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Rob Stewart is a portfolio manager at Equus Point Capital. He has over 25 years' funds and portfolio management experience, specialising in equities managed in a risk-controlled environment. One of his key achievements involved developing a long equities/short futures process for the Chicago based Gelber Group. Rob's previous roles included portfolio manager at Challenger, and head of index funds and asset allocation at Colonial First State Global Asset Management. He holds a Bachelor of Science, a Masters of Applied Science, and Graduate Diploma in Finance and Investment.

FINDING ALPHA

The intersection between active share, capacity and manager skill

Rob Stewart

Introduction

Seasoned investors understand that returns are a function of both beta and alpha. Beta being the component of returns derived from the benchmark return and alpha being returns generated over and above (or below) the benchmark return. The difficulty with generating alpha is that it takes more than just manager skill. It also requires a manager to recognise that alpha is in limited supply and where a manager has a genuine edge (skill) they need to give careful consideration to the level of funds the strategy might be able to accommodate before returns become diluted (capacity).

In addition, managers looking to generate meaningful alpha must design portfolios that maximise the opportunity set by creating exposures that are materially different to that of the benchmark (active share).

In an environment where both bond and equity market valuations are extended, pure 'beta' exposure may leave portfolios vulnerable to market corrections. Traditional asset allocation strategies relying on negative correlation between bonds and equities may no longer offer the same diversification benefits that they have historically. In this environment, alternative strategies designed to preserve capital in the event of a market downturn and offering low correlation to traditional asset classes have the potential to provide meaningful diversification benefits to investor portfolios.

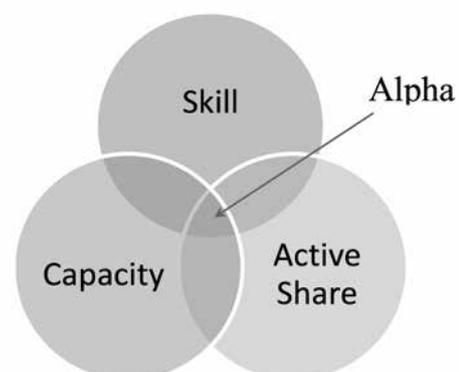
This paper discusses the intersection of capacity, active share and manager skill in efforts to exploit market inefficiencies in generating

alpha, and how an uncorrelated strategy can provide portfolio diversification and capital preservation in the event of market downturn.

Capacity

Active managers need to carefully consider their ability to generate alpha and how this potential is eroded as fund size increases. Perversely, managers are typically rewarded on funds under management and not

Figure 1. Intersection of factors towards achieving alpha



Source: Equus Point Capital

always on excess return, implying manager incentives are not necessarily always aligned with investors.

Capacity is the amount of assets under management invested in an active strategy at which it is no longer possible to make additional investments that generate marginal alpha in excess of a minimum threshold (Vangelisti, M 2006, 'The capacity of an equity strategy', *The Journal of Portfolio Management*, winter 2016).

Chen, Hong, Huang and Kubik ('Does fund size erode mutual fund performance? The role of liquidity and organisation', *The American Economic Review*, December 2005) demonstrated that fund returns are inversely correlated to fund size. This prevalence was more acute with small-cap-focused funds, indicating that the relationship may be driven by liquidity constraints. Trading in a limited number of names becomes more difficult due to liquidity constraints and market impact.

O'Neill, Schmid and Warren ('Capacity analysis for equity funds', *The Journal of Portfolio Management*, spring 2018) demonstrated that capacity is also determined by the number of opportunities available; the market segments from which opportunities are sourced; the cost of executing trades; and any constraints on stock holdings or ability to participate in trades.

As a strategy's size increases, managers are forced to either diversify the portfolio into a larger number of smaller positions or limit capacity to retain any edge they might have in stock selection. Managers that demonstrate real skill and achieve excess returns will typically experience increased net inflows. This, in turn, increases fund size and eventually erodes any edge the manager may have exhibited. With smaller-company managers, the liquidity constraints are more acute and capacity becomes an issue at lower fund size.

The trade-off between capacity and the ability to generate alpha is clear. Different approaches to this trade-off lead to the separation of managers into the 'alpha hunters' and 'beta grazers' so eloquently described by Martin Leibowitz ('Alpha hunters and beta grazers', *Financial Analysts Journal*, September/October 2005).

Managers that primarily seek to accumulate assets will by definition produce portfolios that increasingly resemble the benchmark. They will therefore tend to produce returns that are reflective of the benchmark return (beta grazers). Of course, this is before costs and fees. The more assets under management, the harder it becomes for the manager to provide investors with an outcome that betters the benchmark after fees and costs. This is evidenced in the S&P Dow Jones research SPIVA Australian Scorecard Mid-Year 2019, where managers show a consistency in underperformance across multiple timeframes.

There will also be reputational and career risk aspects to consider. As fund size increases, managers may become more risk averse, avoiding portfolios that differ significantly from a benchmark. Agreed, a manager might underperform a benchmark after fees and costs, but a little bit of underperformance — consistent with peers

— may be a more palatable outcome for the manager, notwithstanding the interests of the investor.

Investors are therefore faced with a conundrum.

Managers that demonstrate real skill attract fund flow, thus increasing funds under management and eroding their edge if capacity is not constrained. Large-cap funds tend to have unconstrained capacity and show an inability to exceed performance benchmarks over the long term. Small-cap managers, where capacity is frequently constrained due to liquidity, demonstrate a better ability to exceed performance benchmarks over the long term.

Active share

The ability to generate alpha requires a manager to construct a portfolio that varies meaningfully from that of a benchmark or index. The greater the variation in relative weights, the greater the expected variance in returns relative to the benchmark.

Active share (Cremers, M & Petajisto, A 2006, 'How active is your fund manager?' A new measure that predicts performance', *The Review of Financial Studies*, September 2009) is a measure of the percentage of stock holdings in a portfolio that differs from that of the benchmark. Portfolios that hold a limited number of concentrated exposures and where those weights differ from index weight, typically have a high active share.

Alternatively, portfolios that hold a large number of highly diversified positions that resemble benchmark weights typically have low active share. For example, an index fund, designed to replicate the index exactly, would have an active share of zero.

Importantly, active share also provides an indication of whether a manager is a closet 'index hugger' or a true-to-label active stock picker.

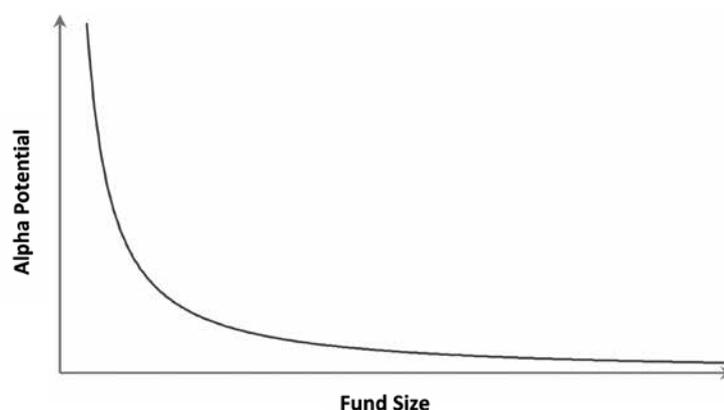
Low active share indicates a manager's stock position sizes fail to deviate significantly from the benchmark. As an investor, one would question why one pays active



The quote

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Figure 2. Fund size vs alpha potential



Source: Equus Point Capital

fees for a portfolio that has a high likelihood of producing index-like returns, and on an after-fees and after-costs basis is likely to underperform a benchmark.

An active stock picker typically has a high active share, indicating what is likely to be a more concentrated portfolio with position sizes that deviate substantially from benchmark weights. As a result, the return outcomes have a greater chance of being significantly different from that of the index, and subject to the manager's ability to generate alpha, justify higher fees.

Patrick O'Shaughnessy ('Alpha or assets', *The Investor's Field Guide*, April 2016) demonstrated the importance of active share in alpha generation. The premise was that active strategies should 'build for alpha, not scale'. This is not typically reflected in the funds management industry where large managers dominate. This tendency is evident in the local funds management industry where large providers of product dominate the industry, encompassing both active, index and smart beta strategies.

O'Shaughnessy's study is reproduced using Australian data.

As an exercise, let us assume as an investor we had perfect foresight on stock returns for the next 12 months and built portfolios to achieve the best forward annual return at various levels of active share. We have used the S&P/ASX 200 index as the basis for the study with data from June 2000 to September 2019.

To avoid an exposure to just a handful of positions that have the potential to skew outcomes, we have limited the exposure to any single position to 5%, unless the stock has an index weight greater than 5%, in which case its weight is limited to no more than its index weight.

The analysis suggests that increasing active share does indeed lead to greater potential alpha generation (top line). But the analysis also demonstrates that the outcome for the worst-case portfolios becomes increasingly poor with active share (bottom line). Interestingly, the difference between these two extremes is skewed to the positive side (middle line). This skew may be explained by the unbounded upside potential of the best-performing equities, whereas losses are limited to the initial investment.

For completeness, we have extended the analysis by splitting out stocks from the S&P/ASX 200 into the top 100 stocks by market weight ('large-cap' portfolio) and stocks 101 to 200 by market weight

('small-cap' portfolio) to test the impact of size on alpha potential, given different levels of active share. For simplicity, we have kept the scale on both charts constant to demonstrate the difference in potential alpha between a large-cap-focused and small-cap focused portfolio at various levels of active share.

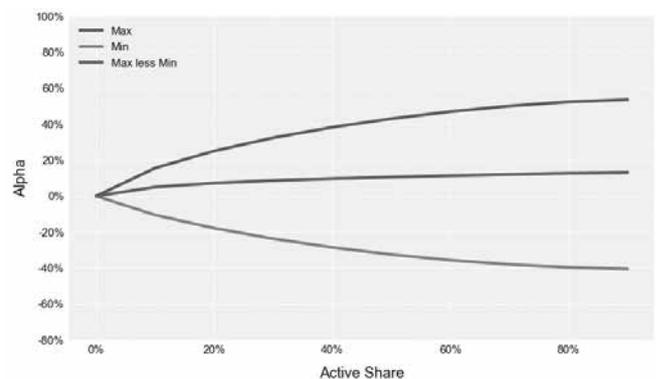
Again, we see the increasing potential in higher active share to generate alpha. Note: the alpha generation potential for the large-cap portfolio is significantly less than that of the small cap. This may in part be due to large caps having growth rates that are naturally less than small caps. Large caps will be more reflective of an economy's industry and services, whereas small caps can have drivers in niches that may produce superior growth rates, hence potentially greater return outcomes.

Large caps are also obviously the dominant contributor to benchmark returns themselves, so achieving returns beyond the benchmark with only the large-cap universe available is inherently more difficult.

However, one needs to remember that Figures 3, 4 and 5 represent the average of the best (and worst) outcomes, given perfect foresight. In the real world, no-one knows what the future holds.

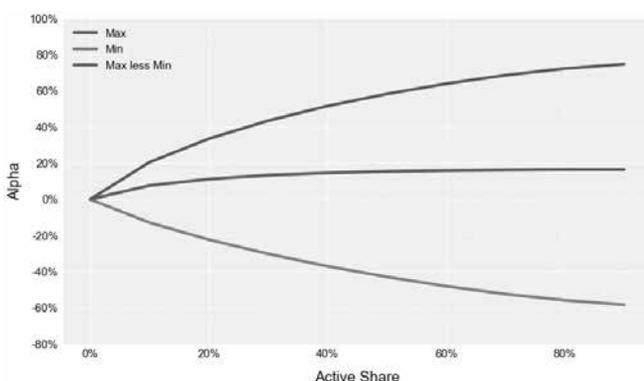
Active share is not in and of itself a predictor of positive alpha, de-

Figure 4. S&P/ASX 100: difference in potential alpha



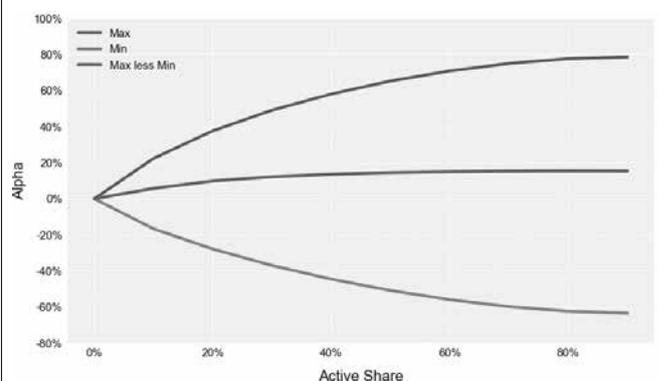
Source: Equus Point Capital

Figure 3. S&P/ASX 200: difference in potential alpha



Source: Equus Point Capital

Figure 5. S&P/ASX ex-100: difference in potential alpha



Source: Equus Point Capital

spite the positive skew indicated in the Figures 3, 4 and 5. Rather, it is a necessary but insufficient condition to be able to generate positive alpha. Let us apply some real-world testing to the analysis.

In the Figure 6, we have applied 1,000 random portfolios to various levels of active share. The second-bottom line represents the median result and falls almost exactly at zero excess return. The average (second-top line), however, would suggest that there is indeed a small positive skew and that increasing active share generates a positive expected return on a randomly generated portfolio.

This slight skew is driven by the skew in the distribution at the extremes as noted above. However, this is before costs and fees which would erode the slightly favourable expected outcome. Further, even before fees and costs the small favourable skew would likely be insufficient to compensate an investor for the additional risk and volatility of outcomes associated with higher active share.

In summary, active share alone is not a predictor of meaningful outperformance, but it is a prerequisite for outperformance. A strategy needs to deviate from benchmark weights in order to produce a return that is materially different to that of the index. However, it is manager skill that provides the missing ingredient to meaningful positive alpha generation.

Manager skill

We have already explored the theme that unconstrained fund size reduces a manager's ability to provide investors with a portfolio and return stream that is materially different from benchmark. Investors subsequently achieve returns that are index-like in nature (less fees). This is reflected in surveys that show chronic under-performance of managers relative to benchmark. Further, we explored the concept of active share. A high active share is required in order to provide a return that is materially different from a benchmark. Larger managers will tend to have a low active share component (otherwise known as 'index huggers' or 'beta grazers').

But limiting capacity and targeting high active share alone is not enough to generate meaningful positive alpha, as our randomised portfolios demonstrated. A manager still requires skill. Generating alpha requires a manager to have an edge; whether this is derived from an informational advantage, a technical advantage, an ability to capi-

talise on behavioural biases within the market, or some other source.

Informational inefficiencies contribute to a manager's ability to acquire relevant information that others do not have. However, regulations requiring companies to keep the market 'fully informed' have removed much of the informational inefficiency that may have previously existed, particularly for larger companies which tend to be well researched. While smaller companies are also required to keep the market fully informed, they tend to be less well researched and the opportunity set for a manager is larger, and they may subsequently retain an informational edge. This may go some way to explaining why smaller company managers show a greater tendency to generate alpha.

Evidence-based strategies are often systematic in nature and seek to harvest clearly defined market inefficiencies, often derived from known behavioural biases among market participants. These evidence-based strategies typically target well-established factors that have a demonstrated ability to deliver alpha through the cycle. Examples include value, size, momentum and volatility factors.

One characteristic of factor-based strategies is they also allow a manager to exploit both the long and short side of market inefficiencies. For example, long stocks with positive momentum and short stocks with negative momentum, and so on. Building a long/short strategy, or a market-neutral strategy, where the return stream and risk outcomes are largely independent of market direction (that is, uncorrelated), has the potential to provide meaningful diversification benefits to an investor's portfolio.

In addition, these alternative strategies can be designed to provide capital preservation in the event of a prolonged market downturn and give the investor a volatility outcome that is typically less than what might be experienced in a typical beta-focused strategy.

To be clear, we are not advocating that investors should avoid exposure to beta within a broad diversified portfolio. Rather, we are proposing that investors are better served gaining an exposure to beta cheaply, and paying for alpha only where managers limit capacity and have either an informational edge (for example, small-cap managers with capacity discipline) or can demonstrate a repeatable process that is able to efficiently harvest market inefficiencies.

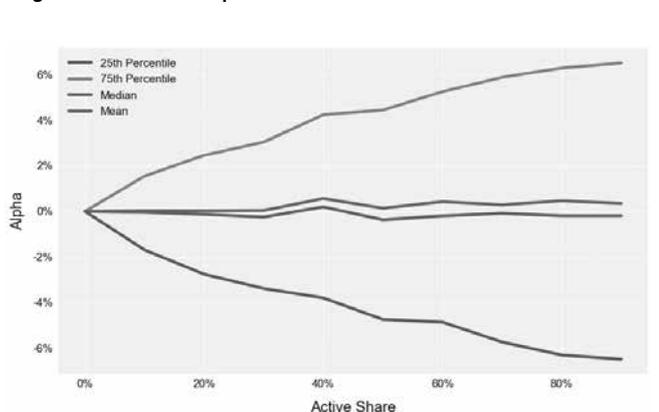
Conclusion

Investors may wish to consider the value of having an exposure to beta where managers' portfolios are capacity unconstrained and are essentially closet indexing. Why pay active fees for passive returns? Investor portfolios may be better served gaining exposure to beta cheaply through an index fund or exchange-traded fund and gaining an exposure to niche strategies that are deliberately capacity constrained in order to retain the ability to generate meaningful alpha.

Generating alpha requires managers to construct portfolios that are meaningfully different to the benchmark index. This difference, or active share, is a prerequisite to providing alpha, but it is not a predictor. Managers require genuine skill in generating alpha through an informational or technical advantage, or by systematically exploiting market inefficiencies.

Evidence-based, capacity-constrained strategies focused on alpha generation that offer an uncorrelated return stream to the market can provide meaningful diversification benefits and improve investors overall risk-adjusted returns. In addition, they may assist in capital preservation and provide lower volatility outcomes than the market. **FS**

Figure 6. Randomised portfolios



Source: Equus Point Capital