RBC Global Asset Management

Understanding active share

Investment insights

Active share is a measure of the difference between a portfolio's holdings and those of its benchmark, and the industry has increasingly used it as a proxy for how "actively" an investment manager is managing a portfolio. A 2009 study on active share led to a great deal of focus by investors, investment managers, consultants, and even regulators, but we consider this level of attention to be somewhat misplaced. We believe that while active share is a useful measure in some instances, it has the potential to lead to some inappropriate conclusions.

In this short article we briefly describe active share and its merits, then consider three issues with its interpretation that investors should be aware of. Specifically, that as a single measure, active share cannot provide a comprehensive picture of active risk within a portfolio; that active share numbers are not comparable across different geographies and market segments; and that active share is able to measure the size of an investment manager's relative positions, but not their skill or their efficiency (or the return earned for risk taken).

Ultimately, the goal of this article is to provide a balanced representation of the merits and shortcomings of active share as a measure of active management.

What is active share?

Active share is a measure of the difference between a portfolio's holdings and its benchmark index. Mathematically, it is calculated as the sum of the difference between the weight of each stock in the portfolio and its benchmark weight, divided by two. A portfolio that replicates the index has an active share of zero, while a portfolio that owns entirely out-of-benchmark securities has an active share of 100. While it is possible to calculate an active share number for a fixed income portfolio, this measure is primarily used for equities.

The beauty of active share is its simplicity. It is easy to calculate, and doesn't require any special models or assumptions. We have been using active share, among other measures, in the monitoring of investment mandates within RBC Global Asset Management for many years.

The measure was first introduced in a widely read research paper published in 2009[1] that suggested that active share is a predictor of future performance, and argued that managers with higher active share delivered better long-term performance than those with lower active share. While subsequent research[2] using the same data set cast significant doubt on this conclusion, investors, consultants, and even regulators continue to focus a great deal of attention on this one measure. And not surprisingly, investment managers whose approach results in a high active share relative to their benchmark have continued to highlight this in their marketing materials.

In the following three sections, we detail why we believe that much of this focus is misplaced.

1. One useful measure of many

What single measure defines success for a hockey player? Goals scored? Points earned? Games won in a season, or in the playoffs, or in a career? Stanley Cup titles?

Similarly, what statistical measure best describes a set of data? Its mean? Median? Standard deviation? Skewness? The answer, of course, depends on what exactly you want to know about the set of data, and how comprehensively you want to describe it.

Active share describes a difference in holdings between a portfolio and its benchmark, however:

- It is also only a snapshot of a point in time. A manager may reasonably want to take more risk when they see many opportunities, but less when they don't, therefore a portfolio's active share may be meaningfully different at different points in time.
- Not all differences in holdings between a portfolio and an index will have the same impact on relative performance. A 2% overweight in a large-cap stock with a beta similar to the market will have a dramatically different impact on relative performance than a 2% overweight in a volatile natural resource or technology stock.
- Two portfolios with identical active share but different trading activity may behave very differently. A manager may well derive a significant amount of performance from opportunistic trading, and active share cannot capture this.

[1] Cremers and Petajisto, "How Active Is Your Fund Manager? A New Measure That Predicts Performance," (March 31, 2009).
[2] Frazzini, Friedman, and Pomorski, "Deactivating Active Share," (April 22, 2015).

Our view is that investors should understand a manager's approach, and then monitor those statistical measures that are most relevant for the strategy the manager is employing. The list could include active share, as well as tracking error, turnover, upside/downside capture, and of course the magnitude and consistency of relative performance.

2. Active share numbers are not comparable between geographies or market segments

The active share of a portfolio is in significant part a function of the market in which it operates. Actively managed portfolios in concentrated markets such as Canada's, for example, generally exhibit much lower active shares compared to those in more broadly diversified markets because most of the stocks that are candidates for investment have large index weights. On the other hand, portfolios benchmarked against indices comprised of many small constituents will have higher active shares.

Consider Figure 1, below, for an illustrative example. A global portfolio manager benchmarked against the MSCI World Index has 93 banks to choose from,[3] with an average weight of 0.1%. To establish a 2% overweight in Barclays, with a current index weight of 0.1%, they would only need to devote 2.1% of their portfolio to the position. Conversely, a Canadian portfolio manager benchmarked against the S&P/TSX Capped Composite Index has eight banks to choose from, with an average weight of 3%. If they wish to establish a 2% overweight in Bank of Montreal, with a current index weight of 3.1%, they would need to invest 5.1% of the portfolio.

Both the global and Canadian managers would have added the same 2% active share to their portfolio through their 2% overweight, but the Canadian manager needed to commit 5.1% of their portfolio to do so, while the global manager needed to commit only 2.1%. Unless the Canadian manager is investing almost entirely in small-cap or off-benchmark stocks, it is very difficult, and probably not desirable, to build a Canadian portfolio with the same active share as a global portfolio, because the potential stocks for investment have such large index weights that a considerable portion of the fund's capital is used merely getting to the benchmark weight.

Therefore, a U.S. equity fund benchmarked against the S&P 500 Index (505 constituents, largest weight 3.2%) will in all likelihood have a higher active share than a Canadian equity fund benchmarked against the S&P/TSX Capped Composite Index (250 constituents, largest weight 6.7%), even if the Canadian manager approaches portfolio management with the same active mindset as the U.S. manager. Global equity funds benchmarked against the MSCI World Index (1,654 constituents, largest weight 1.9%) or small-cap funds benchmarked against the Russell 2000 (1,978 constituents, largest weight 0.45%) will have higher active shares still. For these reasons, comparing the active share of funds managed in different geographies, or in different segments of the market (small-cap vs. large-cap), will lead to inappropriate conclusions.

3. Active share is a proxy for the benchmark-relative risk a manager is taking, but not for their skill

As illustrated in the previous section, a U.S. equity fund benchmarked against the S&P 500 Index will typically have a much higher active share than a Canadian equity fund benchmarked against the S&P/TSX Capped Composite Index. Does this mean that U.S. equity managers, by being more active, have done a better job of beating their benchmark? In fact, the opposite is true – on average, active managers have been considerably more successful adding value against the S&P/TSX Capped Composite Index than against the S&P 500 Index.[4]

Figure 1: Active share comparison between benchmarks

	Global Equity Fund (MSCI World Index)	Canadian Equity Fund (S&P/TSX Capped Composite Index)
Bank stocks to choose from	93	8
Average weight	0.1%	3.0%
Representative bank (index weight)	Barclays (0.1%)	Bank of Montreal (3.1%)
Overweight	2.0%	2.0%
Resulting active share	1.0%	1.0%
Position size	2.1%	5.1%

Source: MSCI and S&P. Index weights and numbers of constituents are as of December 31, 2016.

[3] The global manager also has access to a large number of banks with multi-billion dollar market capitalizations and liquid shares that are not part of the index, while the Canadian manager does not.

[4] Mercer's quarterly Investment Performance Survey of Canadian Institutional Pooled Funds reports that for the ten-year period ended December 31, 2016, the median Canadian equity fund outperformed the S&P/TSX Capped Composite Index by 1.0% annualized, while the median U.S. equity fund underperformed the S&P 500 Index by 0.3% annualized, all on a pre-fee basis.

Generating investment performance that is superior to a benchmark is a function of taking positions that are different than a benchmark index, and of having those positions prove profitable more often than not. Active share measures the former, but not the latter.

Some investment strategies involve taking large positions in a smaller number of stocks in which a manager has conviction; this stock-picking approach will naturally result in a higher active share portfolio. With such strategies, active share is indeed a useful measure for investors to monitor to ensure that the manager is building portfolios as they have advertised. These strategies will clearly do very well if the manager's stock picks are good ones, but underperform – possibly significantly – if they are not. High active share has not assured performance, it has merely magnified the results of the manager's stock selections.

On the other hand, investment strategies such as quantitative strategies, "smart beta" portfolios, enhanced index strategies, or even traditional core portfolios involve taking a larger number of smaller positions. These "higher breadth" strategies will naturally have lower active shares, but many investment managers have proven successful with these strategies over time, especially when measurement is also focused on the volatility of the result and the range of outcomes over time.

One possible undesirable effect of high active share is a high level of "unintended risks" relative to the benchmark. That is because an investor with a small number of large positions, while exposed to the success of those stocks in which they have taken large positions, may also have very different exposures than the benchmark to factors into which they may have little insight: currencies, geographies, sectors, beta, or momentum, for example. The returns attributable to these other exposures may well overwhelm the returns driven by that manager's stock picking in any given period.

There are ways to address unintended risks through portfolio construction, so that the portfolio's performance is more a function of the manager's insights and less a function of unintended exposures, but they will generally (though not always) result in a lower active share. However, to the extent that an investor values this risk control, they may be quite willing to accept the lower active share.

Conclusion

Investors have a need to understand their investment manager's investment process, and monitor it over time. While active share can play a role in selecting and monitoring a manager, investment strategies should be evaluated and monitored based on multiple metrics chosen for their relevance to that strategy. Furthermore, our view is that there is no "right" active share for a portfolio. Active share will be a function of the market in which a portfolio is invested and the benchmark it is measured against, as well as the investment approach and the magnitude and types of risks taken in the portfolio.

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