Active Share

August 2017

Is your equity manager giving you enough bang for your buck?

It is well-accepted that active investment managers cost more than passive managers. At the very least, fundamental research, company visits, and financial modelling requires the employment of financial professionals to perform these tasks. There "must" be some sort of premium over passive management that is due for the extra resources required to beat the market, right?

And assuming the manager does indeed achieve a superior result to the index, the investor should not be averse to paying a bit more for this service.[1]

But what does it mean to be active? If I were to hold 48 of the 50 stocks in the S&P/NZX 50 index (at their index weights), and just slightly overweight Xero and underweight Trade Me, would you be happy paying me a large fee? With over 90% of my portfolio simply replicating the index, perhaps you'd argue I'm due at most 1/10th of a full active management fee. After all, most of my portfolio would generate the index return, making it unlikely that the overall result would differ too much from the benchmark.

Active share

One way to quantify activeness is "active share".[2] Active share measures the level of activeness by tallying up how different a portfolio is to the benchmark.

Active share is calculated first by adding up, for each stock, the difference in percentage allocation between the portfolio and the benchmark. Absolute values are used so that an underweight of 1% and an overweight of 1% each contribute equally. The measure varies between 0% (a portfolio identical to the index) and 100% (a portfolio completely different to the index).[3]

In this article, we look at active share for six New Zealand equity managers as at 31 December 2016. We have anonymised the results.

Active Share		Active Share	
Manager A	37%	Manager D	32%
Manager B	53%	Manager E	27%
Manager C	27%	Manager F	43%

The results show a spread from 27% to 53%. This is perhaps surprising for a cohort of "active" managers. Managers C and E have just a net 27% of their portfolios different to the index – or, put another way, they are 73% passive! These managers are relying on just a net 27% of their portfolios to reach their value added target.

Low active share has been defined in global markets as anything below 60% (*"How Active Is Your Fund Manager? A New Measure That Predicts Performance"* – Cremers, Petajisto, 2009)[4]. On this basis, you might argue that the managers we have examined are all "closet indexers".

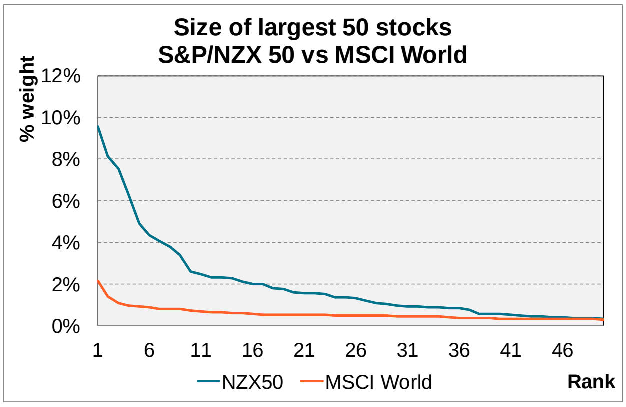
However, that is not the full story.

Benchmark implications

The index that a manager follows will have a large impact on the active share that a manager can be expected to hold.

The S&P/NZX 50 index, for example, is very concentrated with over 15 stocks at more than 2% and the largest holding sometimes approaching 10% of the index.[5]

The MSCI World Index, on the other hand, covers many more companies and generally has no single stock worth more than 2%.[6] Below we show the difference in "skew" between the New Zealand market and the global market.



To contain risk, most managers are only willing to move so far from index position in any one stock, meaning that they are required to maintain fairly substantial holdings in the larger stocks even if they choose to underweight them. For example, say Spark is 8% of the index. If the manager has a position limit of ±2%, it could only ever go as low as 6% in Spark. This is 6% of the portfolio that can never contribute to active share.

Extrapolating this, a ±2% position limit means that the theoretical maximum active share is a paltry 64% in New Zealand (versus almost 100% for the MSCI). In this light, the figures in the previous section look more reasonable.

Moreover, the rationale for these risk constraints is sensible. Returning to our example, say Spark has a volatility of 25% pa. A ±2% active position could generate as much as ±1% relative return at the portfolio level in two out of every three years.[7] A more volatile stock (say, a2 Milk at 50% pa volatility), might generate ±2% relative return at the portfolio level.

Tracking error considerations and risk cognisance means that managers *should* seek to limit their position sizes to avoid these swings in performance.[8]

What about tracking error?

The traditional measure of adherence to the benchmark is tracking error (standard deviation of relative performance). However, tracking error has the disadvantage in that it can understate the degree to which a manager is active in stock selection.

Simpl House 40 Mercer Street
PO Box 11330 Wellington 6142 New Zealand
T: 64 4 499 0277
wgtn@mjw.co.nz

www.mjw.co.nz

MELVILLE JESSUP WEAVER LIMITED

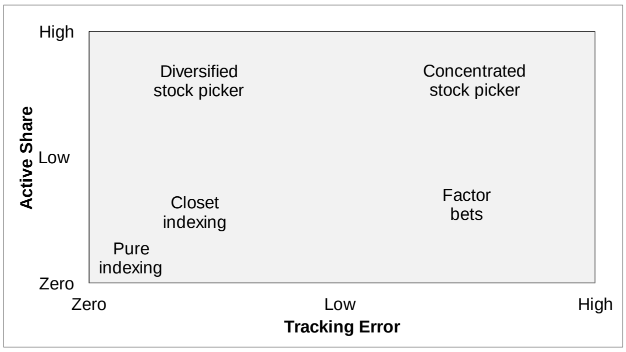
Delta Insurance Building 57 Fort Street
PO Box 4014 Auckland 1140 New Zealand
T: 64 9 300 7155
akld@mjw.co.nz

For example, a manager which takes a variety of positions in many stocks may find that negative results in some stocks are cancelled out by positive results in other stocks and therefore that its overall tracking error is relatively low. On the other hand, a manager which takes a particular view of an entire sector may find that value added for stocks in this sector is all positive or all negative. This second manager will have a higher tracking error, even if both managers are taking similar numbers and sizes of positions.

Tracking error can be seen as a measure which puts greater weight on positions that are positively correlated, since this will have a more dramatic effect on value added. Active share, on the other hand, puts equal weight on all positions taken.

The two measures can work together to provide a more detailed picture of performance. Tracking error may provide a good measure of the extent to which a manager's positions in certain style factors or industry sectors are outperforming or underperforming, and what's more, does so without making any assumptions about which stocks belong to which sectors or styles. Active share provides a more neutral measure of the extent to which a manager takes positions away from the index.

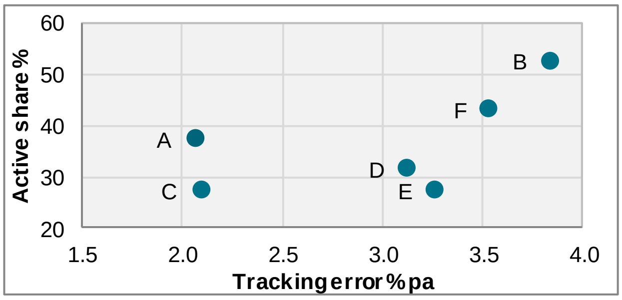
In a similar vein, Cremers and Petajisto offer the following schematic for understanding the relationship between tracking error and active share.



This shows that higher tracking error can either come from concentrated stock picks (which comes with high active share) or factor bets – positions in correlated groups of stocks (which comes with lower active share). On the other hand, high active share can be generated in a reasonably diversified portfolio, without as much tracking error. To do so, the stock positions need to be less correlated.

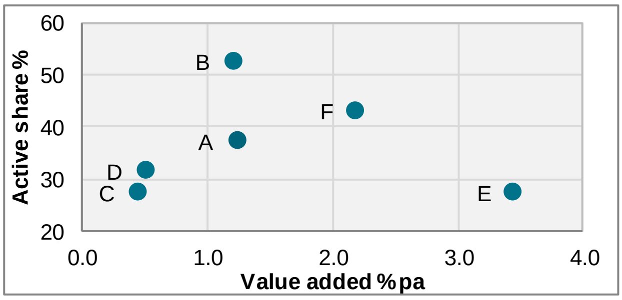
Relating active share to performance outcomes

The following charts show how active share relates to the results our managers realised. In the first chart, we see that despite having low active share, Managers C and E have realised markedly different tracking error.[9] Manager C has performed close to the benchmark while Manager E has seen significantly higher tracking error.



Applying our theory from the previous section, we might suspect that Manager E has taken more correlated positions than Manager C.

Next, we plot value added over four years versus active share. Generally, greater active share has corresponded with greater value added.



Manager E stands out as bucking the trend. It has added significant value with low active share. Possible explanations are that Manager E had just a few positions that generated a lot of added value, or that it has now closed out the large positions which were used to add value earlier in the period.

Conclusions

The concept of active share is something that goes to the heart of active management. In a sense, every percentage point of active share is the extent to which the fund manager is managing actively at all.

It is crucial that investors are getting what they pay for when employing an active fund manager. If your portfolio is only 30% different from the index, should you really be paying the same fee as a portfolio that is 60%, 70% or 80% active?

However, caution should be exercised. A New Zealand portfolio with high active share (by global standards) should be expected to exhibit much more tracking error given the skew in our market. Investors should be sure of their risk tolerance before blindly pursuing high active share portfolios.

ABOUT MELVILLE JESSUP WEAVER

Melville Jessup Weaver is a New Zealand firm of consulting actuaries providing advice on investment consulting, superannuation, and insurance. The firm, established in 1992, has offices in Auckland and Wellington and is an alliance partner of Willis Towers Watson, a leading global services company that is located on the web at willistowerswatson.com.

For further information please contact:
Ben Trollip 09 300 7315 *William Nelson 09 300 7150*
ben.trollip@mjw.co.nz *william.nelson@mjw.co.nz*

[1] This is the philosophy that underlies performance fees.
[2] Sometimes also called "active money".
[3] To achieve this, the figures are scaled by a factor of one half.
[4] Available here.
[5] As Fletcher Building did, prior to its recent falls.
[6] Apple has just crept above 2% in recent months.
[7] Simplifying assumptions are made here for illustrative purposes. Chiefly, that serial returns are independently identically distributed and follow a normal distribution. This does not hold in practice.
[8] Assuming, of course, we are talking about benchmark-aware strategies. We do not consider absolute return mandates and highly concentrated portfolios in this paper.
[9] Note that, unlike tracking error, active share is taken at a point in time and thus may not represent a typical position for the managers.