

Stock Market Perspective: Is “Smart Beta” Really Smart?

A few years back, this section discussed enhanced indexing. The concept is based on the belief that capitalization weighted indices and the funds that track them overweight stocks that are “overvalued” and underweight the others. One reason given for the overweighting is that the overvalued stocks’ prices have done better than the others, which has increased their weights. Enhanced indexing proponents claim that by looking at factors other than market capitalization they can avoid giving too much (or possibly any) weight to the overvalued stocks in the index. Examples of these factors include dividend yield and earnings. In the past couple of years, the term enhanced indexing has been more or less replaced by “smart beta,” and its application has been broadened to customized indices that are not necessarily based on the standard ones like the S&P 500.

I will take a look at few smart beta ETFs and see how they compare to a couple that track the S&P. Before doing that, here is a quick primer on the technical meaning of beta and alpha, a related measure. Linear regression is a well known statistical procedure that estimates the value of one variable in terms on another one by fitting the “best” straight line through a scatter plot of the two variables. If we take the “independent” variable to be the S&P 500, or more precisely its daily percent changes, and the “dependent” variable to the those changes for a stock, mutual fund, ETF, or any tradable instrument, then the slope of that line is called the beta of the dependent variable. It measures the relative volatility of the variable. So if a fund has a beta of 1.25, it is 25% more volatile than the S&P in that its daily changes will average out to be 25% larger than those of the index. If the beta is less than one, the fund is less volatile than the index.

The straight line fit also has an intercept, which is the alpha of the fund. That is the regression’s estimate of the change of the fund when the index has zero change. If alpha is positive, the fund is “adding value” above what occurs due to volatility alone. The opposite holds for a negative alpha. The index as the independent variable has alpha equal to zero and beta equal to one.

The thinking behind smart beta is that by cleverly focusing on some fundamental factors such as dividend yield a fund can take advantage of the inherent volatility in the markets. In a sense the claim is this is a smarter way to take advantage of market movements than owning the capitalization weighted index. I don’t think this is a valid description. To me, it is an attempt to add value, have a positive alpha, by choosing the funds’ holdings according to particular methods or formulas. Regardless of whether it is smart beta or trying for positive alpha, we can see how well some examples of the approach have worked.

Wisdom Tree is one of the first if not the first investment firm to offer enhanced index funds, and it likely is the best known. One of its “experts” is Jeremy Siegel of the Wharton School who wrote *Stocks for the Long Run*, which is now in its 5th edition. Its first funds started in June 2006, and I will look at three of them. We have nine years of performance that have seen both very strong and very weak stock markets, which will provide a decent period for examination.

Six exchange traded funds are evaluated:
SPY - the “spider” tracking the S&P 500
RSP- equally weights stocks in S&P 500
SDY - S&P Dividend ETF invests in “dividend aristocrats,” companies that have raised dividends for at least 20 years in a row

Does this heavily promoted approach beat index funds? The few examples here say that it does not.

DTD - Wisdom Tree Total Dividend, fundamentally-weighted, dividend payers
 DLN - Wisdom Tree Large Cap Dividend
 DHS - Wisdom Tree Equity Income, higher yields among stocks in DTD

The first table shows two items of basic information about each fund—the current yield and expense ratio, and two measures over the nine-year period 2006-Q3 through 2015-Q2, the annualized returns¹ and the maximum drawdowns, all of which began in mid-2007 and bottomed out in March 2009.

	Yield	Expense Ratio	2006-15 Return	Maximum Drawdown
SPY	1.87%	0.09%	7.69%	-55.2%
RSP	1.47%	0.40%	8.77%	-59.9%
SDY	2.23%	0.35%	7.67%	-54.8%
DTD	2.50%	0.28%	7.06%	-58.2%
DLN	2.48%	0.28%	6.87%	-57.8%
DHS	3.10%	0.38%	5.67%	-67.2%

Although all three of the Wisdom Tree funds have higher yields than the others, they have lower returns and generally greater drawdowns although all of the drawdowns were quite severe. All have reasonable expense ratios. SPY has the lowest since it does not require much in the way of management, just keeping up with changes in the membership of the S&P 500.

Next are the results of the regression analysis of the daily percent changes of the funds over the nine-year period:

	Beta	Alpha	Correlation
SPY	1	0	
RSP	1.073	0	0.975
SDY	0.943	0	0.918
DTD	0.922	0	0.949
DLN	0.927	0	0.966
DHS	0.994	0	0.896

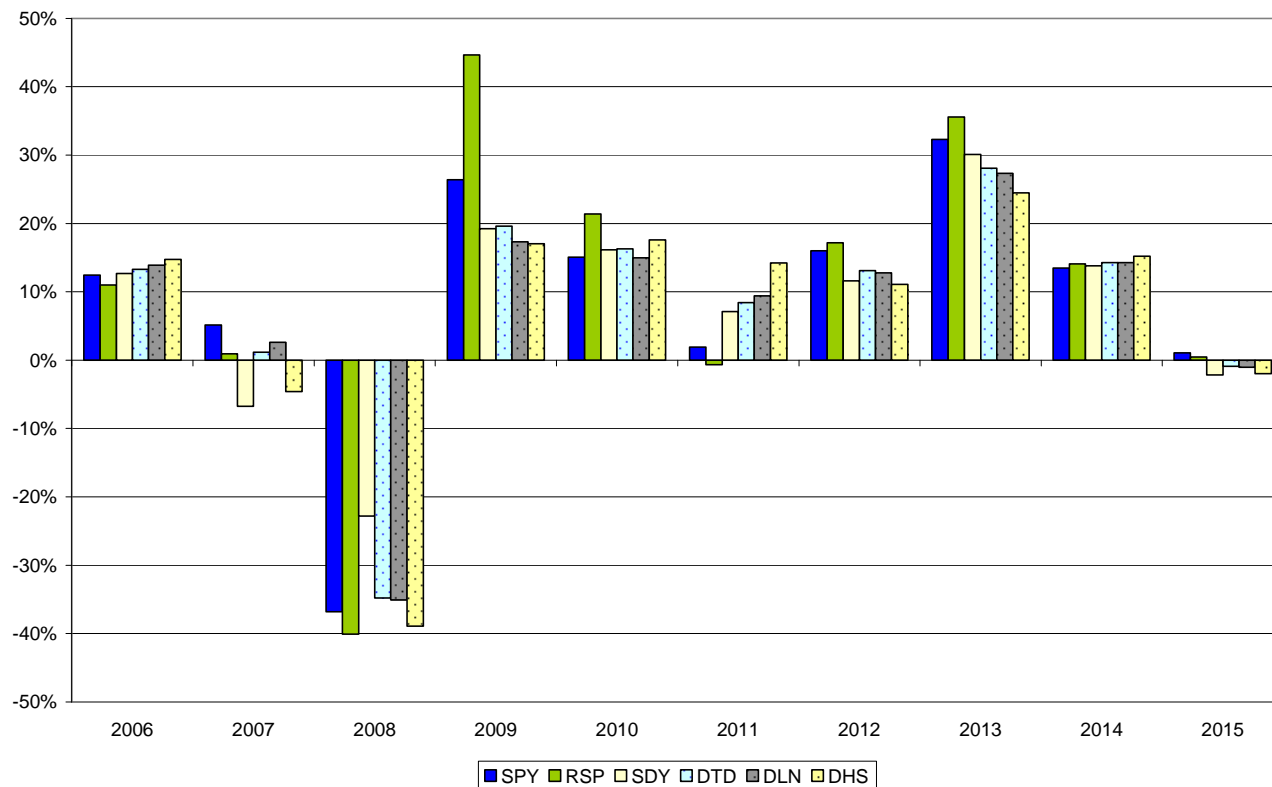
The alphas of the five funds other than SPY are not exactly zero, but one has to go the fifth or sixth decimal place to find a non-zero. It is fair

¹ The returns include dividends, which the calculations assume are reinvested. Unlike a traditional mutual fund, ETFs' distributions are paid in cash, not fund shares.

to say none of these funds adds value by that measure. The equal weight fund is a little more volatile than the index fund, and the others are less so by small amounts. The correlations with SPY show that all of them have similar movements for the most part.

Let's focus in on the yearly performance of the funds. The graph is on the next page. Keep in mind that 2006 is for the last half of the year, and 2015 is for the first half.

YEARLY RETURNS 2006-Q3 TO 2015-Q2



The most notable feature of the chart is the poor performance in 2008. SDY lost far less than the others, not quite 23%. As we know, there is no “free lunch” as that fund is not the best of the six in any other years and was one of the two that was down in 2007. The Wisdom Tree funds—the three rightmost bars in each year—are not particularly outstanding. In the years when they are the best, the margin is quite small. The equal weight fund, RSP, is the best in four of the years, spectacularly so in 2009.

The large losses in 2008 and drawdowns of over 50% show the danger of buying and holding,

particularly if there is any chance the money will be needed with the next few years. That is why I advocate getting out when the risks of staying invested are too great in comparison to the potential rewards. Based on analysis similar to what is shown, I use RSP when the model I use for timing the S&P 500 is on a buy signal.

My answer to the headline questions is “not really,” at least for the three Wisdom Tree funds analyzed. It is worth noting that the simplistic (so not so “smart”) approach, being equally weighted, handily outperforms the so-called “smart beta” funds.