How Active Is Your Portfolio?

Most do-it-yourself investors own stocks through mutual funds, either in taxable accounts or in their retirement portfolios. There are thousands of mutual funds to choose from, and there are plenty of data points one should consider when selecting a fund. You've probably heard of many of these before: expense ratios, loads, 12b-1 fees, portfolio turnover, portfolio manager experience and tenure, performance numbers, standard deviation, and so on.

And, certainly, these can all be important factors to take into account. But we'd like to introduce you to another important metric which may be new to you: Active Share.

Mutual funds can be broadly categorized into one of two buckets: passive funds and active funds. Passive funds are those that don't even try to beat the market; they just mimic a specific index, such as the S&P 500 or the Russell 2000. Since these index funds are not actively managed, they tend to charge lower fees.

On the other hand, active funds try to beat the indexes by making specific bets designed to provide better returns than the market. These funds, since they are actively managed by a number of equity analysts and portfolio managers, charge higher fees than index funds.

But are these active funds really "actively managed"? And exactly how are "active" are they? In other words, are they significantly different from the market index they are trying to beat (and therefore worth their higher fees), or are they really just "closet indexers"? To find out, read on.

Active Share

"It is better to fail conventionally than to fail unconventionally."
- *John Maynard Keynes*

Lord Keynes could have been thinking about the mutual fund industry when he said this quote. It just so happens that many mutual fund managers prefer buying popular stocks that the rest of the herd is buying (even if they would probably under-perform) to buying obscure ones (even if they have a much better chance of out-performing). It is much easier to justify a failure if everyone is doing the same thing, than if you're are an outlier and the only one doing it. In other words, if you're a mutual fund manager and your fund under-performs while holding the same investments as everybody else's funds, you get a slap in the wrist; if you under-perform by having unique investments, you get fired.

To check whether mutual fund managers have been earning their fees, the industry has traditionally relied on a measure called the tracking error. The tracking error measures the variability of a fund's returns versus the returns of a benchmark, like the S&P 500. However, this measure does not tell the whole story, since it only looks at the outcome and not the input. It does not actually look at the underlying portfolio holdings.

In 2006, two Yale finance professors, Antti Petajisto and Martijn Cremers, developed a measure to differentiate truly active managers from closet indexers. In 2009, they published a paper, “How Active is Your Fund Manager? A New Measure That Predicts Performance,” in which they introduced a measure they called Active Share.

Active Share measures the percentage of a fund’s weight-adjusted portfolio that differs from its benchmark. A portfolio will always have an Active Share somewhere between 0% and 100%, with 0% indicating that the holdings are exactly identical to the index, and 100% indicating that the portfolio is completely different from the index. An Active Share reading below 60% (i.e., less than 60% of its investments differ from its benchmark index) implies closet indexing. That is, the mutual fund may claim to be actively managed, but its holdings are so similar to the index that it may as well be considered an index fund.

If you are curious to try it on your own, the actual mathematical formula for Active Share is:

$$Active\ Share = \frac{1}{2}\sum_{i=1}^{N} |weight_{fund,i} - weight_{index,i}|$$

Well, Duh

Professors Petajisto and Cremers examined the Active Share of all mutual funds between 1990 and 2003, and compared them to each fund's under- or over-performance relative to its benchmark index. They found that funds with an Active Share of at least 90%—meaning that no more than 10% of their portfolio mimicked the benchmark—in general out-performed their index, and funds with an Active Share below 60% consistently under-performed their benchmark.

The amount of that under-performance, by the way, is rather curious. These closet index funds under-performed their benchmark on average by 1.42% a year, after accounting for fees. And wouldn't you know it? The average actively managed mutual fund in America charges annual fees of just about 1.50%. In other words, these "actively managed" funds were only able to match the performance of the index before fees, but their high fees caused them to lag the index by a significant margin.

Investors in these closet index funds (that is, funds whose Active Share is less than 60%) would have been better off buying a low-cost index fund such as the Vanguard 500. For a mere 0.10% or so fee each year, investors in the Vanguard 500 fund are guaranteed to have their portfolio go up exactly 0.10% less than the S&P 500 index. That is, if the S&P 500 goes up 15.50% one year, investors in the Vanguard 500 will see their account go up 15.40%, whereas investors in one of these closet index funds would have seen a return of just 14.08%.

Biggest but Not Necessarily Best

As you may have guessed, the study also found that focused funds and funds that invest in small- and mid-sized companies tend to have a high Active Share. Large funds—those with more than $1 billion in assets—tend to have a tougher time maintaining Active Share. In fact, the 15 largest mutual funds have middle-of-the-road Active Share numbers, ranging around the high-50%s to the mid 70%s:

Fund	Ticker	Active Share (%)	Assets ($B)
American - Growth Fund of America	AGTHX	67	113
Fidelity - Contrafund	FCNTX	63	85
American - Investment Co of America	AIVSX	67	57
American - Washington Mutual	AWSHX	72	55
American - Fundamental Investors	ANCFX	66	52
Fidelity - Growth Company	FDGRX	57	43
Dodge & Cox - Stock	DODGX	77	40
Vanguard - Windsor II	VWNFX	63	37
T. Rowe Price - Growth Stock	PRGFX	69	30
Vanguard – PRIMECAP	VPMCX	71	29
BlackRock - Equity Dividend	MBDVX	65	26
American - AMCAP	AMCPX	73	25
T. Rowe Price - Equity Income	PRFDX	64	25
American - American Mutual	AMRMX	76	23
MFS - Value	MEIAX	70	22

Source: Barron's, Morningstar. Data as of 1/10/13

As the mutual fund industry has grown over the last 30 or 40 years, so has the number of funds that, while labeled as "actively managed," closely mimic an index. The percentage of assets under management with Active Share of less than 60% increased from 1.5% in 1980 to 40.7% in 2003. Correspondingly, the percentage of fund assets with an Active Share greater than 80% went down from 58% in 1980 to 28% in 2003. In 1980, there were few actively managed funds with Active Share of less than 60%. In 2003, funds with an Active Share of below 60% accounted for 20% of funds and 30% of assets.

Conclusion

When researching mutual fund investments, there are already a lot of things to pay attention to, but we think you should add Active Share to the list. While it turns out that high Active Share does not necessarily mean that the fund will out-perform—simply being different from an index is not enough to do better than the index—it is generally a pre-requisite for market-beating returns. You cannot beat an index if you look exactly like it. And why would you want to pay high fees to a mutual fund manager when he/she is just mimicking an index? You'd be better of just buying an index fund and paying lower fees.

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