Matarin Capital

Investing with Insight and Integrity

All Active Share is Not Equal

March 2013

Recent studies have suggested that active share can be a predictor of investment managers' returns, but all active share isn't created equal. Indeed, active managers generate alpha by being different from their benchmarks, but the important question is: *<u>How</u> are they different?* Managers can differentiate themselves from the benchmark by varying:

- Individual position sizes
- Level of cash held in the portfolio
- Active sector exposures
- Active size exposure (large cap vs. small cap)
- Active beta exposure
- Macro exposures (e.g. energy prices or exchange rates)
- Fundamental exposures like growth- or value-orientation

to name just some potential differentiators. For example, at Matarin we manage the first three "common sense risks" listed above using rules in our portfolio construction process, whereas we control the remaining risks on the list using a Northfield Risk Model, which we have customized to best suit our investment process.

What is Active Share?

Active share measures how different an active portfolio's holdings are from the benchmark on a scale of 0% to 100%, with 0% being an index fund and 100% being a portfolio that has no stocks in common with the benchmark.

How is Active Share Measured?

For each security in the benchmark, calculate the absolute value of the difference between the benchmark weight and the portfolio weight. Sum all of the absolute values and divide by two. In the example shown below, the active share of the portfolio is 50% calculated as (25% + 25% + 20% + 20% + 10%) / 2.

Security	Benchmark Weight	Portfolio Weight	Portfolio Active Weight
Jet Blue Airways	25%	50%	25%
Delta Airlines	25%	50%	25%
Kodiak Oil & Gas	20%	0%	20%
Parker Drilling	20%	0%	20%
Magnum Hunter	10%	0%	10%

When calculating a portfolio's active share, the choice of benchmark has a large impact. For a manager with a highly concentrated portfolio of 20 stocks, active share against any broad benchmark has to be high. However, for a manager with a more diversified portfolio of say 100 stocks, active share may be high relative to a broad, more equal-weighted index (i.e. the Russell 2000), but low relative to a less broad, cap-weighted index (i.e. the S&P 500). The size of a portfolio manager's assets under management relative to the size of the average company in the benchmark may also have a meaningful impact on active share. In the smaller-cap space, a portfolio manager with a large and increasing amount of assets will see active share decline as their opportunity set shrinks and they are forced into the larger and more liquid names and thus become more like the benchmark. These types of factors will affect a manager's active share, but we should not necessarily expect them to be informational with regard to manager skill.

At Matarin, we think about risk in terms of "risk budgeting." Given that we choose to "spend" only a limited risk budget, we prefer to take significant risk only where we think we will be rewarded. That is, we only want to be different from the benchmark in areas where we have skill at making choices. If we are picking up active share through industry differences, we want to be good at picking industries. If we are picking up active share through a value-orientation, we want to be good at value investing, and so on. If the drivers of a manager's active share are not well understood, or are outside a manager's area of expertise, this may lead to high active share underperformance as long-term "skill" overwhelms short-term "luck." This may lead to survivorship bias in studies on this topic, resulting in the overstatement of returns for high active share mangers.[1]

At Matarin, we attempt to add value via stock selection. Because our investment process focuses on capturing unique fundamental insights in order to forecast individual stock returns, stock-specific return is the opportunity set in which we have the greatest "edge." Statistically, all other things being equal, specific stock picking is also one of the most fruitful arenas in which a manager can express an investment edge, because of the sheer number of opportunities available in this space – every stock in the investable universe is fair game. Therefore, we focus our use of active share on selecting stocks rather than on taking meaningful active positions in sectors, market cap, macroeconomic factors, etc.

We earlier stated that all active share isn't created equal. However what's more, all past investment returns aren't created equal as it relates to forecasting future returns. It is only in areas of the market where managers have a focused and repeatable edge that being active relative to the benchmark will be rewarded in the long run.

[1]From Investopedia, the definition of Survivorship Bias is: "The tendency for mutual funds with poor performance to be dropped by mutual fund companies, generally because of poor results or low asset accumulation. This phenomenon, which is widespread in the fund industry, results in an overestimation of the past returns of mutual funds…."Essentially, average historic fund returns end up getting overstated because the worst performers go out of business over time, and are not included in today's manager databases. This is an important issue to take into account when analyzing past performance. Funds which are risky (high tracking error, high active share) or which possess low AUM would be more likely to go out of business. Therefore if survivorship bias were present in the active share performance studies, we would expect the results of the study to show that higher active share, higher tracking error, small-sized funds performed better than they actually did as a group. We'd expect this because the poor performing risky and small funds that have already gone out of business would be excluded from the study.