1%
<b>10 Year</b>	8.8%	0.0%

January 1978 – September 2010; past results do not ensure future result

**Conclusion**

We've presented several arguments as to why smid-cap exposure is better than small-cap exposure, and why smid-cap exposure of 25-30% may be appropriate for suitable investors. We framed our reasoning in a risk/return discussion. While many believe it's too late to gain exposure to this segment of the US equity market, most investors do not carry 25-30% of their domestic stock allocation in small and mid-cap stocks. We believe that the diversification benefits of smid-cap exposure increase with time, and that the current length and magnitude of smid-cap outperformance falls well within observed norms. We also believe that while some believe stand-alone exposure to smid-cap stocks is too risky, even that risk can be mitigated with a sufficiently long holding period.

**This material is for your private information.** The views expressed are the views of Advanced Investment Partners through the period ended June 30, 2007 and are subject to change based on market and other conditions. The opinions expressed may differ from those with different investment philosophies. The information we provide does not constitute investment advice and it should not be relied on as such. It should not be considered a solicitation to buy or an offer to sell a security. It does not take into account any investor's particular investment objectives, strategies, tax status or investment horizon. We encourage you to consult your tax or financial advisor. All material has been obtained from sources believed to be reliable, but its accuracy is not guaranteed. There is no representation or warranty as to the current accuracy of, nor liability for, decisions based on such information. Past performance is no guarantee of future results. This document contains certain statements that may be deemed to be forward-looking statements. All statements, other than historical facts, contained within this article that address activities, events or developments that Advanced Investment Partners expects, believes or anticipates will or may occur in the future are forward-looking statements. These statements are based on certain assumptions and analyses made by Advanced Investment Partners in light of its experience and perception of historical trends, current conditions, expected future developments and other factors it believes are appropriate in the circumstances, many of which are detailed herein. Such statements are subject to a number of assumptions, risks, uncertainties, many of which are beyond Advanced Investment Partners' control. Readers are cautioned that any such statements are not guarantees of any future performance and that actual results or developments may differ materially from those projected in the forward-looking statements.

Frank Russell Company ("FRC") is the source and owner of the Russell Index data contained or reflected in this material and all trademarks and copyrights related thereto. The presentation may contain confidential information and unauthorized use, disclosure, copying, dissemination, or redistribution is strictly prohibited. This is an AIP presentation of the Russell Index data. Frank Russell Company is not responsible for the formatting or configuration of this material or for any inaccuracy in AIP's presentation thereof.

Standard & Poor's is the owner of the trademarks and copyrights relating to the S&P indexes.

All indices are unmanaged and performance of the indices includes reinvestment of dividends and interest income, unless otherwise noted. The indices are not illustrative of any particular investment and it is not possible to invest directly in an index.