

2017: BRAVE NEW WORLD

Why active managers are well placed to take advantage of social, economic and political regime change.



FOREWORD

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We begin 2017 facing a new paradigm and an ever more unpredictable world. Markets are dislocating as the impact of a changed political and economic direction in major regions begins to be felt, and the benign monetary policy of the past eight years is wound back. In this environment, the potential for active managers to outperform is heightened and the reward for identifying those managers most likely to do so should be greatly enhanced.

In June 2015 we published the paper, *'Not all active managers are created equal – what to look for and why'*. Here we present an updated edition of that publication in response to the changed external environment, which more than ever brings into sharp focus the merits of active management. Active managers are well placed to take advantage of fundamental social, economic and political regime change. Expect to see increases in volatility and lower stock correlations in a world characterised by the gradual normalisation of monetary policy, expansionary rather than austere fiscal policy and a reining-in of globalisation in all of its forms. An equally fundamental reassessment of the equity market's winners and losers is likely to result. This is exactly the environment that plays to the strengths of skilled stock pickers.

In this edition, we have expanded our analysis of a number of key metrics that help identify talented managers, starting with active share. When combined with metrics such as tracking error, active share can help investors establish how focused their fund manager is as a stock picker and can provide a fuller picture of the manager's approach to portfolio construction. We also shine a more intense spotlight on the evidence surrounding the pervasiveness of active manager skill, as well as the role of diversity in adding an invaluable dimension to active fund management. And we take a cue from the world's top sportspeople who understand the value of great coaching to remain at the top of their game, just as successful investors should.

Several new themes have also been added, notably the merits of implementing active management via a diversified manager structure, rather than relying on a single-skilled manager to deliver sustained net outperformance. Not only does this dramatically improve the probability of outperforming the benchmark, but it does so with much lower levels of tracking error. Then there's an analysis of risk factor investing and the evolution of smart beta and alternative beta strategies, which continue to gain traction with investors.

In updating the original paper and adding new themes, our mission remains to help investors better understand the investment choices available to them. By applying the requisite due diligence, investors really can increase their chances of finding exceptional active managers who can realise desired investment outcomes. This is especially true against the backdrop of social, economic and political dislocation we face as 2017 unfolds.

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SECTION 1: SUMMARY

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This paper challenges the notion that active fund management – in aggregate and after fees – is a negative sum game. Indeed, the reward for selecting exceptional managers who deliver sustained net outperformance can be a significant uncorrelated source of investment return. We investigate the many factors at play that can lead to sustained active investment outperformance. These include adherence to a proven investment philosophy and process, stock picking that exhibits high conviction, contrarian thinking and concentration, being capacity aware, employing a patient investment approach, capturing Environmental, Social and Governance (ESG) factors and embracing diversity within fund manager teams. As the paper demonstrates and empirical underpinnings suggest, these and a number of other key factors are critical when selecting a skilful active manager. And while the task of identifying those active managers likely to outperform over the long term is not a simple one, given the very real prospect of more modest and more volatile long-run returns going forward, against the prospective backdrop of fundamental social, economic and political regime change, it is time well spent.

KEY POINTS

- For simplicity, our analysis is restricted to equity fund management, although similar considerations apply to many other asset classes.
- Active managers must exist for information to be translated into stock prices and for investors' capital to be allocated efficiently. Indeed, active capital allocation is a prerequisite for a well-functioning economy and efficient capital markets and a necessary condition for the generation of better quality and more sustainable long-run investment returns.
- While active management in aggregate after fees is positioned as a negative sum game, given the increasing prevalence of closet trackers, the potential reward for selecting a genuinely talented fund manager can be a significant and sustained uncorrelated source of investment return.
- The duration of performance persistency among good active fund managers is greatly influenced by the extent to which investor cash inflows constrain their investment approach. The imperative is to differentiate talented capacity-aware asset managers from simple asset gatherers.
- A combination of luck, skill and investment style determines active fund manager returns in the shorter term. However, while skill can take some time to prove statistically, in the longer run as luck evens out, any genuine skill will shine through.
- As the quantitative assessment of fund manager performance to determine skill is often riddled with practical problems, evaluating fund managers against those key qualitative performance drivers that would appear to point to the ability to outperform over time is time well spent.

KEY POINTS (CONTINUED)

- Although no one factor or quality gives a genuinely skilful manager an edge, the key issues to consider when selecting an active manager, each of which have empirical underpinnings, include:
 - Adherence to a proven and repeatable investment philosophy and process that captures the manager's investment insights and value adding processes
 - An investment approach underpinned by a culture that is dynamic and interactive and by processes that are team-based, performance driven and risk aware
 - Applying the three Cs – high conviction portfolio positions, contrarian/independent thinking and high portfolio concentration
 - Employing an *investing to win* mindset, typically evidenced by a high active share and a moderate tracking error underpinned by intelligent stock picking rather than highly correlated and concentrated industry positions
 - Dedication either to a single investment style in which success has been demonstrated, given that each investment style demands a different mind and skill set, or to a stock picking approach which has successfully emphasised particular style traits consistent with the investment outcomes targeted
 - Employing a patient investment approach – given that this benefits from the greater predictability of asset prices over the longer term and allows skill to surface
 - Adopting a strong sell discipline – with sale proceeds being invested in new portfolio ideas rather than being spread among existing ideas
 - Taking a considered approach to portfolio turnover, given the potentially adverse effects of high transaction costs on fund performance
 - Integrating Environmental, Social and Governance (ESG) considerations into the investment process, as ESG factors become increasingly material to company valuations, to efficient capital allocation and minimising reputational, operational and regulatory risks
 - Appropriate manager and team remuneration structures that align interests with the end investor
 - An ability to:
 - combine proprietary macro and micro insights into investment decision making
 - clearly articulate how ideas find their way into their portfolio
 - be open to debate and genuine challenge
 - recognise and control their behavioural biases, particularly groupthink, misplaced confidence and an aversion to realising loss-making portfolio positions
 - recognise the capacity constraints of their chosen strategy
 - add value in both rising and falling markets, particularly the latter
 - put risk management at the front and centre of all that they do.
- Although the evidence is sketchy, female fund managers appear to be better risk managers than men, generating more consistent and less volatile performance than their male counterparts, with mixed sex teams seemingly outperforming single sex-run funds.
- Research suggests that once a skilful manager has been identified, a patient approach by the end investor must be adopted to allow skill to shine through. All too often investors treat periods of poor performance as proof of skill having deteriorated. Even the most skilful of managers will periodically underperform.
- Given the prospect of more modest and more volatile long-run returns going forward, against the prospective backdrop of fundamental social, economic and political regime change, seeking out skilful active managers really can be worth the governance budget.
- Investors, in applying the requisite due diligence, can increase their chances of finding potentially exceptional managers who more than earn their fees over time and deliver desired investment outcomes.

SECTION 2: INTRODUCTION

As will become clear, the appropriate active-passive mix for any investor (and it will often be a mix) mainly depends on their investment beliefs – principally around how markets function, how securities are priced and the value of diversification – but also on their investment goals or defined outcomes, governance budget and how they frame risk.

However, a good place to start is with a definition of the two approaches and the philosophy that underpins each before moving onto their individual nuances, merits and shortcomings. For simplicity, the following analysis will be restricted to equity fund management, although similar considerations apply to many other asset classes.

SECTION 3: PASSIVE MANAGEMENT

Passive management, or index tracking, as opposed to a buy-and-hold strategy, involves constructing a portfolio of securities that replicates, or tracks, the total return of an equity index, such as the S&P 500, on the premise that securities are efficiently priced. This notion of price efficiency, which originated in the 1930s, is encapsulated in the efficient markets hypothesis (EMH). Developed in the 1960s and 1970s, the EMH states that market prices *continually* reflect all available and relevant information.¹ They therefore move randomly and independently of past prices as investors react rationally and instantaneously to new market news. While the EMH acknowledges that market participants do make random mistakes, it assumes people learn from their mistakes and do not repeat them. Crucially, these random errors are presumed to offset one another. Even if not offset, the contention is that transactions costs would render the opportunity unprofitable. If correct, and it is a big *if*, the EMH has obvious, damning implications for those investors seeking to outperform the market. After all, if market prices continually reflect everything known or knowable about the market's constituent securities, then investors cannot hope to consistently beat the market unless they are very lucky or are prepared to take higher risks, which may or may not be rewarded. Given this, why devote time and effort to fruitlessly second-guessing the market when you can simply track the market's performance?

In seeking to replicate the market, most index tracker funds adopt one of two tracking methodologies: full replication or stratified sampling. Full replication holds every index constituent in accordance with its index weighting, while stratified sampling uses sophisticated statistical techniques to select a subset of index constituents to track the index as closely as possible. The latter technique is typically applied when full replication isn't feasible, whether because of the illiquidity of some of the index's underlying holdings, the sheer size of the index or country specific laws on foreign holdings.

On the plus side, index trackers minimise the risk of underperforming the index before fees and minimise the costs of investing by only transacting when necessary, such as when new money and dividend income is received, to meet investor redemptions and to accommodate periodic changes to the index being tracked. However, on the flip side, once fees, costs and a number of minor technical factors are taken into account, underperformance of the market often results.² Moreover, being fully invested in the chosen index means trackers follow the market down as well as up.

Most index tracker funds are based on market capitalisation weighted indices, such as the S&P 500, Dax and Hang Seng, where the largest stocks in the index by market value have the biggest influence on the index's value. This is because only market cap weighted indices (as opposed to price weighted indices, such as the Dow Jones and Nikkei Dow, or equally weighted indices, like the S&P 500 Equal Weighted Index and FT30) are easily replicable and perform like an actual investment portfolio. They also automatically rebalance portfolio weightings with changes in the prices of the underlying constituents.³

However, tracking market cap weighted indices is not without its problems. Index trackers cannot be customised to meet all investor objectives – the index chosen is the index tracked. This can be particularly problematic for those investors who seek to integrate Environmental, Social and Governance (ESG) factors into their portfolios, or who target low volatility or income generation. Also, diversification is often compromised by the index being highly concentrated. Far and away the biggest problem though is that the largest positions in the index are concentrated in those sectors and stocks that the market perceives to be the most successful, even though these may transpire to be last year's winners rather than this year's. Indeed, with rapid product innovation and lower barriers to entry for potential new entrants in many industries, industry pre-eminence can often be a temporary phenomenon. Moreover, the resultant misallocation of capital and subsequent drag on performance

¹The idea of efficient markets dates back to the pioneering work of Alfred Cowes in the 1930s, Harry Roberts and Harry Markowitz in the 1950s, and Bill Sharpe and Eugene Fama through the 1960s and 1970s.

²Underperformance is often countered by the fees generated by stock lending.

³Again assuming that these prices reflect everything that is known or knowable.

is particularly acute in momentum-driven equity bull markets as market cap weighted index trackers are forced to allocate more money to, what prove to be, increasingly overpriced market favourites and less to those sectors and stocks likely to be undervalued. This was dramatically illustrated in the dot.com boom and subsequent bust of the late-1990s and early noughties. This matters as the misallocation of capital hinders productivity and stymies growth, so compromising the generation of better quality and more sustainable long-run investment returns. Indeed, active capital allocation is a prerequisite for a well-functioning economy and efficient capital markets.⁴

In addition, as the big became a lot bigger so did the potential for catastrophic corporate failures, as seen with Enron and WorldCom. Moreover, the big getting bigger was compounded by the overpriced favourites having restricted the amount of issued share capital they made available to investors.⁵

This latter point has since been addressed to a degree by the major market cap index providers introducing free float adjustments to their indices. These dictate a pro-rata index weighting for those stocks which make less than 100 per cent of their issued capital available to investors. In addition, there has been widespread adoption by the major index providers of alternatively weighted, or *smart beta*, indices, principally constructed around those long observed and well documented risk premia, such as size, value, momentum and low volatility, whose existence is at odds with the EMH. Principal among these are fundamentally weighted indices. These weight each constituent by the size of their real world attributes, such as company revenues, earnings and cash flow, rather than their market cap, and result in portfolios very different from those that are market cap weighted. However, despite increased interest in these alternatively weighted index strategies, especially fundamentally weighted and low volatility indices and their back-tested long-run risk-adjusted outperformance of market cap weighted indices,⁶ the latter remain the dominant index tracking structure.

MARKET EFFICIENCY

While the idea of price efficiency is simple and intuitive, it is arguably based on some highly questionable simplified assumptions about investor rationality, the capacity to interpret information correctly, no matter how it is presented, and the ability to learn quickly from past mistakes. Indeed, casual observation suggests that the composition of the investor base is continually changing, as older, more experienced investors leave the market and the less experienced enter the world of money management. As we suggest a little later, one can argue that an investor who has been exposed to several market cycles is probably more in tune with the market and less susceptible to repeating past errors than a less experienced investor. Indeed, there is a considerable body of empirical evidence on the plethora of regularly observed pricing anomalies, patterns and trends – all of which are inconsistent with the EMH – that can be repeatedly and profitably exploited by simple trading strategies.

These phenomena are well documented in both the traditional and the burgeoning behavioural finance literature. The latter, rather than making simplified assumptions about the way investors approach investment decision-making, instead analyses the way in which systematic, or often repeated, cognitive biases – bad heuristics (taking mental shortcuts to simplify decision-making) and framing errors (posing, or framing, a decision problem incorrectly) – enter into the process, causing security prices to randomly depart from their fundamental values. Central to behavioural finance is investors' limited cognitive ability, working with limited information under conditions of uncertainty allied to an inability to calculate probabilities, and slow learning, hence the oft-repeated mistakes observed in financial markets.

⁴See: Müge Adalet McGowan, Dan Andrews and Valentine Millot. The walking dead? Zombie firms and productivity performance in OECD countries. Economics Department Working Papers No. 1372. OECD, January 2017.

⁵The fundamental issue of the misallocation of capital and importance of active capital allocation is further considered later in the paper when looking at the importance of integrating ESG factors into the investment process.

⁶See Clare A., N.E. Motson and S.Thomas (2013). An Evaluation Of Alternative Equity Indices. CAMR, Cass Business School, London. All eight alternatively weighted indices generated a higher Sharpe ratio than market cap weighted indices over the period 1969 – 2011 and over the four decades of the 1970s, 1980s, 1990s and 2000s, excluding transactions costs. Most of the alternatives did, however, suffer significant periods of medium-term underperformance and exhibited much higher portfolio turnover than market cap weighted indices.

MARKET EFFICIENCY (CONTINUED)

Although the long-running debate between the efficient markets and the behavioural finance schools of thought remains inconclusive,⁷ Warren Buffett, the world's third richest man and the living embodiment of successful active management allied to a very patient investment approach (more on that later), sums up the market efficiency debate rather well:

“Observing correctly that the market was frequently efficient, [many academics and investment professionals] went on to conclude incorrectly that it was always efficient. The difference between the propositions is night and day.”⁸

Suffice to say, Mr Buffett has amassed his vast fortune over the past 50 years from those instances when the market has been inefficiently priced and, by implication, from those parts of the market less closely scrutinised. On this latter point, it is worth noting that ironically, market efficiency is as a result of active managers extensively researching the market which they hope to outperform. Essentially, index funds take a free ride on the hard work and effort of their active counterparts. Indeed, active investors must exist for information to be translated into prices as passive management reduces the informational efficiency of stock prices.⁹ As a consequence, passive management fails the so-called *macro consistency test* in that if everyone adopted it, the strategy simply wouldn't work.

Of course, given that there's a cost to obtaining and trading on information for it to be reflected in market prices, there must also be, at least prospectively, a commensurate reward on offer.¹⁰ Indeed, many studies suggest there is, at least gross of fees.

As intimated above, some markets and market segments are more heavily researched than others, resulting in varying levels of market efficiency around the world, with this efficiency varying over time (for reasons that the behavioural finance literature, in particular, seeks to explain). However, rather paradoxically, as money is allocated away from active management towards passive, a tipping point may come (which has yet to be accurately quantified but is thought to be in the region of 30 to 35 per cent) when a particular market is not being sufficiently well researched, resulting in highly inefficient stock pricing and active management coming into its own.¹¹ Indeed, passive equity funds in the US are already estimated to be about one third of equity assets under management.¹²

Ultimately, the relative merits of active and passive management revolve around three key issues: the extent to which markets are price efficient; if inefficient, the ability of active managers to consistently and profitably exploit market anomalies, net of fees, of course; and the ability to deliver desired investment outcomes.

⁷However, Professor Andrew Lo's Adaptive Markets Hypothesis seeks to reconcile the two schools of thought. Lo argues that “markets are neither always efficient, nor always irrational, but are adaptive.” This suggests that the EMH and behavioural finance each have merits and can co-exist on the premise that humans are neither fully rational nor psychologically unhinged and each approach captures different aspects of the same “adaptive” system. Drawing heavily on Darwinian evolutionary biology, Lo argues that while markets can remain stable for extended periods of time, this stability can be periodically disrupted by the emergence of new financial “species” and the extinction of others. So investor behaviour that may seem irrational is instead behaviour that has not had time to adapt to a dynamic investment environment which produces new investment products, principles and paradigms. Against this backdrop, humans work best by making guesses and by trial and error until their behaviour adapts to the new environment. According to Lo if one investment strategy works then we stick with it, if not then we try another.

⁸John Kay, *Markets after the age of efficiency*, Financial Times, 7 October, p.17 (2009).

⁹See: Russ Wermers and Tong Yao, “Active vs. Passive Investing and the Efficiency of Individual Stock Prices,” *Working Paper*, May 2010; Rodney N. Sullivan and James X. Xiong, CFA, “How Index Trading Increases Market Vulnerability,” *Financial Analysts Journal*, forthcoming, September 26, 2011 (see http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1908227); and Jeffrey Wurgler, “On the Economic Consequences of Index-Linked Investing,” NBER Working Paper No. 16376, September 2010.

¹⁰Sanford J. Grossman and Joseph E. Stiglitz, “On the Impossibility of Informationally Efficient Markets,” *American Economic Review*, Vol. 70, No. 3, June 1980, 393-408.

¹¹The Best Thing for Active Managers? Passive Investors. aiCIO, 17 December 2014.

¹²Passive to overtake active in US by 2024 says Moody's. FTfm, 2 February 2017.

SECTION 4:

ACTIVE MANAGEMENT

By contrast, the basic premise of active management is that markets are inefficiently priced. That is, securities are not correctly priced, at least not in all markets and not all of the time. Therefore, active managers seek to profitably exploit these mispricing opportunities by taking positions in stocks different to their weight in the index or in off-benchmark positions not represented at all in the benchmark they seek to outperform. In so doing, actively managed equity funds address many of the criticisms levelled at index trackers. Firstly, they can be positioned to meet stipulated investor objectives and defined outcomes. Indeed, in addition to requiring strong and sustained outperformance, investors are increasingly looking for asset managers that can deliver defined outcome-based investment solutions, increasingly with ESG integrated into the decision making. Crucially, however, active managers can potentially capitalise on prevailing and expected market conditions and provide diversification in varying degrees, as appropriate. The challenge is, of course, to find talented active managers who have and will continue to demonstrate skill.

IDENTIFYING SKILL

There are essentially two ways in which one can determine whether an active fund manager is skilful: quantitatively and qualitatively. In taking a quantitative approach, the metrics employed should possess two essential qualities: they should be both reliable and valid. That is, they should demonstrate persistency over time and be correlated with the desired outcome. The three metrics we are about to consider – tracking error, the information ratio and active share – each possesses these two qualities in varying degrees to provide an *indication*, though not a *validation*, of skill.

TRACKING ERROR

The extent to which the return on an active manager's portfolio differs from their benchmark is termed their *active risk*. This has historically been measured by their *tracking error*. Usually expressed as an annual percentage, this is the standard deviation of the fund's return from the benchmark. This is expressed both as an expected, targeted, or *ex ante* and as an actual, realised or *ex post* metric. The bigger the targeted, or *ex ante*, tracking error, the greater is the fund manager's latitude to be benchmark agnostic. The bigger the realised, or *ex post*, tracking error, the more benchmark agnostic the manager has been. While tracking errors of two or three per cent are commonplace, truly active, or high conviction, active managers often target tracking errors twice as high or even higher. Of course, the higher the tracking error the greater the potential for both significant outperformance and underperformance.¹³ By contrast, index tracker funds strive to minimise their tracking errors to as close to zero as possible.

Then, of course, there are the closet trackers, or index huggers, the *bête noire* of the asset management industry. These are the funds that are managed on an almost passive basis over prolonged periods, with similarly low tracking errors, while charging active fees.

¹³As is detailed later in the paper, this short-term performance volatility can be managed by investing with a number of skilled managers whose returns are uncorrelated.

DOES TRACKING ERROR POSITIVELY CORRELATE WITH PERFORMANCE?

We categorised the 658 global equity funds on the *eVestment* database according to their annualised *ex post* tracking errors relative to the benchmark MSCI All Country World Index (MSCI ACWI) over the five years to 30 September 2016 – five years being a reasonable time over which to invest. This was to establish whether tracking error positively correlates with performance in the medium term. The results show the annualised five year performances before fees against the MSCI ACWI.

	Annualised 5 year <i>ex post</i> tracking error			
	0% - 2%	2+% - 4%	4+% - 8%	8+%
Number of funds	67	277	288	26
Minimum annualised return	-2.56%	-4.66%	-6.67%	-4.73%
Mean annualised return	0.65%	0.78%	0.68%	1.79%
Median annualised return	0.76%	0.87%	0.90%	2.12%
Maximum annualised return	2.29%	5.47%	7.66%	9.36%

Source: eVestment and Columbia Threadneedle Investments. Data applies to 658 global equity funds over the five years to 30 September 2016

While it is acknowledged that this analysis has been conducted at the fund rather than at the manager level, we can see that the annualised mean and median performances of these actively managed funds before fees not only outperform the MSCI ACWI by between 0.65 and 0.9 per cent (1.79 and 2.12 per cent respectively in the case of those funds with an eight plus per cent tracking error) in all four cases, but also correlate positively with the active risk taken. We conducted the same analysis for the first edition of this paper, taking the five years to 31 March 2015 and arrived at very similar results.¹⁴

However, one should not blindly assume that a high number is good and a low number is bad. After all, tracking error is heavily influenced by the amount of systematic risk, or highly correlated active positions, assumed within the portfolio. Principally comprising sector/industry overweights and underweights, these are the positions that tend to move together within a stock portfolio. As these positions are typically less well rewarded than those culminating from intelligent stock picking, particularly high tracking errors which reflect a considerable amount of highly correlated active risk are not always desirable.¹⁵

INFORMATION RATIO

Tracking error is also integral to calculating a fund's *information ratio*. Utilising the fund's realised, or *ex post*, tracking error, the information ratio is an increasingly popular measure of risk-adjusted performance that expresses a fund's performance relative to its benchmark per unit of active risk. So the *greater* the fund's outperformance and the *smaller* the tracking error, the higher the information ratio and, by implication, the greater the risk-adjusted value added by the fund manager. Unlike *ex post* tracking error, which provides but one measure of the extent to which an active manager deviated from their benchmark, the information ratio *helps* validate *ex post* an active manager's ability to exploit market anomalies, or at least the extent to which this deviation from the benchmark has been rewarded. However, this isn't a conclusive validation of manager skill, at least not in the shorter term, given the indecipherable role of luck in influencing shorter-run performance. This we consider later in the paper.

¹⁴Also see: Financial Conduct Authority, Asset Management Market Study Interim Report MS15/2.2, November 2016, p100 Figure 6.3 Distribution of excess net returns against tracking error.

¹⁵See: Petajisto A. (2013), Active Share and Mutual Fund Performance, Financial Analysts Journal 69(4) 73-93. Of the 1,124 US mutual funds analysed between 1990 and 2009, stock picking funds, comprising diversified stock picks, were the top performing category, generating alpha before fees of nearly 1.4% per annum, whereas those reliant on big and highly correlated industry overweights and underweights were the worst performing, with negative alpha of over 2% per annum.

ACTIVE SHARE

That brings us on to *active share*. Unlike tracking error, active share is not a measure of active risk, and unlike the information ratio, does not help validate manager skill. Rather, active share simply measures the extent to which the composition of a portfolio differs from the benchmark against which its performance is assessed and, as such, acts as a good starting point in assessing *how active* a fund manager is. Devised in 2009 by two Yale professors, Martijn Cremers and Antti Petajisto,¹⁶ active share, by summing the absolute value of the manager's underweight and overweight positions relative to the index, or benchmark, then dividing by two, operates on a scale of zero to 100 per cent.¹⁷ The former indicates that the portfolio holds every stock in the same proportion as the benchmark, while an active share of 100 per cent signifies that the portfolio doesn't hold any of the stocks in the benchmark. Active share is expressed as:

$$ActiveShare = \frac{1}{2} \sum_{i=1}^N |w_{fund,i} - w_{index,i}|$$

where:

$w_{fund,i}$ = portfolio weight of asset i in the fund

$w_{index,i}$ = portfolio weight of asset i in the index

Prima facie, the higher the active share of a fund, the more actively managed the fund is, with active shares of 80 per cent and above having become associated with truly active or high conviction asset managers. These are the *benchmark aware* but not *benchmark constrained* managers who adopt an *invest to win* philosophy, rather than the *invest not to lose* mindset of closet trackers.

Combining active share with other metrics

However, whereas tracking error is a good proxy for the amount of systematic risk/correlated active positions in a portfolio, active share is a good proxy for stock selection. To illustrate: if an index contains, say, 20 industries with, for example, 10 stocks in each industry, and a manager selects one stock from each of the 20 industries, weighting each stock as per its industry weighting in the benchmark, then the result will be a high active share but a relatively low tracking error. Indeed, while there is typically a simple relationship between the two metrics, in that both tend to either be simultaneously high or low, there can be considerable variation between the two as just illustrated. For instance, active shares of 70 to 80 per cent can be associated with tracking errors of between two and 14 per cent.¹⁸

Therefore, like tracking error, active share numbers must be seen in context and, like any other comparator, should never be used in isolation. At the very least, active share should be used in conjunction with both the fund's realised tracking error and its information ratio, if investors are to obtain a fuller picture of the manager's approach to portfolio construction to assess whether they are obtaining the value they expect for the active management fees they pay. Indeed, active share, like tracking error, is influenced by several important factors, most of which rail against simply assuming that a high number is good and a low number is bad.

Determinants of active share

Firstly, the more diversified, or the greater the number of constituents that comprise the benchmark, the higher the fund's expected active share. So, other things equal, a global equity fund, a US equity fund or a smaller companies fund, all of which are typically benchmarked against highly populated and well-diversified indices, would be expected to have a higher active share than a single country, ex-US, equity fund, particularly one with a highly concentrated index. This is because, other things equal, it is easier to take bigger, more meaningful, active positions

¹⁶Cremers, Martijn and Petajisto, Antti, (2009). How Active is Your Fund Manager? A New Measure That Predicts Performance. *Review of Financial Studies*, Vol 22, No.9, 3329-65.

¹⁷For long-only, non-leveraged funds.

¹⁸See: Michael J. Mauboussin, "Seeking Portfolio Manager Skill: Active Share and Tracking Error as a Means to Anticipate Alpha". Legg Mason Capital Management. February 24, 2012.

from the benchmark, the greater the number of benchmark constituents and the smaller their individual weightings in the benchmark. So whereas a high conviction global equity fund might be expected to have an 80+ per cent active share, a China fund managed by a similarly high conviction manager might have an active share in the region of 40 to 60 per cent. Linked to this is the choice of benchmark used to assess performance. If the benchmark is inappropriate, in that it is mismatched with the fund's objective and/or strategy, then a high, and largely meaningless, active share will result.

Additionally, active share tends to change with differing levels of market volatility over time, although not definitively. For instance, in more volatile market environments,¹⁹ i.e. when the dispersion between stock returns is high and managers can potentially profit from individual stocks moving out of step with one another, as opposed to when markets are calmer and individual stock movements are not so clearly differentiated, active shares would, in many cases, be expected to be higher. After all, this is when many active managers are more inclined to more fully utilise their active risk, or tracking error, budgets. However, as by definition this is when the correlation between stock returns is low, active share might conceivably *fall* as smaller active positions are taken, given that the manager can more easily achieve their performance objective in this environment.

Equally, in a low volatility environment, when the dispersion of stock returns is low and correlations are high, the corollary is that active share could *rise* as larger active positions are now needed to achieve the harder-to-attain performance objective. However, active share might *fall* if the manager decides that, in an environment of not-so-clearly differentiated stock price movements, using their active risk budget fully might go unrewarded.

REPRICING WINNERS AND LOSERS: AN ENVIRONMENT MADE FOR STOCK PICKERS

While eight years of quantitative easing by central banks and the assumption of lower interest rates for longer increasingly gaining momentum has boosted equity markets, this has largely been to the benefit of passive management. With macroeconomic news and central bank policy having overridden stock specific news, stocks have tended to move in tandem with one another, making stock picking that much more difficult with truly active managers less inclined to use their active risk budgets.

However, that may be about to change with the heightened prospect of fundamental economic and political regime change. Characterised by the gradual normalisation of monetary policy, expansionary rather than austere fiscal policies, and globalisation in all its forms being replaced by more inward looking policies, this will likely culminate in both rising real interest rates and inflation. Crucially, this could, in turn, lead to an equally fundamental reassessment of the equity market's winners and losers, associated price volatility, and reduced stock correlations – exactly the environment that plays to the strengths of skilled stock pickers. The evidence for this we consider when looking at stock valuation spreads later in the paper.

Active share can, of course, change over time for other reasons. One such reason is if a fund starts to hit capacity constraints and is forced to move away from an outperforming niche strategy to a more benchmark constrained investment strategy. In this regard, the imperative is to differentiate between capacity-aware asset managers and simple asset gatherers. Petajisto illustrates this in a later paper,²⁰ showing how the active shares of behemoths the American Funds Growth Fund of America in the late-1990s through to the late-noughties and the Fidelity Magellan Fund in the mid-1990s through to the mid-noughties, plummeted as a result of substantial increases in assets under management. Equally, small cap portfolios sometimes need to move into large cap names to

¹⁹More volatile market environments are characterised by increased two-way trading as investors increasingly take on different views of the world.

²⁰Petajisto A., (2013). Active Share and Mutual Fund Performance, *Financial Analysts Journal* 69(4) 73-93.

deal with capacity pressures. Indeed, the long-term trend more generally has been a move towards lower active shares.

Given this, active share can act as a check on the consistency with which a manager's investment strategy has been applied. Consistency of philosophy and approach matters in active asset management. We touch on this when looking at investment philosophy and process and investment style later in the paper.

However, given the relative simplicity of its calculation, active share also fails to differentiate between funds with different performance drivers and risk profiles. So, two funds with vastly different active positions in stocks and/or industries/sectors and, by association, vastly different risk profiles could have similar active shares. For example, a diversified stock picking fund that isn't tilted towards any one sector/industry might have the same active share as one that seeks to derive its performance principally from tilting towards a few sectors/industries. Similarly, stock specific risks are ignored, as a stock picker focused on companies in higher risk sectors might have the same active share as a stock picker focused on companies residing in lower risk sectors. In both instances, this is where tracking error helps to provide a clearer, more holistic picture of the manager's approach.

Active share and patient investment strategies

Despite its shortcomings, the popularity of active share has largely revolved around its association with outperforming funds. This followed from Cremers and Petajisto's finding, in their original 2009 research, that outperforming funds were typically small, concentrated portfolios with a high active share. However, that is not the same as saying that active share alone can predict outperformance. No one metric can. Indeed, in his more recent research, Cremers suggests that active share "...helps to know which funds to consider, or where on the lake to fish", citing those active managers with *both* high active shares and who adopt patient investment strategies as the ones best positioned to outperform.²¹ Cremers defines these as managers with stock holding durations of at least two years, ideally longer.²² Of course, if the manager is underperforming, they may not be given two years to turn their performance around. Indeed, UK consultancy firm Spence Johnson recently found that post-crisis, underperforming managers are only given 12 months by UK pension funds to improve their performance, eight months less than pre-crisis. Suffice to say, a skilful manager also requires patience on the part of the investor if their skill is to shine through.²³ Indeed, accepting governance and accountability considerations, investors must avoid making emotional, knee jerk, and potentially value-destroying decisions when a truly active, largely unconstrained manager suffers a period of significant volatility and drawdown.²⁴ As the late Nobel Economist Paul Samuelson once said: "Investing should be more like watching paint dry or watching grass grow. If you want excitement, take \$800 and go to Las Vegas." We'll revisit this when looking at the role of luck and skill in manager performance data.

Although partly attributable to lower trading costs,²⁵ patient investment strategies are those that benefit from the greater predictability of asset prices over the longer term. So, whereas in the short-term, fundamentals such as the level of dividend yield fail to substantially predict subsequent investment returns, over a ten year investment horizon they are a reliable predictor of return.²⁶

Perhaps unsurprisingly, holding a smaller number of high conviction positions rather than a larger number of stocks was also found to be a significant performance driver. Indeed, research shows that it's a manager's best ideas which typically generate excess returns.²⁷ These points, of course, haven't been lost on Warren Buffett, that most patient of investors, over the past 50 years.

²¹Cremers, Martijn and Patek, Ankur. Patient Capital Outperformance: The Investment Skill of High Active Share Managers Who Trade Infrequently. September 19, 2014.

²²The investment consultant Willis Towers Watson in analysing those 977 global equity funds with a five year performance track record on the eInvestment database at 31 March 2016, found that 72% of those considered "highly active" with an average active share over the period of 80+% outperformed the MSCI World ND (USD) index before fees. This outperformance was concentrated amongst those with a portfolio turnover of less than 80% per annum, notably those with a turnover between 20% and 40%. This contrasts with 7% of those with an active share of between 0% and 60% and 21% of those with an active share of 60% to 80% outperforming the index.

²³Indeed, poor investor timing was found to largely offset the value added by actively managed funds. Geoffrey C. Friesen and Sapp, Travis R.A. Mutual Fund Flows and Investor Returns: An Empirical Examination of Fund Investor Timing Ability. Unpublished (2007).

²⁴See: A. Goyal and S. Wahal, The Selection and Termination of Investment Management Firms by Plan Sponsors. Journal of Finance, Volume 63, Number 4, pp.1805-47 (2008). The two US researchers found a tendency, amongst 3,400 institutional investors analysed between 1994 and 2003, to hire managers who had recently performed well and to fire managers who hadn't. On average, the fired managers subsequently outperformed those hired, albeit marginally, not to mention the sizeable transition costs incurred in changing managers.

²⁵The attritional effect of trading costs on performance is well illustrated in Barber B.M. and T. Odean. Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment. Quarterly Journal of Economics (2000) and Barber B.M. and T. Odean. Trading Is Hazardous to Your Wealth: The Common Stock Performance of Individual Investors. The Journal of Finance. Vol 55, No2, pp773 - 806 (2002).

²⁶The work of Nobel Economists Eugene Fama and Robert Shiller, amongst others, in this area is well illustrated in the Barclays Capital Equity Gilt Study, pp. 5 - 10 (2009), using metrics such as dividend yield, price-to-earnings ratios and Tobin's Q. The legendary investor Benjamin Graham frequently referred to the equity market as being an emotional voting machine in the short-term but an evidence based weighting machine in the long run.

²⁷See: Randy Cohen, Christopher Polk, and Bernhard Silli, "Best Ideas," Working Paper, March 2009; Klaas P. Baks, Jeffrey A. Busse, and T. Clifton Green, "Fund Managers Who Take Big Bets: Skilled or Overconfident," Working Paper, March 2006; C. Thomas Howard. Why Most Equity Mutual Funds Underperform and How to Identify Those that Outperform. January 26, 2016. <http://www.advisorperspectives.com/articles/2016/01/26/why-most-equity-mutual-funds-underperform-and-how-to-identify-those-that-outperform/3>.

DO LONG-TERM EQUITY MANDATES PRODUCE BETTER RESULTS?

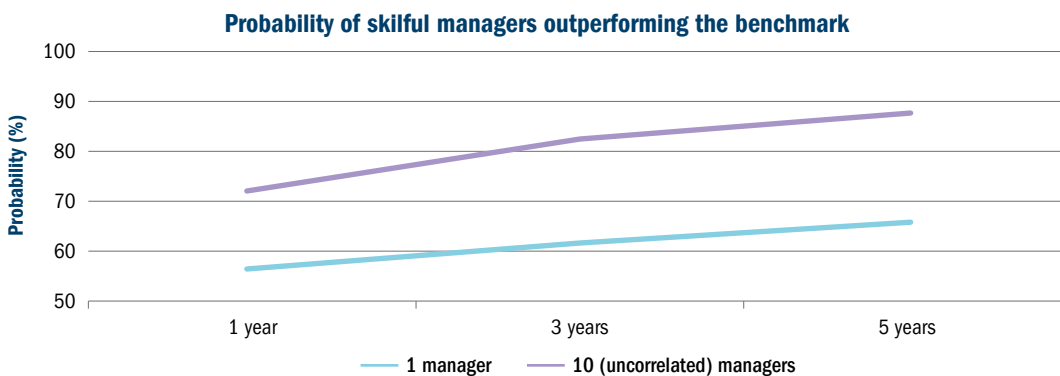
Back in 2004, the investment consultant Willis Towers Watson (WTW) constructed a 10 year model equity mandate to test the idea that longer-term equity mandates, combining patient investing with patient investors, should deliver sustained outperformance. Shortly after, in 2004/05, a number of 10 year institutional client equity portfolios were constructed.

In 2015, *Top1000Funds* assessed whether the exercise had been successful.²⁸ What WTW found and have incorporated into a new working paper, *Long-term mandates 2.0*, is as follows:

- Despite the very large spread of performance between the top and bottom performing managers, the model portfolio outperformed the MSCI ACWI index by 2 per cent per annum before fees.
- While investors increasingly sign up to the idea of benchmarking longer-term mandates to a price inflation index + x% absolute return objective, most still assess quarterly performance relative to a relevant global equity index.
- By appointing a single equity manager rather than a diversified portfolio of managers, the experience for many was quite a volatile one, especially during the Global Financial Crisis (GFC), even though post-GFC portfolio values bounced back. Consequently, given governance and accountability issues, not all investors stood the course.

As a result of the latter two points, WTW then looked at the merits of implementing active management via a diversified manager structure, rather than relying on a single skilled active manager to deliver sustained net outperformance. Using a monte carlo simulation of uncorrelated and identically distributed monthly returns for one and 10 skilled, high conviction managers with highly concentrated portfolios, over one, three and five years, WTW found that employing a diversified manager structure dramatically improved the probability of outperforming the benchmark. This is illustrated in Chart 1 below.

Chart 1: Employing a diversified manager structure dramatically improves the probability of outperforming the benchmark



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Moreover, by implementing a top-down derivatives overlay that mitigates concentrations of country, currency and industry risk when aggregating the portfolios, this higher probability of outperformance is complemented by low tracking error. Combined, a high probability of achieving sustained long-run net outperformance allied to low tracking error better enables investors to take a more patient approach towards active management to the ultimate benefit of risk-adjusted returns.

²⁸Amanda White. Do long-term mandates produce better results? Top1000funds.com. October 7, 2015.

SUMMARY – USING QUANTITATIVE METRICS TO DETERMINE SKILL

As intimated above, none of the metrics considered so far tell us anything about manager skill – the ability to generate repeated outperformance through systematically and profitably exploiting market inefficiencies. Even the information ratio only helps to validate past risk-adjusted performance, being unable to attribute this performance entirely to skill, unless a sufficiently long time frame is being considered. After all, luck, good and bad, while evening out in the long-run, can influence returns markedly in the short-run, with good luck flattering the performance of an unskilled manager and bad luck unseating a good investment process and offsetting genuine skill. As short-term performance can have a substantial random element to it, extrapolating past performance into the future can be particularly dangerous.

With this in mind, let's turn to the issue of active manager performance and what characteristics prospectively define a skilful active fund manager, as opposed to just a lucky one or, worst still, a closet indexer.

ACTIVE MANAGER PERFORMANCE

The main argument for active fund management over passive management is that active managers potentially have the skills to beat the market. Genuine skill is valuable not only because of the obvious value it can add net of fees to investment return, against the probable backdrop of more modest and more volatile longer-run returns going forward,²⁹ but also because it is an uncorrelated source of return. Arguably, *the* ultimate source. However, as the sum of all fund managers managing a particular asset class is the market, they can't all outperform it. Similarly, by definition, every fund manager cannot beat every other fund manager. On average, we might expect half to win and half to lose. So, before fees, active fund management would seem to be a zero sum game. If so, then after fees, by definition, it's a negative sum game. That is, we should expect, at least *in theory*, more than half of all active fund managers to underperform. However, the idea of active fund management being a negative sum game is not clear cut given the increased prevalence of the bane of the active management industry – the low conviction, index hugging, closet tracking managers.

So, is the prevalence of manager skill much greater than we have come to believe?

²⁹Based on sub-par sustainable, or trend, economic growth rates, real yields and available risk premia.

SECTION 5: IS ACTIVE FUND MANAGEMENT REALLY A NEGATIVE SUM GAME?

Although by no means definitive, a 2015 study into the relative net-of-fees performance of actively managed equity growth funds by Morningstar, the performance data analytics firm, suggests that active funds, particularly in Europe ex-UK, the UK and Asia ex-Japan have, on average, fared better than passive funds over the longer term. Restricting the analysis to those actively managed funds with a growth bias³⁰ the shaded data shows that the mean active fund performance after fees over 10 years in four of the six countries/regions analysed bettered that of the best performing tracker fund.

The results of the study are shown below.

Country/region	% of actively managed equity growth funds after fees outperforming the best performing tracker fund			Best tracker performance over 10 years (%)	Mean active fund performance over 10 years (%)
	3 years (%)	5 years (%)	10 years (%)		
US	22	12	33	150	136
UK	70	72	52	115	123
Europe ex-UK	43	65	70	110	130
Asia ex-Japan	41	43	59	193	215
Japan	32	47	37	78	71
Global	15	22	48	123	132

Source: Do trackers beat active funds? The Telegraph, 4 April 2015. Data supplied by Morningstar.

CLOSET TRACKERS

As noted earlier, closet trackers are those managers who manage their portfolios over a prolonged period on an almost passive basis, adopting a benchmark constrained, *invest not to lose* mindset, while charging active fees for the privilege. Typically identified with active shares of less than 60 per cent, sometimes much less, and top ten holdings mirroring that of the index against which their performance is benchmarked, if there was ever a formula destined to underperform and detract value from investors' portfolios, this is it. Despite this, it was estimated in 2014 that a gargantuan £58bn (\$74bn), or 29 per cent, of investors' money held in UK equity funds is closet tracked. More recently, the UK's Financial Conduct Authority (FCA) estimated this figure to be £142bn (\$181bn).³¹ This is the biggest such percentage in any developed market. Based on 2014 data, in the US it's a little less than ten per cent, in continental Europe it's a little more than ten per cent, whereas in Japan the figure is a mere three per cent.³² Crucially, however, it is the immense value destruction by closet indexers overcharging for their lack of active management that is of the greatest concern. In the UK alone, it has been estimated that if the £58bn (\$74bn) closet indexed was instead invested in the least expensive UK tracker fund, investors could save themselves in excess of, a not inconsiderable, £750m (\$953m) per annum in fees.³³ Suffice to say the issue hasn't gone unnoticed not only by regulators in the UK, but also in continental Europe and particularly the Nordics,³⁴ with the Norwegian regulator in 2015 singling out the country's largest bank for mis-selling a \$1bn closet tracker to retail investors. This followed investigations into closet indexing by

³⁰Please see the section on investment style within Section 6.

³¹Financial Conduct Authority, Asset Management Market Study Interim Report MS15/2.2, November 2016, p102 Figure 6.6. The FCA's definition of "partly active" funds is those with a tracking error of 1.5% or less.

³²Simon Evan-Cook, Premier Asset Management, Kill the Filler: The Costs of Closet Tracking, November 2014.

³³Premier Asset Management November 2014, Op. cit. The FCA (2016) estimates that of the £142bn "partly active" equity funds in the UK, £109bn have charges/fees comparable to those of active funds.

³⁴The future is bleak for closet trackers. Financial Times, 7 December, 2014.

the Swedish government and the Danish regulator,³⁵ with Sweden's second largest fund manager in 2015 having had a class action lawsuit filed against it by the Swedish Shareholders' Association over allegations it had mis-sold closet trackers to investors.³⁶

MEASURING ACTIVE PERFORMANCE

For many years, the academic literature has produced successive research papers dedicated to examining the performance of active fund managers, with the aim of understanding whether active managers have the requisite skill to provide investors with value for money. However, with the increasing prevalence of closet trackers dragging down the performance of the average active fund, it probably comes as no surprise that most, though not all, studies typically find that more than half of active funds underperform. Indeed, the general conclusion of most studies is that genuine alpha, or skill, is a rare commodity, with persistent outperformance, or performance persistency, being rarer still. After all, as noted earlier, if a successful manager who, in applying a niche strategy, has consistently outperformed but is not particularly capacity-aware, then they are likely to be overwhelmed with investor cash and forced into a strategy that places larger and more heavily researched stocks at its core, with performance tapering off as a result. Once again, it pays to differentiate a genuine asset manager from a simple asset gatherer.

Manager performance or fund performance?

Just as most investors look at the performance of the fund rather than that of the manager, empirical tests are usually applied to fund performance rather than to manager performance. Quite simply, the former doesn't take account of managers moving between funds and asset management houses. Of course, this isn't helped by manager performance data being less readily available than fund performance data. This matters, as where research has been conducted at the manager level, it has been shown that manager departures can make a difference to a fund's performance.³⁷ It also demonstrates the importance of keeping track of manager changes.

LUCK AND SKILL

Another issue with performance data, alluded to earlier, is knowing the extent to which performance has been generated by skill rather than luck. Even if a manager has had a good run of performance, can the investor attribute this entirely to skill, given that good and bad luck can have a significant impact on performance in the short term? Of course, it is better to have a lucky fund manager than an unlucky one, but it is much better to have a genuinely talented one than a lucky one. After all, manager skill is the ultimate source of uncorrelated return and can be valuable during periods of modest returns.

A simple test of whether an activity involves skill is to ask if one can lose on purpose. While you cannot purposefully lose at the casino wheel because this is a game of pure luck, you could lose on purpose at chess because this is a game of pure skill. However, asset management, like many human endeavours, involves both skill and luck. Indeed, a considerable number of studies show that luck alone cannot explain the results of active management.³⁸ The difficulty comes in discerning the contributions of skill and luck, even if analytical tools are available. In sport, for instance, even if a player's skill remains consistent, their results will be affected by changing luck. An exceptional performance is rarely repeated for any length of time as the good luck that boosted this performance will typically be absent the next time around, or certainly the time after that.

³⁵Norway takes action against closet-tracking. *Financial Times*, 15 March, 2015.

³⁶Active share revealed to have feet of clay. *FTfm*, p.6, 26 January, 2015.

³⁷A. Clare, N. Motson, S. Sapuric and N. Todorovic, What Impact Does a Change of Fund Manager Have On Mutual Fund Performance? *International Review of Financial Analysis* 35, 2014, 167-177.

³⁸See: Robert Kosowski, Allan G. Timmerman, Russ Wermers, and Hal White, "Can Mutual Fund 'Stars' Really Pick Stocks?" *Journal of Finance*, Vol. 61, No. 6, December 2006, 2551-2595; Laurent Barras, Olivier Scaillet, and Russ Wermers, "False Discoveries in Mutual Fund Performance: Measuring Luck in Estimated Alphas," *Journal of Finance*, Vol. 65, No. 1, February 2010, 179-216.

Conversely, poor outcomes can reflect a lot of skill and a good process being offset by a lot of bad luck. However, over time, as luck evens out, any skill that exists will shine through. Therefore, luck tends to 'mean revert'. That is, an outcome that deviates from the average is typically followed by one that is closer to the average. Quite simply, any activity, such as fund management, whose outcomes are determined by a combination of skill and luck, will be subject to this phenomenon. Moreover, given that it has been suggested that *on average*, active management is 90 per cent skill and 10 per cent luck,³⁹ one can appreciate the importance of finding managers that are genuinely skilful.

However, to compound the problem, skill does not remain constant over time. Indeed, it can suddenly or progressively deteriorate. In the case of athletes, skill deteriorates with age. However, in more cerebral fields, such as fund management, hitting a peak can take a little longer. Indeed, one can argue that a manager who has been exposed to several market cycles is probably more in tune with the market than a less experienced manager. That said, there is always the danger of applying past principles to a wholly new set of circumstances against the backdrop of the constant evolution of financial markets. What worked in the past may not work in the future, notwithstanding the fact that some anomalies and trends are a seemingly permanent feature of financial markets.

Crucially, the bigger the role of luck in the outcomes we observe, the larger the sample of observations one needs to distinguish skill from luck. Although subject to debate, many finance academics would argue that around 12 years of monthly performance data for a fund manager with an information ratio of 0.5 is needed to prove skill with 95 per cent confidence, though others would argue that nearer 300 months (25 years), or more, of continuous data is required to statistically prove the existence of skill for those managers with high information ratios. The problem is that very few managers have anything like a 12, let alone a 25 year, track record, especially of running the same fund within the same firm. However, those few that do, have proved to be amongst the world's most successful managers with exceptional long-run performance records, albeit punctuated with periods of short-term underperformance. Moreover, these managers are among a select group of active managers who have added value in most up *and* down markets. Indeed, given that most investors are loss averse and prefer stable to erratic performance, with no nasty surprises, skilful active managers are those who should add more value in down than up markets, evidenced by a positively skewed long-term return profile.

These managers aside, the inability to separate skill from luck in the short- to medium-term and skill tending not to be constant over time, explains why past active manager performance is not necessarily a good guide to future active performance, and therefore not necessarily a good way of choosing an active fund manager. Chance and change really do make past performance difficult to extrapolate. As noted earlier, this is compounded by the inability of some managers to successfully manage capacity constraints following a run of good performance.

MANAGER SKILL – A COUNTERFACTUAL VIEW

One particularly interesting observation on the pervasiveness of active manager skill is that provided by C. Thomas Howard, a prominent US researcher in the area of deciphering manager skill.⁴⁰ Howard suggests that *performance drag*, comprising unsuccessfully managing capacity constraints, benchmark tracking and overdiversifying, can dramatically overwhelm skill and so understate the level of skill that exists within the asset management industry. Indeed, Thomas' work rails against conventional wisdom by suggesting that, in adjusting for performance drag, active manager skill for US mutual funds is pervasive. He also intimates that as performance drag tends to increase with fund age, manager skill may be more constant over time than is currently suggested.

³⁹See: Elizabeth Pfeuti, Uncoachable: Underperformance, egos and asset management's most obvious structural flaw, ai.com, 11 September 2015. See: <http://www.ai-cio.com/channel/NEWSMAKERS/Uncoachable/>

⁴⁰See: C. Thomas Howard, Why Most Equity Mutual Funds Underperform and How to Identify Those that Outperform, January 26, 2016, <http://www.advisorperspectives.com/articles/2016/01/26/why-most-equity-mutual-funds-underperform-and-how-to-identify-those-that-outperform/3>. Howard, C. Thomas, Collective Intelligence Market Model (November 9, 2015). Available at SSRN:<http://ssrn.com/abstract=2631237>.

Of course, this evidence is counterfactual. Moreover, it could be argued that managing performance drag is integral to manager skill. However, Howard argues that performance drag is often due to a variety of pressures, incentives and constraints imposed on active managers, both by loss averse investors, who react badly to short-term underperformance, and those who advise on manager selection. This leads to the construction of underperforming portfolios that overwhelm or disguise skill in the process. Indeed, Howard finds in his study of 4,000+ US actively managed mutual funds, that skill averages 3.81 per cent, with average performance drag at 2.71 per cent being twice that of average explicit fees at 1.39 per cent, resulting in average alpha net of fees of -0.29 per cent. However, Howard suggests that after adjusting for performance drag, 88 per cent of active equity funds display skill, with 79 per cent more than covering their explicit fees – a point that challenges the notion of active management before fees being a zero sum game and a negative sum game after fees. Additionally, Howard contends that, while the zero sum game argument must hold for the *entire* equity market, it doesn't necessarily hold for individual markets. Taking the US equity market as an example, where only nine per cent of the market capitalisation is managed by US equity mutual funds, Howard contends it is possible for the average stock held by those nine per cent to outperform the other 91 per cent.

SECTION 6: SO IS SEEKING OUT A GENUINELY SKILFUL ACTIVE MANAGER REALLY WORTH THE TIME AND EFFORT?

“...investors who can identify superior active managers should always expect ...a substantial impact on returns with only a modest impact on total portfolio risk. Finding such managers is not easy or simple – it requires going well beyond assessing past returns – but academic studies indicate that it can be done.”⁴¹

Robert C. Jones and Russ Wermers, 2011

Given that the quantitative assessment of active manager performance to determine skill is often riddled with practical problems, many investors question whether seeking out skilful asset managers is really worth the governance budget. However, by applying some intelligent due diligence investors can increase their chances of finding potentially exceptional managers who, like Warren Buffett, more than earn their fees over time.

Indeed, there are certainly those who stand out from the crowd, just as Lionel Messi does when he plays football at the highest level, Usain Bolt does when he competes against the fastest runners on the planet and Serena Williams does when winning yet another Grand Slam. So, active management when well executed is by no means a lost cause – far from it. The question is, of course, how do we identify the Messis, Bolts and Williams' of the active fund manager world? Or to phrase it differently, what are the attributes, or qualities, that characterise a skilful active manager, one who generates *skill alpha* rather than *lucky alpha*, and what exactly gives them that edge? After all, the main problem for active managers is that they are each having to fiercely compete against a set of highly skilled peers. In so doing, they all have to run increasingly faster just to stand still.

However, it certainly isn't just one particular quality that makes a manager skilful or gives a genuinely skilful manager an edge. There are a multitude of factors at play,⁴² many of which have strong academic underpinnings. This should start with an investigation of the manager's investment philosophy and process (IP&P), before moving on to the manager's investment style, the ability of the manager to recognise their behavioural biases and to be in tune with the psychology of the market and the extent of their risk management. Finally, one should not ignore the fund manager's gender. We'll touch on each of these in turn.

INVESTMENT PHILOSOPHY AND PROCESS (IP&P)

Any interrogation of an active manager's capability should begin with ensuring the manager has a clearly articulated investment philosophy. Set out in a statement that captures a manager's investment insights and value adding processes, this should comprise the manager's genuine beliefs about how asset prices become mispriced and the manager's capability and competitive advantage in repeatedly exploiting these pricing anomalies with examples that have borne out these beliefs in practice.⁴³ This should, in turn, underpin a logically constructed and repeatable investment process, consistently applied through thick and thin, with examples of where this has worked and not worked in practice. Indeed, as even the best fund managers sometimes get it wrong, humility is a worthy characteristic in a fund manager. The key takeaway, of course, is what was learnt from the experience and how this learning has since been applied. This we consider later in the paper when looking at the importance of managers being coached.

⁴¹Robert C. Jones, CFA and Russ Wermers, "Active Management in Mostly Efficient Markets". Financial Analysts Journal, Vol. 67, Number 6, (2011).

⁴²Also see Roger Urwin, Identifying Tomorrow's High Performer Today: An Analysis of the Factors which can Help Forecast the Relative Performance of Investment Managers. 2nd AFIR Colloquium 1991, 4: 293 - 315.

⁴³See: John R. Minahan, The Role of Investment Philosophy in Evaluating Investment Managers. Journal of Investing, Vol.15, No.2 (Summer 2006): 6-11. Summarised at: <http://www.cfapubs.org/doi/full/10.2469/dig.v36.n4.4337>.

Integral to the effective functioning of an active manager's process is the manager's ability to provide a logical and coherent rationale for why their IP&P works and to ultimately explain their performance with explicit reference to it. As mentioned earlier, the manager should be able to demonstrate whether they have added value in both up and down markets, ideally with a greater emphasis on the latter. Indeed, in gauging whether or not the manager has an edge, the following key aspects to the manager's IP&P should be evident:

- A talented and truly active manager should run a portfolio based on the *three Cs* – high conviction, contrarian thinking and high concentration. As contrarians, or independent thinkers, truly active managers continually challenge the market consensus reflected in market prices. They seek to identify opportunities where their perceived fair value of a security materially differs from its market price. However, only if their analysis presents a view that is clearly differentiated from the consensus, one in which they believe with sufficiently high conviction, is this implemented into their portfolios. With high conviction comes portfolio concentration. If a high conviction idea warrants inclusion in a portfolio, then it must be implemented in a meaningful manner. That is, the portfolio should not contain 'ballast'. It should not overdiversify and merely finesse positions around the benchmark, simply to provide emotional comfort to those loss-averse investors who expect to see a considerable number of stocks in the portfolio. Indeed, as noted earlier, it is the manager's best ideas that typically generate those excess returns.⁴⁴

Therefore, most truly active equity portfolios typically contain no more than 60 to 80 stocks. Many contain far less. By definition, and as noted earlier, these are managers who, while aware of the benchmark against which their performance is judged, are not constrained by it. They *invest to win*, as evidenced by a moderate to high tracking error and a high active share, rather than *invest not to lose*, as evidenced by a particularly low tracking error and active share. Of course, as noted earlier, other things equal, the higher the tracking error the greater the potential for both significant outperformance and underperformance, accepting that genuine stock pickers are more often rewarded for taking active risk than those who take concentrated industry positions.

- Talented managers should be free of top down constraints if they are to be given the freedom to exercise creative thinking and individual flair, albeit within a formalised risk management framework.
- The investment approach adopted by a skilful manager should be underpinned by a culture that is dynamic and interactive and by processes that are team-based, performance driven and risk aware. To explain:
 - Talented fund managers rarely operate in splendid isolation. Most typically operate within or have the support of a well-incentivised team, with each team member having a genuine stake not only in their own long-term success but also in that of the team. This alignment of interests should, of course, extend to those of the investor and is typically evidenced by the manager investing their own funds in a fund, or funds, managed by the asset manager. The strength and depth of the team also matters. The idea behind this collegiate approach is clear: if one of the fund managers moves on, the team's process remains in place for the other managers to carry on from where their departed colleague left off. Just as importantly, these teams should be encouraged not to act as introspective silos but to interact with the asset manager's other managers and research teams so that ideas may be shared and portfolio positions challenged.
 - Indeed, in a genuinely collaborative environment it is absolutely imperative that suitable mechanisms exist that allow team members and other teams to rigorously debate and genuinely challenge a manager's portfolio positions and thinking. Equally important is the manager's willingness to listen to and act upon these challenges, as is disciplined oversight of the process. By working together across asset classes and geographies, in an increasingly interconnected and interdependent world, this pooling and sharing of research and intellectual capital globally generates richer perspectives on global, regional and local investment landscapes, enriches teams' individual investment processes and results in better informed investment decisions.

⁴⁴According to C. Thomas Howard, such is the importance of a high conviction approach to active management that increasing the weighting of an actively managed fund's top 10 positions by 10% on average improves fund alpha by 0.61%. However, increasing the weighting of stocks ranked lower than 20th in the portfolio hurts fund performance. See: C. Thomas Howard, Why Most Equity Mutual Funds Underperform and How to Identify Those that Outperform. January 26, 2016. <http://www.advisorperspectives.com/articles/2016/01/26/why-most-equity-mutual-funds-underperform-and-how-to-identify-those-that-outperform/3>.

- Talented managers should be able to clearly articulate how ideas find their way into their portfolio. These ideas, which should combine macro and micro insights, should principally be generated internally rather than wholly being bought in from sell side analysts. Just as a macro level understanding of economies, markets and themes helps inform investment decisions at the micro level, when conducting fundamental research, the information gathered from companies, government agencies, non-governmental organisations (NGOs) and industry experts helps shape macro views. Suffice to say, these micro insights should have a strong fundamental underpinning based on company visits, ideally conducted on a one-to-one basis with both management and those on the shop floor; an in-depth knowledge of the company and the industry in which it operates – especially if the industry is highly specialised; an understanding of what constitutes a sustainable competitive advantage; and of the stock's fair value.
- Understanding valuation is particularly important. After all, as we noted earlier, there is a very strong inverse relationship between equity valuation and subsequent long-run returns.⁴⁵ Moreover, a talented manager is one who doesn't confuse a quality company with a quality investment. What matters is being able to differentiate between what is built into the price and what doesn't appear to be but should be.
- A good active manager should integrate environmental, social and governance (ESG) factors into their investment process. Far from being an altruistic exercise, doing so prospectively provides the investor with both short- and long-term benefits, not least in minimising the reputational, operational and regulatory risks attaching to many companies, while leading to the generation of better quality and more sustainable long-run investment returns.

To explain, ESG factors are becoming increasingly material to company valuations but are not always fully factored into market prices. This is as a consequence of the externalities arising from unsustainable and ultimately unproductive corporate activities not being fully internalised and financial markets misallocating capital to companies on the basis of incomplete information. Therefore, integrating ESG into an intelligently applied active approach provides the potential to exploit the resulting pricing anomalies. However, as the promotion of best practice in corporate governance and sustainable and responsible business and management practices becomes more widespread and gains greater acceptance, so these anomalies will disappear as capital is allocated with more complete information. As noted earlier, such active capital allocation is a prerequisite for a well-functioning economy and efficient capital markets. It is also a necessary condition for the generation of better quality and more sustainable long-run investment returns.

- The portfolios of talented active managers should usually exhibit low turnover or at least a considered approach to portfolio turnover. Equally the manager should rigorously apply a sell discipline to stocks that have either breached a pre-determined price trigger or where the original thesis for holding the stock no longer holds. There should also be no evidence of the manager succumbing to loss aversion. That is, selling winning stocks too soon and/or running loss making stocks for too long. Additionally, there should be evidence of positions sold being invested in new portfolio ideas rather than the proceeds simply being spread between existing positions.

Finally, in conveying their IP&P, a truly talented manager should come across as inquisitive, curious, hard working, ultra competitive and, perhaps most importantly, as an independent thinker – one who demonstrates an ability to balance individual flair with collaboration while recognising the perils of unchallenged consensus thinking, or groupthink.

INVESTMENT STYLE

Although the choice of stock holdings and sector weights impact portfolio returns, one potentially big driver of active manager outperformance, however, remains investment style; a form of *factor-based investing*. While style investing can be traced back to the 1930s, originating from the pioneering work of Benjamin Graham and David Dodd⁴⁶ and since developed by a number of academic luminaries,⁴⁷ it has only really gained prominence since the mid-1990s, notably in the US, as a means of developing and evaluating investment strategies and stock selection processes.

⁴⁵Barclays Capital Equity Gilt Study, pp. 5 – 10 (2009). Deniz Anginer, Kenneth L. Fisher, and Mier Statman, "Stocks of Admired Companies and Despised Ones", working paper 2007. A study of Fortune's "Most admired companies", over a 20 year period, found that the stocks with the worst ratings outperformed those with the best. This was partly as a result of luck, which had contributed to the initial success of the latter and the lagging performance of the former, reverting to the mean, so reversing the expected outcome.

⁴⁶Benjamin Graham and David Dodd, *Security Analysis*, New York, McGraw-Hill, 1934.

⁴⁷See Rolf W. Banz, The Relationship Between Return and Market Value of Common Stocks. *Journal of Financial Economics* 9 (1981): 3 – 18. DeBondt, Werner and Richard H. Thaler. Does the Stock Market Overreact? *Journal of Finance*, 40(3) (1985): 793 – 805. Jagadeesh, Narasimhan and Sheridan Titman. Returns to Buying Winners and Selling Loser: Implications for Stock Market Efficiency. *Journal of Finance*, 48 (1993): 65 – 91.

Active fund managers adopt a chosen style given evidence that particular groups of stocks sharing one of a number of common characteristics, or *style factors*, exhibit a meaningful tendency to move together and so experience long periods of out- and under-performance of the broader market. Of these styles, the most established and well documented and to which almost all fund managers are deliberately (the good) or unwittingly (the bad) exposed to some extent, are size, growth, value and momentum.

Indeed, a whole new subset of the asset management industry has been predicated on the idea of *smart beta* and *alternative beta*, an active/passive halfway house that attempts to systematically capitalise on style factors in addition to other risk factors, or market anomalies, such as low volatility stocks outperforming high volatility stocks, and fundamental indexing, to which we referred earlier when looking at passive management. Smart beta and alternative beta are examined in more detail shortly.

INVESTMENT STYLE

Growth versus value investing

Whilst investment styles are many and varied, the most popular are growth and value investing. The growth versus value debate has run as long, if not longer, than the active versus passive debate.

Growth investing originated in the 1960s, emerging as a distinctive investment style during the US *Nifty Fifty* craze of the early 1970s. Growth investing is a relatively aggressive investment style and is typified by a so-called GARP approach. GARP, or buying Growth At a Reasonable Price, centres on those companies that are perceived to offer above average earnings growth potential that has yet to be fully factored into the company's share price. It is also about avoiding those companies most susceptible to issuing profit warnings, as any stock trading on a high valuation that fails to meet consensus earnings expectations can be marked down savagely by the market. Genuine GARP stocks are those companies that are able to differentiate their product or service in some way from their industry peers so as to command a competitive advantage and pricing power and, therefore, an ability to generate high quality earnings and above average earnings growth for a considerable period of time.

Value investing, meanwhile, with its origins in the 1930s, seeks to identify those companies that typically operate in mature markets with little prospect of substantial market expansion or rapid future growth in earnings, but which still produce a stable and relatively high dividend stream – utilities for example. These value stocks typically trade on low valuations and a high dividend yield relative to the rest of the market. Fund managers that specialise in investing in value stocks do so because they believe that in the long-run these stocks will outperform other stocks, particularly growth stocks.

So which of the two styles has been the most successful? It is well documented that within developed markets globally, value outperforms growth over the very long-term by some considerable margin, though this period typically extends far beyond the investment horizon of most institutional, let alone individual, investors. Over shorter horizons, however, the evidence suggests that no one style outperforms in all market conditions; rather each periodically outperforms and underperforms the other and the market.

Small cap investing

The small cap, or size effect, was first identified by Rolf Banz in 1981.⁴⁸ Banz showed that the smallest companies quoted on the NYSE had generated the highest long-run returns. As with value investing, small-caps have outperformed large-caps globally over the very long-run by a significant margin but, equally, shorter run outperformance has been less predictable.

⁴⁸Rolf W. Banz (1981) Op.cit.

Momentum investing

Momentum investing focuses on those stocks that have recently performed well and whose price continues to gather momentum in a self-perpetuating manner. Momentum investing, sometimes termed fashion-led investing, appeals to investors' natural tendency to extrapolate trends, as little, if any, attention is paid to the average market valuation of such shares. However, fashions, by definition, soon go out of style. And so it is with momentum, which can sometimes turn dramatically, often resulting in significant drawdowns. Indeed, investing in last year's top performing stock does not necessarily guarantee a repeat performance the following year. That said, short-term momentum effects are often in evidence for periods of up to about 12 months with the academic literature suggesting momentum investing generates higher than average returns over time.⁴⁹ Moreover, the momentum effect is a global phenomenon.

Quite simply, momentum investing is more about gauging short-term market psychology and going with the market consensus, whilst employing a shrewd sense of market timing, not least because of the considerable downside risk, rather than analysing the more salient characteristics of individual stocks.

Thematic investing

Thematic investing involves identifying an economic or socio-economic trend that will eventually have an impact on the valuations of underlying securities. For example, if an active fund manager was strongly of the belief that advances in technology would mean that people would have increasing amounts of leisure time available in the future, then the manager might build a portfolio, often on a global basis, consisting of firms with exposure to the leisure industry, comprising travel companies and companies with an interest in leisure parks for example.

In practice, many active fund managers adopt investment themes, favouring particular stocks and/or industries and reflect this in their portfolios. However, these themes will change over time as global financial markets, geopolitical risks, demographics and other socio-economic factors evolve. In contrast, thematic investing tends to involve sticking with one or a number of particular themes.

Contrarian investing

Some active fund managers will deliberately position their portfolio so that it is at odds with the consensus view. In particular, managers that apply this approach might be willing to buy the stocks of companies where the stock price has fallen considerably in the belief that it will recover in the future as the consensus eventually comes to the same view of the stock.

All active managers buy or overweight stocks, relative to their benchmark, that they expect to rise in price in the future. However, these investments are still usually made with reference to a benchmark, whereas a contrarian investment manager will simply seek out stocks that have fallen in value significantly and hold these stocks regardless of the sector in which they trade and without reference to a benchmark index. Most people tend to associate contrarian investing with value investing, but contrarian investors can also be growth investors. For instance, a growth investor may also sell a stock after a strong run in performance in the belief that the consensus view has driven the stock's price beyond its fair value. Indeed, just as markets undershoot by overreacting to bad news, to the benefit of value-oriented contrarian investors who position themselves against the market consensus, they also overshoot their intrinsic value to the benefit of momentum investors.

⁴⁹The momentum effect was first formally identified in a seminal research paper in 1993. See: Narasimhan Jegadeesh and Sheridan Titman. Returns to Buying Winners and Selling Losers: Implications for Stock Market Efficiency. *The Journal of Finance*. Vol 48, No 1 (March 1993) pp 65-91.

Stock picking

Arguably the oldest style of all is that of the pure stock picker. Stock pickers are generally not concerned with larger themes, dedicated styles, industry sectors or even a stock's market cap. They simply pick the stocks that they believe will perform well over time. That's not to say stock pickers are style agnostic, as their portfolios will show particular style traits consistent with the investment outcomes they target.

This bottom-up, high conviction, concentrated style of investing results in far fewer stocks being held than most equity fund managers, or their investors, would be comfortable holding and typically exhibits both a high active share and moderate tracking error if the manager is sector/industry agnostic, which most are.

Each investment style demands a different mind- and skill-set. For example, in the same way that Real Madrid's finest, defender Sergio Ramos and forward Cristiano Ronaldo, could never perform at their best by swapping positions on the hallowed turf of the Bernabéu, most value and growth managers would find it difficult to successfully emulate their counterpart's defensive and attacking investment styles, respectively. Therefore, it is vitally important that active managers adhere to their chosen investment style and don't succumb to *style drift*, or engage in *style rotation*. Moreover, evidence suggests that while style rotation can, at least in theory, be successfully undertaken by observing a multitude of economic and market indicators that collectively signal potential inflection points in the equity market, in practice style rotation has proved to be an elusive skill.⁵⁰ Style drift and style rotation can be monitored by using the output from multi-factor risk models employed by most fund managers and investment consultants that drill down into the DNA of a portfolio by identifying the extent of the portfolio's style bias.⁵¹

That said, the evidence surrounding the role of style drift in active manager returns remains inconclusive.⁵² Indeed, many fund managers argue that while growth and value investing have a different focus, they are not mutually exclusive, in that the majority of stocks exhibit, to varying degrees, both growth and value characteristics. Moreover, according to Warren Buffett, growth and value investing are joined at the hip in that investment styles and processes often overlap. For instance, not too many value managers would ignore a cheap stock simply because it looked to have strong growth prospects. In short, no two fund managers will approach any one investment style in exactly the same manner.

Despite this, style matters. Indeed, a growth-oriented stock picker would find it difficult to outperform in a value-driven market and vice versa.

After all, no single style outperforms over all time periods and in all market conditions: each periodically outperforms and underperforms other styles and the market. Because of this difficulty in identifying *ex ante* the style that is likely to outperform in the future, some equity fund managers adopt a *style neutral* approach. This can be done by blending sub-funds, each managed according to a distinctive investment style independently of the other, and combining these to form a single fund. When well implemented, this approach should offer returns that are more consistent and less volatile than the returns of the sub-funds in isolation, given the diversification of manager and investment style risk. This assumes, of course, that style drift is being closely monitored. More commonly, a single fund is used with the manager either rotating between styles or adopting a *style agnostic*, or stock picking, approach, given the practical problems of identifying style inflection points in an attempt to style rotate.

⁵⁰See: M. Lewis and N. Tessaromatic. *Style Rotation Strategies: Issues of Implementation*. Journal of Portfolio Management, Vol 30, No.4, pp160-9 (2004); A. Clare, S. Sapuric and N. Todorovic, *Quantitative or Momentum based Multi-Style Rotation*. Journal of Asset Management, Volume 10, Number 6, pp.370-81 (2010).

⁵¹These multi-factor risk models do this by using traditional valuation measures, such as the portfolio's average price-to-earnings ratio, price-to-book ratio, dividend yield, earnings growth prospects and the size of the stocks held, to quantify the extent to which the characteristics of the stocks held within the portfolio differ from the portfolio benchmark, so pointing to a particular investment style.

⁵²C. Howard Thomas suggests that a fund cannot outperform, on average, if it does not style drift. See: C. Thomas Howard. *Why Most Equity Mutual Funds Underperform and How to Identify Those that Outperform*. January 26, 2016. Similarly Russ Wermers found that funds that allow the most style drift are more likely to outperform. See: Russ Wermers. "A Matter of Style: the Causes and Consequences of Style Drift in Institutional Portfolios." Unpublished, University of Maryland. May 2010.

Stock valuation spreads

There are times when having the right active manager, a talented stock picker, can really make a difference. For example during recessions and episodes of fundamental regime change, characterised by periods of high volatility and highly dispersed stock returns.⁵³ This is especially true when stock valuation spreads – the difference in the valuation of the cheapest 20 per cent of stocks in the market compared to the average valuation of stocks – deviate from their historical average. This was dramatically illustrated at the height of the global financial crisis in 2008, when financial stocks were hit particularly hard, resulting in a marked dispersion of fund manager returns. Unsurprisingly, closet indexers and index trackers felt the full force of these declines. However, as the valuations of the very cheapest stocks returned to historical norms in the first half of 2009, so active management well and truly came into its own, with 70 per cent of active managers in the US outperforming the S&P 500, gross of fees. Crucially though, this outperformance was not evenly distributed. While 96 per cent of US large-cap value managers outperformed, only 16 per cent of large-cap growth managers did so, with the most marked outperformance being amongst US small-cap managers who averaged outperformance of 33 per cent⁵⁴ – such is the importance of investment style in determining returns, especially under such conditions.

Risk factor investing: the evolution of smart beta and alternative beta strategies

For years, academics and investors have been researching sources of return to understand what drives outperformance. Increasingly this research has been focused on smart beta and alternative beta strategies. A form of factor-based investing, these rules-based strategies, which are seen as an active/passive halfway house, are now entering the mainstream.

Both seek to systematically capture return streams from well-established risk premia, or pricing anomalies, with strong academic underpinnings. At odds with the Efficient Markets Hypothesis (EMH), each of these risk premia can be explained by persistent and well-documented investor behaviour in the burgeoning behavioural finance literature. While the benefits of alternative betas include daily liquidity and position level transparency, what appeals most to investors, in a world of highly correlated markets, is their minimal market directionality and low correlations with traditional asset classes, derived from the adoption of long-short strategies. This not only makes alternative betas genuine portfolio diversification tools, but also helps to limit portfolio drawdowns. By contrast, smart betas are those where market directionality still dominates returns, given their long-only nature.

While these risk factors, that underpin both smart and alternative beta strategies, have always been embedded in financial markets, their identification only began 35 years ago with Rolf Banz and his research into the small cap effect in 1981.⁵⁵ Then in 1993, the so-called Fama/French three-factor model showed that market beta alone was not enough to explain varying, or abnormal, stock returns. In addition to the small cap effect, EMH – adherents Eugene Fama and Kenneth French also discovered that value stocks, those with

⁵³See: Tobias Moskowitz. "Discussion: 'Mutual Fund Performance: An Empirical Decomposition into Stock-Picking Talent, Style, Transactions Costs and Expenses.'" *Journal of Finance*, vol.55, no.4 August 2000: 1695-1703; Robert Kosowski. "Do Mutual Funds Perform When It Matters Most to Investors? US Mutual Fund Performance and Risk in Recessions and Expansions". Working paper, Imperial College Business School. August 2006.

⁵⁴Empirical Research Partners. 8 October, 2009. While it is acknowledged that the S&P 500 is not an appropriate benchmark by which to judge small-cap returns, the point has been made to illustrate the importance of investment style.

⁵⁵Rolf W. Banz. 1981. Op cit.

a low book-value-to-price ratio, tended to generate excess returns. As a result, Fama and French determined that a stock's return depended on three factors – market beta, size and value.⁵⁶ In 1997, this was augmented by Mark Carhart's four-factor model, which added momentum to the other three factors explaining a stock's return,⁵⁷ following on from prior research that had shown stocks with strong short-term price momentum tended to carry on outperforming over the next 12 months.⁵⁸

Alternative betas are systematically captured across multiple asset classes, including equities, fixed income, credit, currencies and commodities, through non-traditional investment strategies, such as rules-based long/short, relative value and arbitrage. Most alternative beta strategies seek to capture between 25 to 40 academically-verified or behaviourally-driven risk premia – such as size and value for equities, momentum for all asset classes, and interest rate carry for fixed income and currency.

Alternative beta strategies can take varying approaches to capturing these diverse return streams, by focusing on a single asset class, multiple asset classes or solely on capturing specific risk premia. This decision is typically driven by the factor exposures and gaps in an investor's existing portfolio and the investor's overall risk appetite and diversification goals. As noted earlier, alternative betas have the potential to provide meaningful diversification for investor portfolios.

Constructing a liquid alternative beta structure with limited market directionality is, in principle, relatively straightforward. For instance, an investor seeking to systematically capture the value risk premium in equity markets – ie, the tendency of cheaper stocks to outperform expensive stocks over time – must first establish both the measure of value to be employed and the universe of stocks, or equity benchmark, from which to systematically capture this pricing anomaly. For instance, using price-to-book as the measure of value and the MSCI ACWI as the benchmark, one can rank the MSCI ACWI top-to-bottom based on price-to-book, from the cheapest stocks to the most expensive stocks, taking a long position in the top quintile of cheapest stocks and a short position in the bottom quintile of most expensive stocks. No investment is made in the middle 60% of the universe. The result is a structure that captures the value risk premium. Crucially, because long and short exposures are typically balanced, and the structure does not invest in the middle 60% of the universe, there is limited exposure to directional market moves, or market beta. By contrast, the returns from a long-only smart beta approach to capturing risk premia are dominated by market beta.

With the increasing separation by investors of alpha (the return from manager skill) from market beta (the return derived from a passive exposure to the broader market), the formulation of alternative beta investing has been integral to the fundamental reappraisal of what constitutes alpha. In particular, returns that were previously thought to be alpha can now, in many cases, be decomposed, at low cost, into investible, liquid risk premia largely isolated from more general market movements.

Of course, good active managers justify their value by both capturing these risk premia *and* by generating alpha over the long-term by profitably exploiting other untapped pricing anomalies. In addition, talented active managers can target desired investor outcomes and manage risk, in all its forms, according to the investor's risk appetite.

⁵⁶Eugene F. Fama and Kenneth R. French, "Common Risk Factors in the Returns on Stocks and Bonds", *Journal of Financial Economics*, Vol. 33, No.1, February 1993, 3-56.

⁵⁷Mark M. Carhart, "On Persistence in Mutual Fund Performance", *Journal of Finance*, Vol. 52, No.1, March 1997: 57-82.

⁵⁸Narasimhan Jegadeesh and Sheridan Titman. 1993. *Op cit*.

What is the evidence for smart beta?

In 2015, researchers at Cass Business School analysed the performance of a number of smart beta approaches against a market capitalisation-weighted index.⁵⁹ They collected the month end total returns on all US equities quoted on the NYSE, Amex and NASDAQ stock exchanges spanning the period from January 1964 to December 2014. Using this data they identified the 500 largest stocks by market capitalisation as at each December in their sample and constructed a market cap-weighted index, the weights for which were updated annually. Using the same data they also constructed eight smart beta indices.

Whereas the market cap-weighted index generated a mean annualised return of 10.6 per cent and a Sharpe Ratio⁶⁰ of 0.38, the smart beta indices produced mean annualised returns ranging from 10.8 per cent to 12 per cent and Sharpe Ratios between 0.39 and 0.49. Interestingly, the researchers also created a rules-based strategy based on the rules of the board game, Scrabble™ by assigning a Scrabble™ score to the three or four letter ticker for every stock in their dataset. They then divided each stock's score by the total score of all 500 stocks to give each stock's weight in the index. They repeated this process at the end of each year, just as they rebalanced the weights of the market cap-weighted index. Once again demonstrating the poor design of market cap-weighted indices, the Scrabble™ rules-based strategy delivered a mean annual return of 12.15 per cent and Sharpe Ratio of 0.44.

Recognising behavioural biases

No examination of what makes a good active fund manager would be complete without considering the extent to which a manager recognises and corrects their own behaviour for the disparate array of prevalent behavioural, or cognitive, biases to which investors typically succumb in a systematic fashion. Although most fund managers admit to recognising these biases, because failing to do so would result in sub-optimal investment decision-making, only the very best actually do so in a formalised way.⁶¹ Some of the more commonly-cited biases, a number of which were uncovered when looking at the key aspects of a manager's IP&P, are as follows:

- Representativeness: is the manager simply a trend follower, evidenced by subconsciously creating and extrapolating patterns and trends from a series of random events, without investigating the reasons for the apparent trend?
- Confirmation bias (cognitive dissonance): does the manager only seek out evidence that confirms a view they hold, dismissing anything that contradicts it?
- The endowment effect: does the manager pay more attention to and know more about the portfolio's overweight positions than the portfolio's underweight positions and, indeed, those stocks that form part of their universe but are not held.⁶² Skilful managers know as much about the latter as the former and are able to articulate scenarios that would challenge these positions.
- Gambler's fallacy: does the manager believe the market is about to change direction simply because longer-term data suggests a correction is due, despite the longer term not correlating with the shorter term?

⁵⁹A. Clare, S. Thomas and N. Motson. *Smart Beta: Part 2: What lies beneath? What is the evidence for smart beta?* Centre for Asset Management Research Cass Business School in cooperation with Invesco PowerShares. November 2015

⁶⁰Return in excess of the risk-free rate, divided by the volatility of that return. The higher the Sharpe Ratio, the greater the ratio of return to risk.

⁶¹The behavioural finance literature contends that it is easier to recognise the behavioural biases of others than your own.

⁶²Research suggests that confirmation bias compounds the endowment effect in that those managers who succumb to the latter bias also typically seek out confirming evidence that validates, rather than contradictory evidence that challenges, their overweight and underweight positions.

- Overconfidence: is there evidence of the manager overestimating their investment knowledge, skill and ability, often resulting in excessive portfolio turnover, to the detriment of investment returns? Does the manager suffer from information overload, gathering reams of information without context, leading to false empowerment, misplaced confidence and compromising the accuracy of their decision making?
- Adjustment conservatism: is the manager overconfident in their forecasting ability and so failing to adjust forecasts for new salient news and being subject to a series of company earnings surprises?
- Anchoring: has too much emphasis been placed on the price paid for a stock when considering the stock's future prospects and the price at which to sell?
- Ambiguity aversion: is there an unwarranted home bias to the manager's portfolios or an emotional attachment to stocks that should otherwise have been sold?⁶³
- Loss aversion: has the manager sold their winning stocks too soon and held on to their losing stocks for too long? Have they started doubling up on their loss-making positions?

Being prepared to ask questions in this area is crucial if investors are to avoid poor active managers.

Risk management

Risk management and appropriate risk allocations should be central to a manager's investment process. Good active managers are those who not only manage the known and more readily quantifiable risks but also those risks that are not so easily forecasted and calibrated. Indeed, a good manager in seeking to limit the portfolio's downside risk, will constantly evaluate the macroeconomic, company specific, geopolitical, regulatory and ESG risks to their portfolio, as well as the extent to which the portfolio is exposed to any one risk – not least overconcentrations of correlated active positions.

One of the key elements of risk management is having a disciplined approach to selling securities. This we considered when looking at the manager's IP&P and ability to recognise their behavioural biases. After all, it is much more difficult psychologically to sell a stock than buy one.⁶⁴ A talented active fund manager is not only one that buys well, but one that sells well too.

Another key aspect of risk management upon which we have touched on several occasions is successfully managing potential capacity constraints. The performance of even the best performing, quite possibly the most skilled, fund managers can be compromised by subsequent inflows of cash from investors chasing performance, as this can force the manager, overwhelmed by the sheer amount of cash, to depart from the strategy which generated that superior performance. A manager's capacity constraints will be determined by both the characteristics of the market in which they operate and the investment style they adopt. For instance, to operate effectively, a successful emerging markets equity or a developed markets small-cap equity fund manager may need to limit the size of assets under management to a fraction of the size of a fund managed by a large-cap developed market fund manager. In addition, given the relatively illiquid nature of emerging market and small-cap stocks and the much smaller free-float of such stocks, the manager should also place a limit on the amount of each stock's free float they own. A two or three per cent limit is not unusual. Good active managers are those who can tell you the optimal size of their portfolio, and the level at which they intend to close their fund to new business. Indeed, investors should always ask about the capacity of a fund before investing.

⁶³Decisions guided by feelings rather than analytical reasoning is known as the affect heuristic. See Daniel Kahneman. *Thinking Fast and Slow*. Penguin Books, 2011. p12.

⁶⁴This is captured by loss aversion. Loss aversion is typified by a fund manager, anchored to the price they paid for a loss making stock, running their losses, or even buying more of the stock, in the hope that the price will rise above this somewhat irrelevant anchor, or reference point.

The importance of humility and of being coached⁶⁵

The world's greatest sportspeople remain at the top of their game through a combination of continuous hard work, learning from their mistakes and, of course, great coaching. Despite big egos, they all display humility and crucially never blame anyone or anything other than themselves for failing to perform to the best of their ability. Instead, they continuously seek to be the very best they can be.

For instance, despite having just convincingly won the Australian Open in 2015, Patrick Mouratoglou, Serena Williams' coach, said of the tennis star, "*She can improve a lot. Her game at the net can improve and the transition from the baseline to the net can be improved a lot. Her swing volley can be better; she sometimes hesitates to move forward...*" And with that Serena was back on the practice court the following day to further refine her skills, analysing and learning from the data collected and imparted by her coach. She then went on to win every single major tournament that year.

However, just as Serena's game is estimated to be 85% skill and 15% luck, so fund management is thought to be 90% skill and 10% luck. But how many fund managers, especially after a run of strong performance, are prepared to take a long hard look at themselves and attribute their performance to what went right as well as wrong and accept advice on how to nurture the former and rectify the latter? According to Jeremy Beckwith, Morningstar's Director of Research, the very best fund managers "are passionate and single-minded about investing. They show humility and realise that at least one-third of their decisions are going to be wrong. The successful ones want to learn when they are wrong and when to cut their losses." They are also the ones who never blame irrational markets, the central banks or other factors seemingly beyond their control for poor performance. Rather, they simply seek to overcome such hurdles, working with others to refine their process and to gain and maintain that edge. Complacency is never an option. Former sportsperson turned CIO Larissa Benbow concurs, "Great managers, like great sports people, are constantly evolving strategy".

Although rarely having been the world's best themselves, the value of a great coach is in the difficult questions they ask, the constructive guidance they provide, their ability to act as a sounding board and provide fresh ideas to constantly evolve strategy. Dave Brailsford at British Cycling, for instance, is credited with turning Britain into the world's greatest cycling nation principally through a process of 'marginal gains' – improving every single contributor to performance, no matter how small or seemingly insignificant. The very best fund managers do similarly by seeking *genuine* challenge to their portfolio positions and ideas from both within and external to the organisation in which they operate.

⁶⁵The quotes in this section are reproduced from: Elizabeth Pfeuti, Editor, aiCIO. Uncoachable: Underperformance, egos and asset management's most obvious structural flaw. ai.com. 11 September 2015. See: <http://www.ai-cio.com/channel/NEWSMAKERS/Uncoachable/>

Gender

“‘Impulsive’ and ‘investing’ are not two words you want in the same sentence. You want an investor who is basing their decisions on facts, not emotions... That’s not always true for men. Men, I hate to say, have a tendency to look at the abyss – and then take a step forward. Women want to live another day.”

Hilda Ochoa-Brillembourg, Strategic Investment Group⁶⁶

Who make the best fund managers – men or women? Well, although the evidence is sketchy, according to the French investment funds association AFG in 2009, female fund managers produce more consistent and less volatile performance than their male counterparts. Although, according to the French research, female fund managers are rarely among the top performers, they are less likely to be among the bottom performers.⁶⁷

The principal problem with this research and other more contemporary studies, however, is the small sample size. Indeed, the relative paucity of female managers appears to be a global phenomenon with Citywire noting that only 7 per cent of investment funds worldwide are managed by women.⁶⁸ For instance, recent research from Morningstar⁶⁹ suggests that less than 10 per cent of US fund managers are women – a number that has been in decline for the past six years – with a mere two per cent of US industry assets being run exclusively by women, ie, most women in the US work in mixed fund manager teams. However, the Citywire research pinpoints notable exceptions, principally within continental Europe, Spain being the stand out example with 27 per cent of its asset managers being female.⁷⁰

Despite there being *far* fewer female asset managers than male, anecdotal evidence suggests that a greater percentage of female fund managers are highly rated by the fund management rating agencies – and for good reason. The behavioural finance literature seems to confirm that women do not succumb to as many damaging behavioural biases as men. Of course, it is always dangerous to generalise and much depends on the personality of the manager, but it would seem that women are arguably more analytical in their decision making. Women also appear not to blindly extrapolate perceived trends that more often than not prove to be just a series of random events that look like a trend. That is, women draw more extensively on their thoughtful and analytical, so-called, *System 2* way of thinking and less on their quick fire, intuitive *System 1* than men – which in many (though not all) situations is a distinct advantage.⁷¹

Indeed, a 2013 study of nearly 1,000 brain scans, perhaps unsurprisingly, confirmed that there are major differences between the male and female brain, not least in how men’s and women’s brains are wired.⁷² The research showed that although women’s brains are eight per cent smaller than men’s, they have more neural interconnections, with the left and right hemispheres – the logical and intuitive sides of the brain – being highly connected. By contrast, men’s brains are typically stronger between the front and back regions.

Consequently, women perform better at bigger picture and situational thinking. They are also better listeners than men, employ more analytical reasoning (as the behavioural literature suggests) and have a better reading of social situations. However, men are generally better at problem solving, performing mathematical tasks, processing spatial information about their surroundings, engaging in co-ordinated actions and have generally faster reaction times than women. Crucially,

⁶⁶The Missing Women of Asset Management. CIO. 20 June, 2014.

⁶⁷See Ffim, 23 March 2009, p.11.

⁶⁸Citywire Smart Alpha. Alpha Female. May 2016.

⁶⁹Morningstar Research Report. Fund Managers by Gender. June 2015.

⁷⁰Citywire. May 2016. Op. cit.

⁷¹See: Daniel Kahneman, *Thinking Fast and Slow*, Penguin, 2011, pp.20-21, 48-49.

⁷²Ragini Verma et al., “Sex differences in the structural connectome of the human brain”. University of Pennsylvania, Philadelphia. Proceedings of the National Academy of Sciences, Edited by Charles Gross, Princeton University, Princeton, NJ, approved November 1, 2013. The research examined brain scans of 949 males and females aged between eight and 22 years old.

the research also confirmed what most of us already know, that women are better at multi-tasking, while men tend to be better at performing a single task. This is principally a consequence of women typically having better memories than men – women outperforming men in attention tests and being better at recalling words, names, faces, pictures, objects, and everyday events.

However, when it comes to assuming risks – whether intended, unintended, potentially rewarded or not – all of which ultimately determine a fund manager's performance, men's brains are decidedly more geared towards risk-taking. Indeed, male brains experience a bigger burst of endorphins and sensation of pleasure when faced with a risky or challenging situation. In fact, the bigger the reward, the more likely a man will take a risk (accepting that risk taking behaviour is somewhat tempered if a loss has recently been experienced). However, as Wall Street trader turned neuroscientist, John Coates, confirms, the differences in physiology and biology also play a role, notably the fact that women produce a fraction of the amount of testosterone and the stress hormone, cortisol, men generate. This means women are less prone to excessive, euphoric testosterone-driven risk taking when markets are surging higher or after having taken a series of highly profitable positions. Equally, women don't appear to be as prone to excessive cortisol-inspired and stress-induced risk aversion when markets turn tail or after having realised a series of loss-making positions.⁷³

To shed more light on this issue, two US researchers, Brad Barber and Terrance Odean, looked at the trading behaviour of a large number of US investors.⁷⁴ They analysed the stocks that 66,000 retail investors bought and sold between 1991 and 1996. The average investor had a portfolio turnover of 75 per cent but the most aggressive had a turnover of 250 per cent. Between 1991 and 1996 the market returned 17.9 per cent and the average active investor 11.4 per cent. They found that the single men in their survey had the highest portfolio turnover, followed closely by married men, while both single and married women had similar low portfolio turnover statistics. Was this because single men knew the most, and were better money managers? Interestingly, they found that the 20 per cent of investors that turned over their portfolios the most – largely single men – after transactions costs, earned an average return of seven per cent over the sample period studied; while the 20 per cent of investors that turned over their portfolios the least – largely single and married women – after transactions costs, earned an average return of 18.5 per cent over the same period.

More recently, hedge fund research conducted by HFR to end-June 2015 found that funds owned or run by women outperformed over one, three and five years and significantly so since 2007.⁷⁵ Similarly, hedge fund research conducted by consultants Rothstein Kass to end-June 2013 found that women had comfortably outperformed men over the six-and-a-half year period from the start of 2006, with the outperformance appearing strongest during the global financial crisis of 2008.⁷⁶ That would seem to concur with the fact that, given the lower turnover within female fund manager portfolios, and women's tendency to be more long-term oriented and to stay wedded to their investment choices during turbulent periods, these female hedge fund managers would have benefitted from the rebound in risky asset values in 2009. However, once again the data set in both studies was small given that in the former case only 60 female managers reported to the HFR database, while in the latter only 125 female-run hedge funds did so, accepting the added complication of self-selection bias.⁷⁷

Finally, in considering US manager performances over 12 months to 10 years, Morningstar's research found that mixed-gender teams were the best long-run performers with little separating men's and women's performances in managing mainstream asset classes, despite women typically running more expensive funds across niche areas of world markets.⁷⁸ However, where women did positively differentiate themselves from men was in managing asset allocation, or multi-asset, funds over the medium term.

⁷³The truth behind testosterone: why men risk it all. *Wired*. 27 January 2013.

⁷⁴Barber B.M. and T. Odean. Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment. *Quarterly Journal of Economics* (2000).

⁷⁵See *FTfm*, 17 September 2015.

⁷⁶Is gender a factor in fund performance? *Financial Times*, 9 February, 2015.

⁷⁷Self-selection bias is when a fund manager has the option of reporting their performance to a performance measurement database.

⁷⁸Morningstar. June 2015 Op. cit.

Why does having so few female asset managers matter?

It would appear that women make excellent investment professionals (whether better than men is a moot point). Yet, as we know, women are significantly outnumbered by men. So why does this matter? In short because diversity is being compromised, and diversity matters. Diversity should not be seen as an end in itself, but as adding a valuable, arguably invaluable, dimension to active management. Being different is just as important as being smart. Indeed, we have already referred to the fact that women do things differently to men as a result of different neural connections and physiology. Women are arguably better risk managers, in that they appear to focus more on downside protection than men, stick to their investment choices, most notably through market turbulence, and approach decision making and aspects of portfolio construction differently to men. While this supports the AFG evidence that women produce more consistent and less volatile performance than their male counterparts, this diversity of decision making and approach potentially has its greatest impact in a mixed team environment. Indeed, we have seen that mixed team results generally trump the performance of single-sex managed funds.⁷⁹

Not that we should be surprised by this, given that diversifying the biology of the investment floor counterbalances the extreme euphoric and downbeat tendencies caused by high testosterone and cortisol levels. Moreover, the antithesis of the more optimal decisions that flow from diversity is the sub optimal decision making, or groupthink, that results from homogeneity, or single mindedness. Groupthink, the culmination of unchallenged decision making, is rife in many walks of life, with the resulting sub optimal decision making having been the root cause of some of the world's greatest catastrophes, such as Pearl Harbour and the doomed space shuttle Challenger. It can also be particularly damaging if left unchecked in portfolio construction and money management. Indeed, given the somewhat compelling evidence around diversity improving decision making, incorporating diversity rankings within manager and fund ratings would surely further improve decision making around manager selection. In fact, a diversity kite mark has been suggested by some.

Of course, diversity extends beyond gender. Combining factors such as age, social and educational background and ethnicity improve decision making, at least anecdotally.

⁷⁹Morningstar, June 2015. Op cit.

SECTION 7: CONCLUSION

By way of conclusion, we'll finish on the note on which we started. The appropriate active/passive mix for any investor depends on their investment beliefs – principally around how markets function, how securities are priced and the value of diversification – but also on their investment goals, governance budget and how they frame risk.

What should be emphasised is that taking the line of least resistance and opting for a low cost passive solution every time is rarely the best way forward for all of the reasons considered earlier in the paper.

Suffice to say, despite the practical problems often associated with determining active manager skill, by applying the requisite due diligence, investors really can increase their chances of finding potentially exceptional active fund managers who deliver desired investment outcomes. Moreover, seeking out skilful active managers really can be worth the governance budget, especially with fundamental social, economic and political regime change on the horizon. Indeed, given the likely implications for equity markets and investment returns, this is exactly the environment in which talented stock pickers can yet further differentiate themselves.

BIOGRAPHY

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Chris has over 30 years of experience of the finance and investment industry and regularly features in the pensions and investment press.

Chris is responsible for raising Columbia Threadneedle's presence and profile in the global institutional market, mainly through thought leadership and other generic educational initiatives. Prior to this, Chris was Client Director, Cass Business School Executive Education and Head of Investment Education at Aviva Investors.

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