

## Active Management: A Practitioner's Perspective

---

The chorus proclaiming the “death of active management” has grown louder in recent years and there has been a massive shift of capital out of active and into passive strategies. In this paper we share our perspective, as bottom-up stockpickers, on the active versus passive debate.

### Summary

- Data appears to show that active managers, as a group, have performed poorly in recent years.
- However, this is misleading because active management is *always* a zero-sum game in aggregate.
- Instead, investors must decide whether or not *individual* managers can add value.
- We still see good reasons to believe in active management—but only if managers do the things necessary to maximise their odds of success on behalf of their clients.
- Ultimately we believe the current headwinds facing active managers are a cyclical confluence of events that is likely to pass.

## Active Management: A Practitioner's Perspective

It is often said that the past few years have been “difficult” for active managers. In a sense, however, it is always difficult because active management is a zero-sum game. As Bill Sharpe demonstrated many years ago using simple arithmetic (see below), both active and passive investors must, on average, have the same return before fees, which must also equate to that of the market overall. The total amount won by the winners can vary over time, but it must always equal the amount lost by the losers.

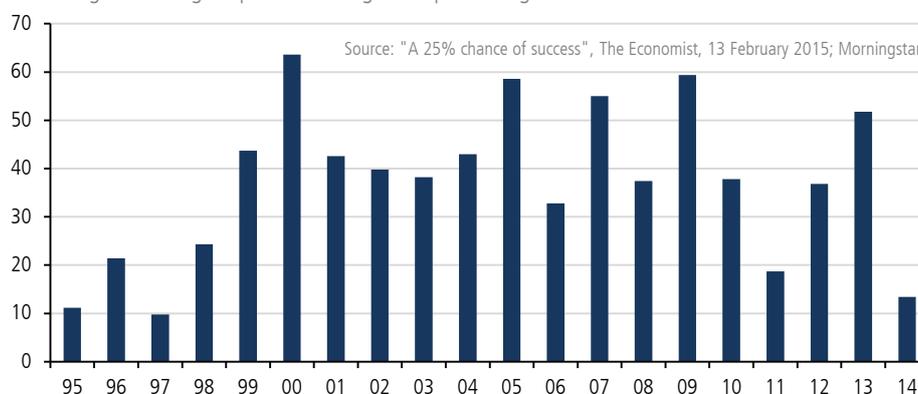
The key difference is the higher cost of active management, which guarantees that a passive approach will always be superior on average. Layer on tax inefficiencies and misguided investor behavior such as buying and selling at the wrong time, and the realized performance difference between the average active manager and a passive alternative can be very meaningful. According to research published in the *Financial Analysts Journal*, this headwind amounts to roughly 3% per year, on average<sup>1</sup>. Compounded over decades, the cumulative reduction in wealth can be enormous.

Still—nearly 25 years after Sharpe’s seminal article—it remains quite common to see news headlines and research reports proclaiming that a given period, such as 2014, was a “tough year” for active managers. But how can that be if it’s always a zero-sum game? While the arithmetic for the market as a whole is irrefutable, most empirical studies only look at specific groups of managers for which there is sufficient data (e.g. actively managed large-cap US mutual funds) and compare their performance against readily available benchmarks such as the S&P 500. Although these studies generally use the best available data as a reasonable proxy, it’s important to remember that they are not truly comparing all “active managers” against all “passive managers” or even against “the market” in the purest sense.

For that reason, any article or report that claims to show evidence of better or worse times for active management is likely to suffer from measurement error more than anything else. Consider the chart below. In a zero-sum game with a large number of players, one would expect dollars of outperformance and dollars of underperformance to be evenly divided on a gross basis each year. But in reality, the performance of active managers as a group swings widely over time. The data appears to show that many active managers tend to win and lose together, seemingly contradicting the zero-sum arithmetic.

### Active manager performance varies significantly from year to year

Percentage of US large-cap active managers outperforming S&P 500



## Active Management: A Practitioner's Perspective

---

### ZERO-SUM GAME

In a succinct 1991 Financial Analysts Journal article entitled “The Arithmetic of Active Management”, Stanford professor and Nobel Prize-winner William Sharpe made two assertions:

- 1. Before costs, the return on the average actively managed dollar will equal the return on the average passively managed dollar and*
- 2. After costs, the return on the average actively managed dollar will be less than the return on the average passively managed dollar.*

Sharpe then went on to prove his point using only simple arithmetic. The first statement holds true because the market's overall return at any given time is a weighted average of the return of all securities within the market. Since passive investors simply follow the market, they must also receive the same weighted average return as the market, before costs.

As Sharpe notes, it also follows “as the night from the day” that the average actively managed dollar must also be the same. That's because the overall market return must be a weighted average of the return on the active and passive investing. So if the market return is, say 10% and passive investors achieve the same, then the only possible average return for active investors must also be 10%.

Sharpe's second point then becomes clear when one considers that active management has inherently higher costs than a passive approach because managers must pay for teams of research analysts as well as higher trading costs and other expenses. Since the before-cost returns are, by definition the same on average for both active and passive, the latter's after-cost return is always superior on average.

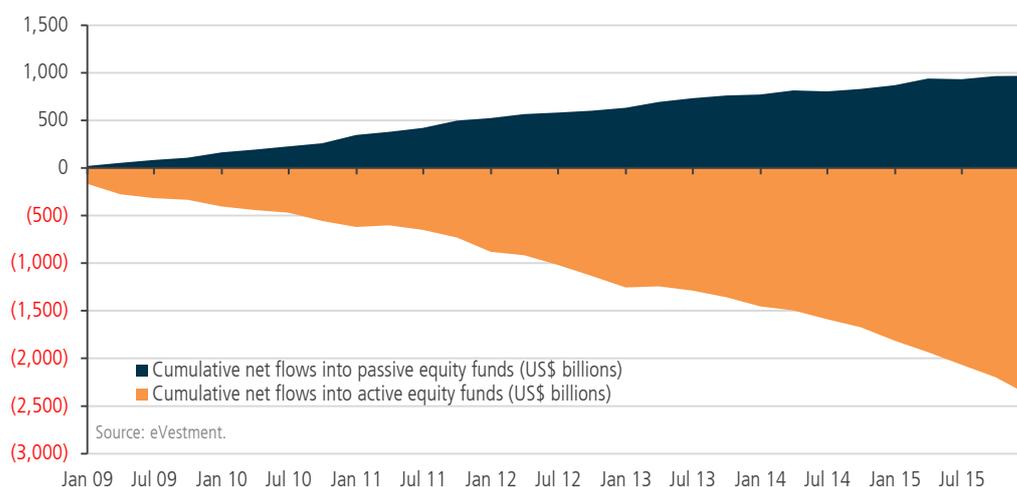
A closer look reveals that a set of common factors usually has a significant impact on performance for many active managers. Research has shown that this can be explained by active managers systematically holding assets that are not in their benchmarks<sup>2</sup>. For instance, active managers in the US tend to hold at least some portion of their portfolios in cash and non-US stocks. Additionally, large-cap managers tend to hold a meaningful number of smaller cap stocks in their portfolios that are not in their benchmarks. The worst outcome for US large-cap active managers as a group, which collectively receives the most attention, is therefore a situation in which cash earns nothing, the US market delivers positive absolute returns, US equities outperform ex-US markets, and large cap stocks outperform small-cap stocks. This is precisely the environment that US managers faced in 2014.

For many investors, the key takeaway has been that active management is “dead” and this is evident in the flow of assets from active to passive strategies. Since 2009, more than US\$2.0 trillion has flowed out of active equity funds globally, while nearly US\$1 trillion has flowed into passive equity funds. Much of this movement has occurred in the past four years.

## Active Management: A Practitioner's Perspective

### Since the financial crisis, investors have flocked to passive funds over active ones

Cumulative net flows into all passive and active equity funds tracked by eVestment, 2009 through December 2015



While the picture above certainly isn't pretty for active managers, we think it would be a mistake to proclaim the "death of active management" based on the environment of the past few years. In our view, this argument is too often used as a convenient excuse for poor performance on the part of individual active managers and as an argument in favor of passive investing by their critics. We think both sides are missing the point.

An important reality, sometimes lost in the discussion of zero-sum arithmetic and headline-grabbing fund flows, is that there is—always has been, always will be—a very wide distribution of managers, some of whom will outperform and some of whom will not. The fact that active management cannot add value on average does not prove that some skilled managers cannot do so over time.

As bottom-up stockpickers ourselves, it goes without saying that we firmly believe stockpicking can add value. Our objective in this paper, therefore, is not to argue the active versus passive debate, but rather to offer our perspective as practitioners and to highlight several key questions that we think investors should consider when making up their own minds:

1. Does skill exist in investment management?
2. Can you identify skilled managers in advance?
3. Is it "different this time"?

#### QUESTION #1: DOES SKILL EXIST IN INVESTMENT MANAGEMENT?

The first crucial question to consider in the active versus passive debate is the question of whether or not skill exists in investment management. If it does not, then the case in favor of active management collapses quickly and there's not much else to say. The narrative against active management generally begins with the premise that markets are extremely efficient and most stocks are efficiently priced most of the time. Skill is extremely rare, critics of active management contend, almost to the point that it doesn't exist<sup>3</sup>. Consequently, any excess returns are simply luck or are entirely explained by the risks assumed. Even worse, goes the narrative, the competition is only getting more intense as the number of active funds grows, managers within the industry consistently invest to raise their game ("The Paradox of Skill")<sup>4</sup>, and retail investors increasingly give up on picking stocks and switch to passive alternatives.

## Active Management: A Practitioner’s Perspective

A critical problem in the top-down argument outlined above is that it fails to recognize that skill is a necessary, but not sufficient, condition for adding value. In particular, such arguments are generally measuring the wrong thing by only looking at the end result (performance of the total portfolio) and not distinguishing between a manager’s ability to identify a set of high-conviction stocks that he believes will outperform, reflecting skill, and his willingness or ability to construct a portfolio that consists only of that set, reflecting his organizational context and incentives. In other words, this view does not consider that the lack of realized alpha may be as much a function of organizational frictions like benchmark risk, career risk, tracking error constraints, and limited investment capacity—all of which induce a manager to hold additional low conviction stocks, as it is of manager skill.

Our own experience as practitioners is that great investment ideas are very difficult to find, and we have no doubt that our performance would be substantially diminished if we forced our analysts to each select 100 stocks instead of their 10-20 best ideas. This view is also supported by research from Randy Cohen at MIT (previously Harvard) and his co-authors in which they measured the return of managers’ highest conviction holdings or “best ideas” compared to the market and to the rest of their portfolios<sup>5</sup>. The results were striking:

*“We find that the stock that active managers display the most conviction towards ex-ante, outperforms the market, as well as the other stocks in those managers portfolios, by approximately one to four percent per quarter depending on the benchmark employed. The results for managers other high-conviction investments (e.g. top five stocks) are also strong. The other stocks managers hold do not exhibit significant outperformance.”*

Of course, this is just one study, and we have no doubt that future research will find evidence both for and against the existence of skill. But we would caution against conflating observed performance with skill, a necessary, but insufficient condition. Just because a manager has underperformed a given benchmark that does not mean that they lack skill—and vice-versa. Instead, there may be other factors at work that have diluted (or enhanced) their observed performance. In our experience, firm structure and incentives are absolutely critical in translating investment skill into value for clients.

### SKILL VS RESULTS

#### Can the manager identify undervalued stocks?

Without skill, everything else is moot

#### Is the manager incentivised to invest in the stocks they identify?

If the manager’s incentives reward different behavior, like minimizing tracking error, they may not want to build a portfolio that reflects their skill

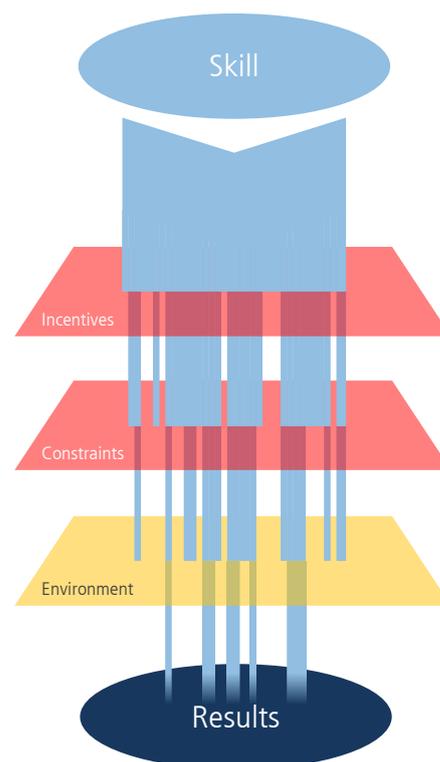
#### Can the manager implement a portfolio of the stocks they identify?

If a manager is unable to implement their ideas due to capacity or other constraints, the portfolio may not reflect their skill

#### Does the environment reward the manager’s skill?

In the short term, an unfavourable market environment may stop skill from producing results even if a manager is able to implement their ideas

Over full market cycles, the effects of the environment should fade. If a manager has good incentives and well-managed constraints, above average skill should be able to deliver superior results over the long term



## Active Management: A Practitioner's Perspective

---

While these important factors add yet another dimension of complexity to the challenge of successful active management, the silver lining is that they are, at least in theory, under a manager's control, and potentially identifiable ahead of time by investors.

While realized performance is important, investment returns are only one part of the performance equation; equally important is the amount of risk undertaken to achieve those returns. Avoiding risk, while seeking to generate superior returns, requires a great degree of skill, even if it is not immediately apparent in short or even medium-term performance.

How one defines risk is therefore of crucial importance to how one perceives the performance of active managers. The challenge, in our view, is that under most reasonable definitions, risk is impossible to measure systematically, either retrospectively or prospectively. Further, if one can't measure risk systematically, then this adds yet another layer of noise to the already difficult task of assessing manager skill through observed performance.

We believe that risk is best defined as the probability of permanently losing money, and that as stewards of client capital, investment managers have a responsibility to avoid permanent impairment of the capital they've been entrusted to manage and to seek a reasonable margin of safety when making investment decisions. On the other hand, investing in a passive strategy avoids the risk of underperformance, but we would not consider it "safe" to buy a broad collection of stocks without regard to their individual merits.

Ultimately, we think the best approximations for assessing the risks that a manager assumes to generate returns are the sizes of drawdowns and the times to recovery. While markets can be irrational at times, a stock that is already priced below its true value is likely to fall less than one that is overpriced, and will generally recover faster when fear subsides. Using this approximation, active managers collectively don't perform any better than they do on other measures, but this is not surprising given the trend toward closet indexing and the pervasive emphasis on benchmark risk and tracking error avoidance.

### QUESTION #2: CAN YOU IDENTIFY SKILLED MANAGERS IN ADVANCE?

Assuming that skilled managers exist, a much tougher question for investors is whether or not they can identify such managers in advance, or at least avoid unskilled managers. We face a similar challenge when assessing the stockpicking ability of our analysts. We cannot be certain in advance which analysts will add value for our clients, but we believe that there are a number of characteristics that we can look for in order to improve the odds of success. Likewise, investors can look for similar characteristics when assessing investment managers. Each of the elements discussed below—which comprise investment philosophy and process as well as organizational design—have a role to play in maximizing the chance that active managers can deliver superior, risk-adjusted performance.

One common thread that skilled investors share is the ability to take advantage of the mistakes made by others. Charlie Ellis, citing Dr. Simon Ramo's classic work on the game of tennis, calls this "winning the loser's game". Both individual and institutional investors make plenty of mistakes, but in our experience there are three really big ones that stand out, all of which are the result of basic human nature:

- Temptation to grow AUM at the expense of performance
- Inability to take bold decisions when appropriate
- Success breeds its own demise

In our experience, if you can routinely avoid these pitfalls—or invest with managers that do—then you are putting yourself in a great position to have the odds stacked in your favor.

## Active Management: A Practitioner's Perspective

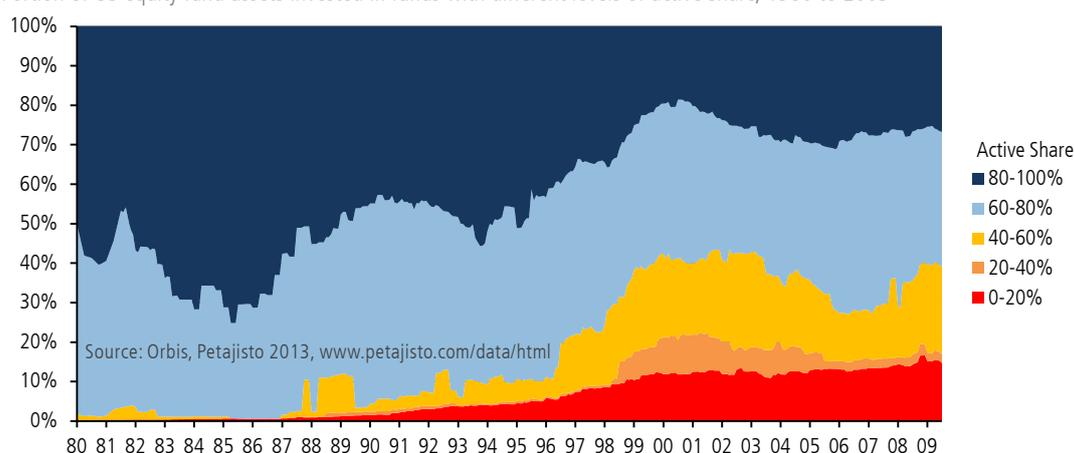
### Temptation to grow AUM at the expense of performance

Due to the economics of flat fee structures, asset managers have a very powerful incentive to gather assets rather than focusing on performance. Some might say that performance is also important, but the reality is that asset size is much more closely correlated with distribution strength than investment performance. As long as performance isn't too bad, and the firm has a strong distribution business, investment managers can do very well.

The unfortunate result, as shown in the charts below, is that so-called "closet index" funds (as defined by low levels of active share) are even more common in the US than passive funds and the proportion of equity funds that are truly active has declined sharply over the past 30 years. While active share is an imperfect metric in some respects, we think it is fair to say that, all else being equal, portfolios that are highly similar to the index will have meaningfully lower odds of achieving a positive net-of-fee return, even if the manager has some skill. For instance, a manager with a 1% management fee and 25% active share would need to generate 4% annual outperformance on the quarter of their portfolio that was different than the benchmark just to cover their fee.

### Indexers and closet indexers account for a growing share of mutual fund assets

Portion of US equity fund assets invested in funds with different levels of active share, 1980 to 2009



Related to this, some critics of active management<sup>6</sup> have noted that there has been a downward trend over time in the dispersion of active manager returns—that is, the annual returns of active managers have become more clustered together – and these critics have concluded that this is evidence that it has become more difficult for skilled managers to outperform. We think the much more likely explanation is simply the rise in closet indexing shown above; with fewer managers actually building portfolios that are meaningfully different from their benchmarks, it follows that the dispersion of outperformance and underperformance would also decline.

### Inability to take bold decisions when appropriate

It is the nature of markets that some of the greatest investment opportunities are presented when investors are least willing or able to capitalize on them. Just think about buying stocks in the depth of the global financial crisis or avoiding the tech bubble at its frothiest peak. While those decisions may seem obvious in hindsight, investors face enormous pressure in the heat of the moment and tend to capitulate at just the wrong time. Clients also tend to do the same in a manager's performance cycle—investing after a period of great performance and redeeming when relative returns are poor.

## Active Management: A Practitioner's Perspective

---

The owners of investment firms feel all of these same pressures too. As a result, it's important to have owners who are able to withstand this pressure and avoid firing a great investment team at the peak of the tech bubble or when their investment style happens to be temporarily out of favor. Having a firm that is entirely under the control of people who understand the investment cycle is critical in that regard.

External shareholders, on the other hand, will naturally respond to the same pressures to capitulate at just the wrong time, and will often impose those pressures on the firm. For example, pushing the manager to produce smoother quarterly earnings rather than tolerating short-term volatility for the sake of superior long-term returns. One might argue that ownership rarely makes a difference to performance, which is true, but when it matters, it matters a lot. A disproportionately large portion of alpha opportunity comes at these cyclical extremes, so the decisions whether to fold or to hold are critical, and those are precisely the conditions where ownership really does matter.

### Success breeds its own demise

There are some pursuits in which "success breeds success", but the cruel irony of our profession is that even if one successfully navigates all the earlier pitfalls, success will itself often lead to failure. If a manager is even moderately successful in generating attractive returns for clients, the compounding that is so beneficial to clients will create problems for the manager. If asset prices rise, say 5% per annum, and one creates, say 5% alpha, one might expect that to attract 10% net client flows per annum. That's north of 20% per annum compounded growth a doubling of assets under management in less than four years.

To cope with such asset growth, managers can choose one of three paths:

- Allow assets to grow and reap the economies of scale (while performance decays)
- Return capital to clients
- Reinvest in growing the capacity of the firm ahead of the growth in AUM.

In reality, there really isn't much choice. A lot depends on the structure of the firm and its incentives. For example, managers who charge flat fees or have profit-maximizing external shareholders will have a hard time justifying anything but the first choice. The second and third options depend on one's priorities. If preserving the track record is considered a high priority, then option two becomes the likely choice and external shareholders will typically push for this option. But this doesn't help clients who must now find a new manager with whom to invest the capital that has been returned, and this approach will lead to decay within a static firm. Option three is clearly the most appealing for clients if successful, but it is much easier said than done, and there's no guarantee of success.

To summarize, we believe that skill exists, but there is no question that an array of very powerful forces conspire against the translation of this skill into long-term investment returns for clients. Investors can give themselves a fighting chance by focusing on managers with portfolios that are truly active, with incentives that motivate investment returns over asset gathering, and with a structure that allows skill to flow through into fund performance. Finding a manager with these attributes is not easy, but it is not impossible. And it is worth it. A manager who can outperform by even several percentage points per annum can create enormous value for clients over the long term.

### What do skilled managers have in common?

Even Jack Bogle has conceded that some individual managers can add value, listing the following six characteristics in a presentation at the Grant's conference in early 2015:

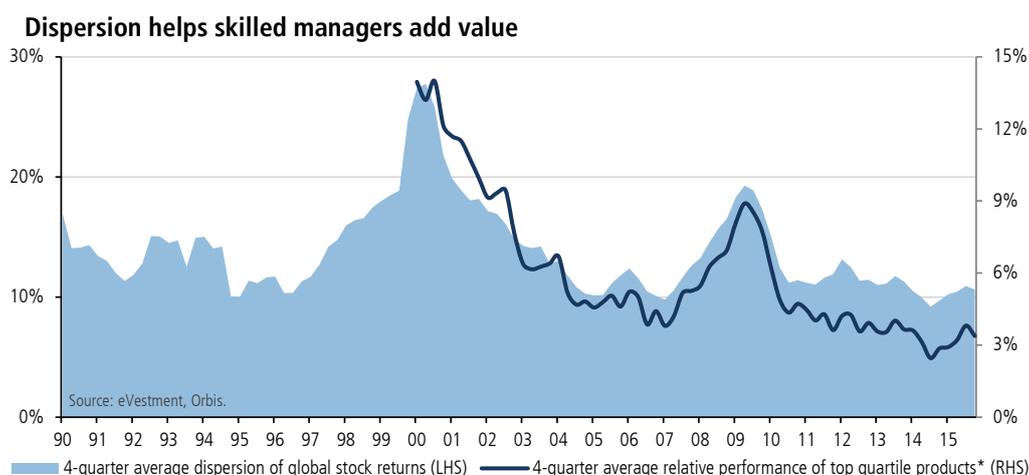
- Managers, Not Marketers
- Reasonable Expense Ratios
- Low Portfolio Turnover
- Limitations on Size
- Interim results that may vary sharply from the market's return
- Investment professionals own and operate the management company

## Active Management: A Practitioner’s Perspective

### QUESTION #3: IS IT “DIFFERENT THIS TIME”?

A central aspect of the active versus passive debate is the extent to which active managers’ recent struggles represent an enduring change. The argument for a secular decline is generally based on the view that competition is getting steadily more intense. While we don’t disagree that competition is probably becoming more intense—what industry is not becoming more competitive?—we think such arguments greatly overstate the case for structural change.

Imagine a stockmarket in which every stock moves exactly in unison. By definition, every active manager would achieve the market return, and, after fees, would detract value. In contrast, imagine a market where the range of returns between winners and losers is very wide. While the average manager is still doomed to underperform after fees, such an environment at least offers the possibility that a skilled active manager can add value by owning the winners and avoiding the losers. Simply put, it’s more difficult to make money as a stock picker when there is little difference between winners and losers. The point we are seeking to illustrate is that the dispersion of returns offered in the market is an important determinant of the possibility for a skilled active manager to add value. Indeed, research has shown that active managers, at least those with some skill, tend to outperform when stock dispersion is high and that they underperform when dispersion is low.<sup>7,8</sup>



\*Global Equity products which are actively managed, with a fundamental approach and have an average active share above 60% are selected from the eVestment database. A rolling 4-quarter average of the average performance of the top quartile products is shown at each date. Statistics are compiled from an internal research database and are subject to subsequent revision due to changes in methodology or data cleaning.

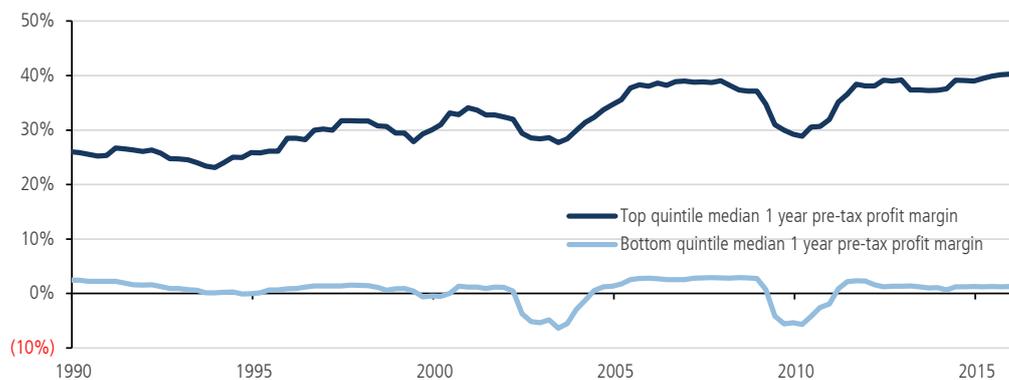
In this regard, the past five years have indeed been an unusual period, with the dispersion of market returns well below the historical average. In fact, over the last five years, there have only been two quarters during which dispersion has been above the historical average! The question, then, is to what extent the low dispersion over the period is itself cyclical or structural. We can think of two possible reasons that low dispersion could be structural, but don’t see evidence to support either.

The first possibility is that the investment universe itself has changed such that fundamental business performance has become more homogeneous, resulting in less stock return divergence. A potential explanation for such a convergence of fundamentals might be that better corporate management and governance has left “fewer mutts in the kennel,” so to speak, thereby making it harder to outperform by simply avoiding the worst companies. If this were true, it should be reflected in a declining dispersion of fundamental performance, with the worst companies in particular showing the most improvement. As shown in the chart below, however, the opposite is actually true—the divergence of fundamentals appears to be widening.

## Active Management: A Practitioner's Perspective

### The dispersion of fundamentals in global stocks is widening

Median 1-year pre-tax profit margin of top and bottom quintile shares in the FTSE World Index, 1990 to March 2016.

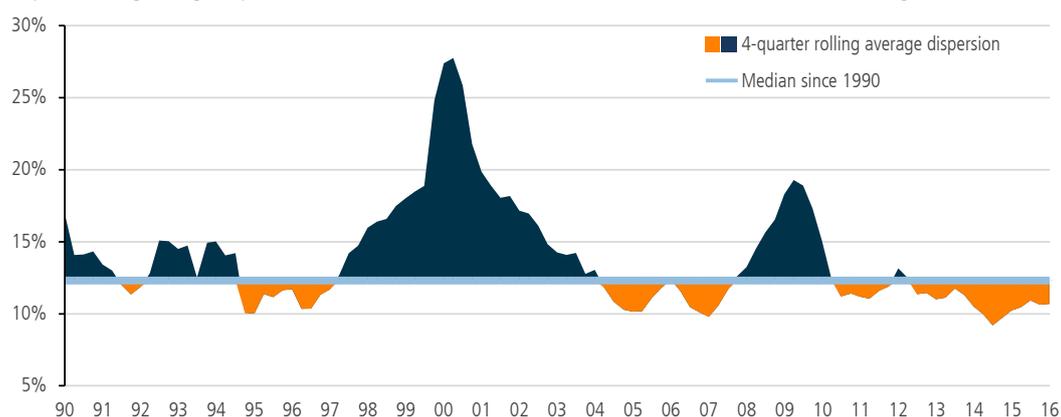


Statistics are compiled from an internal research database and are subject to subsequent revision due to changes in methodology or data cleaning.

A second possible reason that low dispersion could be structural is that the market has become more efficient, resulting in fewer mispriced stocks. While we have no desire to step into the general debate about market efficiency, what we can say is that although dispersion does not imply mispricings, the two variables are probably correlated. Thus, the tendency of return dispersion to stay relatively flat over the long term is more consistent with the conclusion that efficiency is not increasing than if the dispersion trend were sharply downward. What we observe very clearly, however, is that return dispersion is cyclical, and that the current stretch has been unusually long.

### The dispersion of returns has been well below normal for the past five years

4-quarter rolling average dispersion in returns of shares in the FTSE World Index, and the median, 1990 through March 2016



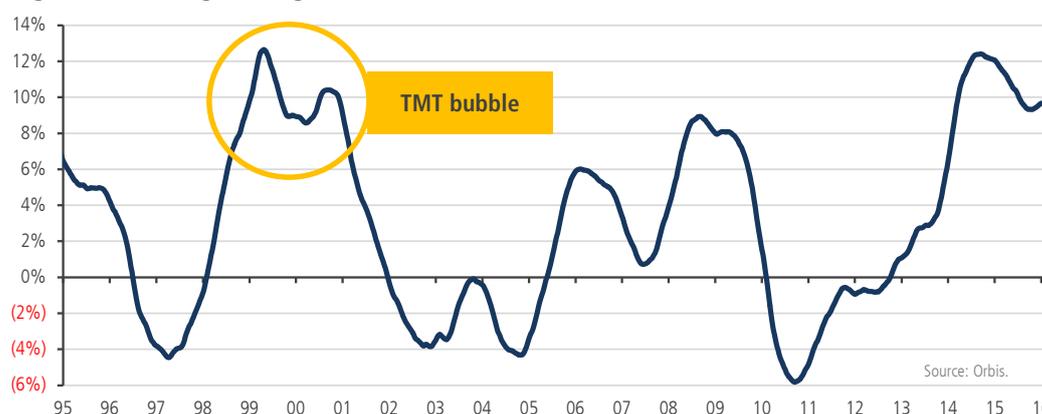
Statistics are compiled from an internal research database and are subject to subsequent revision due to changes in methodology or data cleaning.

Indeed, the current period of low dispersion is most notable not for its depth but for its duration. There have been other extended periods of low dispersion over the past 25 years, such as the mid-1990s during the run-up to the tech bubble, as well as the mid-2000s, but none have lasted as long as the current period. This painfully long episode of sustained low dispersion has, in the classic pattern of herds, led many to conclude that the environment has fundamentally changed and that attempting to achieve an above average return by actively picking stocks has become a fool's errand.

## Active Management: A Practitioner's Perspective

We think, however, that the primary culprit is not a structural change in the market but rather the massive quantitative easing across much of the developed market, which has pushed up the prices of all assets, irrespective of their intrinsic values. In this sense, low dispersion is a close cousin of the “trending” phenomenon that has been a characteristic of global markets in recent years. The following chart plots the degree to which past winners have continued to outperform since the mid-1990s. As one would expect, the late 1990s saw a high degree of trending as technology, media, and telecommunications (TMT) shares outperformed consistently for multiple years. It was a classic example of share prices becoming detached from the reality of their fundamental value—and many value-oriented managers (Orbis included) struggled to keep up with the broader stockmarket. The most recent period, which spans the end of the global financial crisis until today, has also been a strongly trending market. Part of this has been driven by extreme measures taken by central banks in the wake of the global financial crisis. Regular liquidity injections have led to asset inflation as the incremental money supply has fueled further inflows into the recent winners, which has in turn sustained the momentum.

**Degree of trending in the global market**



Note: The chart shows the degree of “trending” in the FTSE World Index. At each point in time, we rank the stocks in the index on their performance in both the trailing 12-month period and the 12-month period before that. We then calculated a statistical measure of correlation (Spearman’s Rank Correlation) between those two ranks at each point in time. Because the data is highly volatile in the short term, we smoothed the results using a four-year rolling average to reflect the degree of trending over the medium term. Statistics are compiled from an internal research database and are subject to subsequent revision due to changes in methodology or data cleaning.

A second and related dynamic is the hunt for positive real return and yield. Real interest rates are negative in many countries (indeed, nominal interest rates have turned negative in some) and many 10-year plus bonds, both sovereigns and some corporates, now offer negative real yields. Loss aversion is a well-known factor in psychology and behavioral finance. Investors are more likely to take on risk when the alternative is a certain loss. If investors cannot generate a positive real return in safer assets, then they will move their money to other assets where positive real returns are possible, albeit far from guaranteed. This is a recipe for asset bubbles, and the assets that have benefitted the most this time have been those with stable “bond-like” characteristics such as high-yielding equities in defensive businesses. The more aggressive central banks have become, the more investors have flocked to the apparent “safety” of these assets, which has also sustained the trend.

Finally, the flood of money into passive strategies in recent years, without regard for the investment merits or valuations of individual stocks, has also caused shares to increasingly move together. This, in turn, fuels even more benchmark-hugging behavior by active managers who are fearful of being left behind. While each of these phenomena would have been difficult independently, the combination of low dispersion and high trending has conspired to create a particularly challenging environment for value-oriented managers (Orbis included).

## Active Management: A Practitioner's Perspective

---

While we can't predict when radical monetary policy in the developed markets will end, or when the flows into passive investments will slow, we remain confident that neither will continue forever. What we do know for certain is that momentum-driven markets have typically ended badly in the past and investors who have focused on valuation and fundamentals at those times have been handsomely rewarded. When they do end, we believe that individual company fundamentals will once again play a more prominent role. In fact, it may be the case that merely the anticipation of a more "normal" policy environment will be enough to change the current trends. While only time will tell if this is a true turning point or simply short-term noise, we may be seeing the early green shoots of a new spring, with dispersion rebounding from the 2014 trough.

### CONCLUSION—THIS TOO SHALL PASS

At the moment, it seems as though active managers can't do much of anything right. But this is actually nothing new. Throughout history there have been plenty of occasions when active management has been in and out of fashion—and this happens to be one of the latter. As we have discussed above, however, we think the recent spate of observed active manager underperformance is best viewed as a cyclical result of a confluence of events that are likely to eventually pass.

The truth, however, is that active management always has been and always will be a zero-sum game and there will be some managers who add value and some who don't. In recent years, growth- and momentum-oriented managers have clearly earned their keep while value investors have struggled. We believe the more general critiques that skill doesn't exist and that active managers don't add value are logically flawed, at least as applied to managers who are truly active. More importantly, there are things that an investor can do to meaningfully improve their odds of finding a manager who will add value. Specifically, an investor should look for a structure and organization that will allow skill to translate into fund performance with minimal dilution or distortion, incentives that are well aligned with clients, and a portfolio that is substantively different than the benchmark.

From our perspective as practitioners, we still see good reasons for investors to consider active management—but only if managers do the things that are necessary to maximize their odds of success on behalf of clients.

## Active Management: A Practitioner's Perspective

---

### REFERENCES

- <sup>1</sup> John Bogle, "The Arithmetic of 'All-in' Investment Expenses", *Financial Analysts Journal*, Volume 70, No 1, Jan/Feb 2014.
- <sup>2</sup> "Is Skill Dead?" - GMO, February 2015.
- <sup>3</sup> "Luck versus Skill in the Cross-Section of Mutual Fund Returns," Eugene Fama and Kenneth French, *The Journal of Finance*, Vol. 65, Issue 5, October 2010.
- <sup>4</sup> Michael Mauboussin, "Alpha and the Paradox of Skill", *Credit Suisse*, July 15, 2013.
- <sup>5</sup> Randy Cohen, Christopher Polk, and Bernhard Silli, "Best Ideas", March 2009
- <sup>6</sup> *The Incredible Shrinking Alpha*, Larry Swedroe and Andrew Berkin, 2015
- <sup>7</sup> Paul, Joseph Gerard, "No Time to be Passive - Get Active Now," *AllianceBernstein*, January 2009.
- <sup>8</sup> Petajisto, Antti, "Active Share and Mutual Fund Performance," *Financial Analyst Journal*, Volume 69, Number 4, July/Aug 2013.

### NOTES

These materials do not constitute an offer or solicitation to invest in the Orbis Funds.

This document provides general information only and does not constitute financial advice.

Orbis Investment Management Limited and Orbis Investment Management (B.V.I.) Limited are licensed to conduct investment business by the Bermuda Monetary Authority. Approved for use in the United Kingdom by Orbis Investment Advisory Limited, 28 Dorset Square, London, England NW1 6QG; a firm authorised and regulated by the Financial Conduct Authority. The distributor of the Orbis Funds in Australia is Orbis Investment Advisory Pty Ltd (AFSL No. 237862). Approved for use in Canada by Orbis Investment Advisory (Canada) Limited, Suite 2600, Metrotower 1, 4710 Kingsway, Burnaby, British Columbia, Canada V5H 4M2, a firm registered as an Exempt Market Dealer in each of Canada's 10 provinces. Orbis Investment Management (Hong Kong) Limited (BCU034) is licensed to deal in securities (Type 1 RA) by the Hong Kong Securities and Futures Commission. Orbis Investments (U.S.), LLC is a broker-dealer registered with the U.S. Financial Industry Regulatory Authority. Orbis Investment Management (U.S.), LLC files as an exempt reporting adviser with the U.S. Securities and Exchange Commission. Orbis Investments K.K. is a Type-1 Financial Instruments Business Operator registered at Kanto Local Finance Bureau of Japan (Kanto Local Financial Bureau (FIBO) No.2944).

### LEGAL NOTICES

Orbis Fund share prices fluctuate and are not guaranteed. When making an investment in the Funds, an investor's capital is at risk. The Orbis Funds are speculative and involve a high degree of risk. The Funds' performance may be volatile. An investor could lose all or a substantial amount of its investment. The Funds' manager has total trading authority over the Funds and the use of a single adviser applying generally similar trading programs could mean lack of diversification and consequently higher risk. For some Orbis Funds, there is no secondary market for interests in the Fund, and none is expected to develop. There are restrictions on transferring interests in the Funds. The Funds' fees and expenses may offset the Funds' trading profits. Subscriptions are only valid if made on the basis of the current prospectus or offering memorandum of an Orbis Fund, and is subject to the prospective investor meeting certain qualification standards. Read the prospectus carefully prior to investing. Persons who are not permitted to receive this communication should not rely on it.

While we have endeavoured to ensure the accuracy of the information herein such information is not guaranteed as to accuracy or completeness. At any time, members of the Orbis Group may have long or short positions in, and may be buying or selling, the investments, if any, referred to in this presentation. This document has been prepared solely for the information of the party to whom it has been delivered and may not be reproduced or used for any other purpose. All rights reserved.

### BENCHMARKS

Benchmarks and indexes are shown for illustrative purposes only, may not be available for direct investment, are unmanaged, assume reinvestment of income, and have limitations when used for comparison purposes because they may have volatility, credit, or other material characteristics (such as number and types of securities) that are different from the Funds.