Fourth Quarter 2015

Schroders
The hidden risks of going passive

Disaffection with underperforming fund managers can push investors towards 'passive' management of their assets. Sometimes the rationale for this shift is that the average returns from active management may not justify its higher cost.

We think it would be a mistake to believe that going passive is a low risk route to success or that it offers a 'set-and-forget' approach. We therefore consider the potential risks of adopting passive approaches.

There is no such thing as a passive asset allocation policy, yet it can make an important difference – and in certain cases, the greatest difference – to return potential.

In this paper we argue that:

- Different portfolio returns are the result of both asset allocation and active stock selection decisions.
- Passive indices can contain unwelcome biases and hidden concentration risks, while also increasing investors' exposure to wider systemic risk.
- Active management is required to ensure that capital is allocated efficiently within markets.
- Certain active managers can outperform passive indices over the long term, often those with high 'active share', but it is important not to let expenses eat up the excess returns.

The importance of asset allocation

First and foremost, it is important to remember that one of the biggest decisions any investor makes is how they allocate their assets. For instance, even the best active manager in one asset class will often underperform the worst asset manager in another. In the example in Figure 1, the impact of the asset allocation decision was demonstrably more significant than the active-passive decision. It is interesting to note that the difference between the index returns of US large cap equity and US investment grade bonds was approximately 12% over the 3-year period – far more than differences in returns within each asset class. A number of academic studies have confirmed that decisions on allocating to different underlying investment markets can account for significant performance differentials between portfolios.

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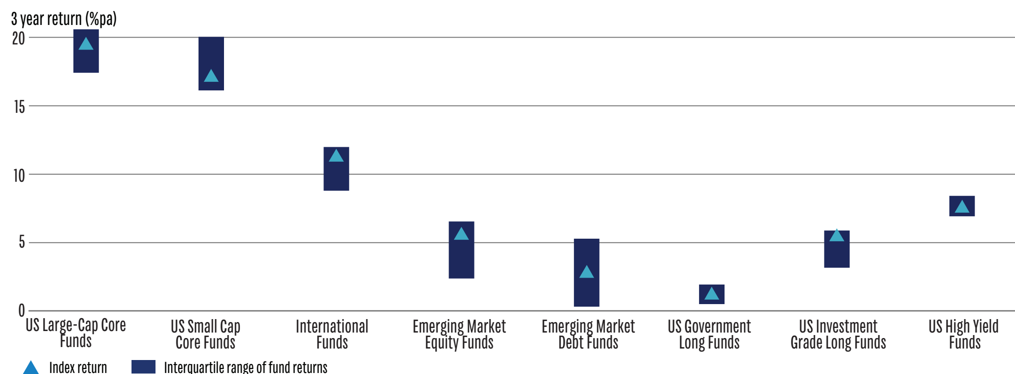
Figure 1: Asset allocation matters: three year returns of different asset classes



Source: Schroders. Three-year look back period data from S&P Indices versus Active Funds (SPIVA) Scorecard Year-End 2014. Corresponding indices: S&P 500, S&P 600, S&P 700, S&P/IFCI Composite, Barclays Emerging Markets, Barclays Long Government, Barclays Long Government/Credit, Barclays High Yield, December 31, 2014. Performance shown is past performance which is no guarantee of future results. The value of an investment can go down as well as up and is not guaranteed. Strategies shown are for illustrative purposes only and should not be viewed as a recommendation to buy/sell. SPIVA is a registered trademark of S&P Dow Jones Indices LLC, a part of McGraw Hill Financial, Inc. SPIVA reports based on categories of interest using Lipper capitalization and style classifications. Please refer to the important information section on page 8 for more details.

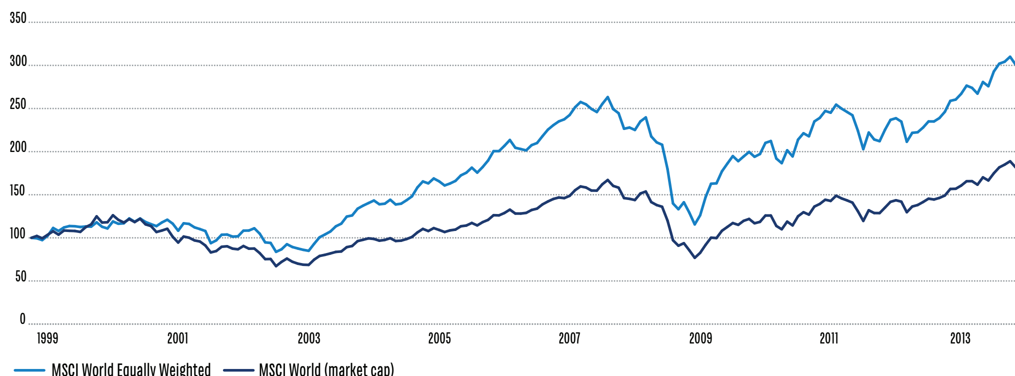
> "This discrimination means that active managers can be referred to as 'price makers', directing capital towards healthier companies in the process. In contrast, passive managers are not able to distinguish between good and bad and are forced to "invest" in all the stocks in an index.

Whether, and how much, to allocate to different asset classes is therefore a decision of paramount importance. It is also inescapably active – it is impossible to make a 'passive' asset allocation decision. However they manage their portfolios, investors cannot avoid making a decision about which broad categories of assets to use: equities, bonds, property, alternatives, etc. Once that course has been charted, the investor needs to make a decision on what vehicle or vehicles to use: whether to use active or passive management to gain access to the assets they have chosen.

Untoward valuation biases

Investing using passive indices can certainly have benefits, including diversification, transparency and low costs, but passive strategies also carry their own risks. For instance, traditional equity indices weight the stocks that they contain by market capitalization, so that bigger companies dominate. At the end of September 2015, almost three-quarters (74%) of the total value of the MSCI World Index – a benchmark widely followed by passive investors – was accounted for by large cap stocks valued at more than $20 billion. It may seem intuitive to weight stocks in this way, but we see a number of problems with this approach. One is that investors may be buying into yesterday's winners as these could be stocks which performed well historically, but are now more prone to underperform as smaller stocks erode their market dominance. This effect is evident when a traditional market cap weighted index, such as the MSCI World, is compared with an index that removes the market cap bias, such as the MSCI World Equally Weighted Index. The market cap weighted index lagged significantly, as seen in Figure 2 below.

Figure 2: A market cap bias can weigh on returns



Source: MSCI Barra, Schroders. Both indices are shown in US Dollars and net dividends are reinvested, May 31, 2015. Performance shown is past performance. Past performance is not a guide to future performance. The value of an investment can go down as well as up and is not guaranteed. Indices shown are for illustrative purposes only and should not be viewed as a recommendation to buy/sell.

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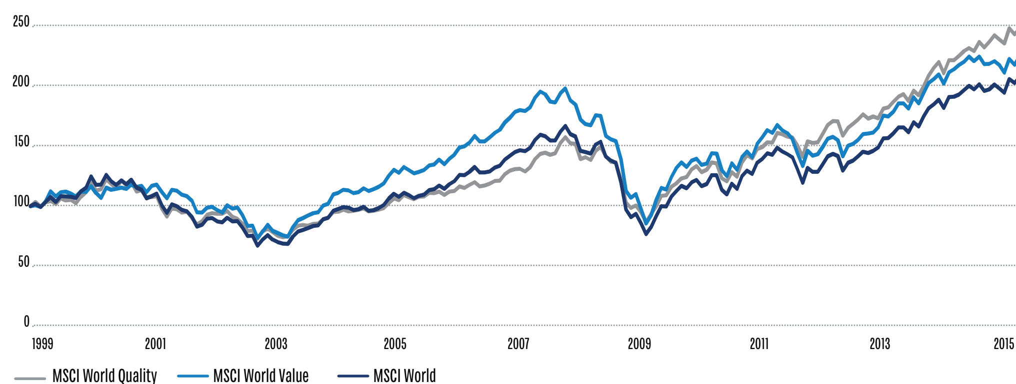
As well as tending to favor highly valued and expensive stocks, indices can be biased towards stocks that are judged to be low quality on measures such as stability of earnings growth. Both types of stock – whether expensively valued or poor quality – are likely to prove a drag on long-term returns. In contrast, stocks seen as having cheap valuations or high quality characteristics have tended to outperform traditional benchmarks (Figure 3). So active managers that have the ability to select from these parts of the market also may have the ability to outperform over the long term.

Figure 3: Discrimination by value and/or quality can bear fruit in investing



Source: MSCI Barra, Schroders. Both indices are shown in US Dollars and net dividends are reinvested, May 31, 2015.Performance shown is past performance. Past performance is not a guide to future performance. The value of an investment can go down as well as up and is not guaranteed. Indices shown are for illustrative purposes only and should not be viewed as a recommendation to buy/sell.

Restricted choice and concentration risks

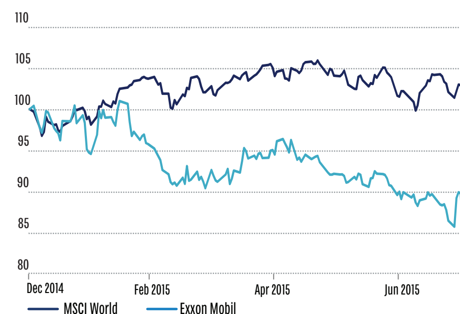
Another problem that passive investors need to overcome is the lack of breadth that comes from an investment strategy based on indices. An index-bound investor unnecessarily restricts their investment choices. For instance, while the MSCI World Index is currently composed of over 1,600 stocks, we calculate that the universe of global stocks with sufficient investable liquidity comes to more than 15,000. Moreover, as we have suggested, index investors further narrow their choices by their bias towards big companies. There is a huge range of mid, small and micro cap stocks beyond the reach of the index, and these categories have all outperformed large cap historically.

In certain market environments these inherent biases can be compounded when even larger concentrations develop in traditional market cap indices. For instance, in February 1989, 44% of the MSCI World was composed of Japanese stocks as a bubble formed in Japanese asset prices. Also in February 2000, technology and telecoms stocks made up over 35% of that same global index. In both cases, these two parts of the market – Japanese stocks and the technology and telecoms sector – underperformed significantly as their high valuations unwound in subsequent periods.

This concentration risk has not gone away. At the end of June 2015, 9.4% of the value of the MSCI World Index – tracked by many passive funds – was represented by the top 10 stocks, or less than 1% of the total by number. This means that there is considerable concentration risk for anyone buying an index tracking fund. Exxon Mobil, for example, is the second largest weight and has significantly underperformed many other stocks in the index due in part to the recent drop in oil prices. (Figure 4).

Figure 4: The MSCI World Index is vulnerable to under-performance among its top five stocks...

Position	Stock	Weight
1	Apple	2.0%
2	Exxon Mobil	1.2%
3	Microsoft	1.1%
4	Johnson & Johnson	0.9%
5	Wells Fargo	0.8%



Source: MSCI Barra, Bloomberg, Schroders, through August 3, 2015. The top five constituents of the MSCI World Index are shown at December 31, 2014 before the Exxon Mobil stock price fell. Performance shown is past performance, which is not a guide to future performance. Other periods achieved different results. The value of an investment can go down as well as up and is not guaranteed. Securities/indices shown are for illustrative purposes only and should not be viewed as a recommendation to buy/sell.

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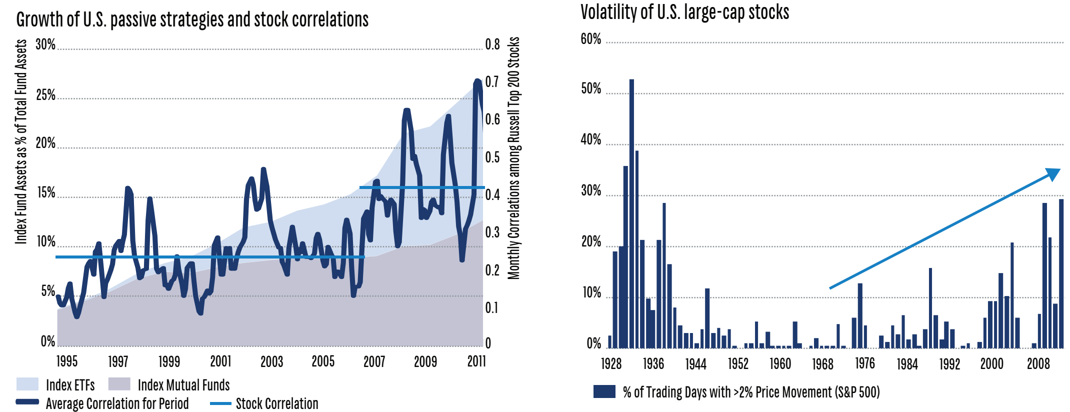
Arguably, the index stocks to which they are exposed are more likely to fall in value at the same time, and in greater magnitude, than those held by active managers who do not hold index positions.

Systemic risks

Arguably more serious for passive investors is the unintended systemic risk to which this approach can expose them. This can result from the process of so-called ‘price discovery’: the way the market arrives at the price for any particular stock. An active manager who receives favorable information about a stock will be more likely to buy it, causing the price to rise. By the same token, a manager who receives adverse information about a stock is likely to cause its price to fall. This discrimination means that active managers can be referred to as ‘price makers’, directing capital towards healthier companies in the process. It was essentially what Adam Smith, the father of economics, was thinking about in the 1700s when he likened markets to operating like an ‘invisible hand’. The consequence should be that economic growth is enhanced as capital is allocated to where it is used most efficiently by society. In contrast, passive managers are not able to distinguish between good and bad and are forced to “invest” in all the stocks in an index, irrespective of any views about their value or quality. As a result, they are often known as ‘price takers’.

This price taking may lead to unintended consequences. Fidelity Investments, the fund management group, estimates that since 1995, assets in passive equity funds and exchange traded funds (ETFs) have grown significantly from 4% of US equity index funds to 27% by 2011. Over the same period, average stock correlations – the propensity for share prices to move together – grew from an average of 24% to 42%, as shown in the first chart in Figure 5 below. At the same time, the volatility of the US equity market also rose significantly, as illustrated by the second chart in Figure 5. This suggests that passive funds may have contributed to these effects by their buying and selling of the same index stocks at similar times.

Figure 5: Growth of passive strategies has coincided with increased correlations and volatility

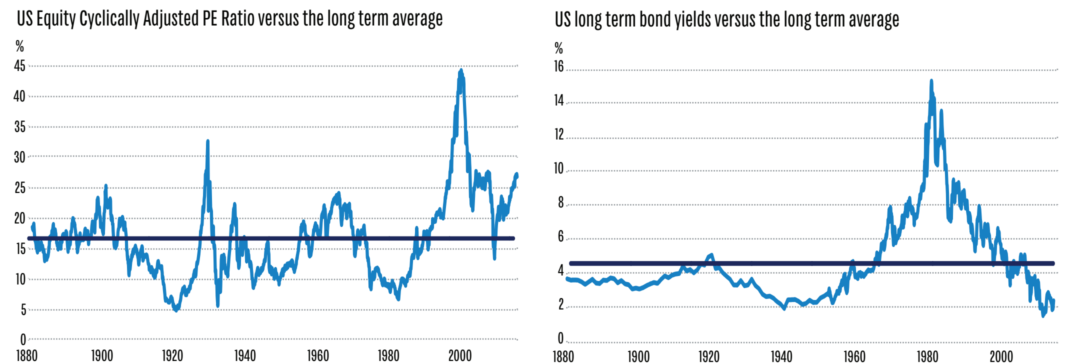


Left chart: Source - Investment Company Institute, Simfund, Haver Analytics, Fidelity Investments as of Dec. 31, 2011. Right chart: S&P 500 Index representative of U.S. large-cap stocks; Source: Standard & Poor's, Bloomberg, Fidelity Investments as of Dec. 31, 2011. Source: Fidelity Investments 'Active and Passive Investing: Both Are Essential to Long-Term Financial Markets Health' by Ren Cheng, June 2012. Performance shown is past performance. Past performance is not a guide to future performance. The value of an investment can go down as well as up and is not guaranteed. Indices shown are for illustrative purposes only and should not be viewed as a recommendation to buy/sell.

It should also be noted that global markets have become more synchronised recently. Companies based in different parts of the world have become more global, making their share price performances more alike. An index that has become more volatile in one region is more likely to fall at the same time as an index based on another region. So investors who have chosen to invest in passive funds containing large cap stocks to, say, avoid the idiosyncratic risks of small companies may have simply replaced one risk with an even greater, systemic, risk. Arguably, the index stocks to which they are exposed are more likely to fall in value at the same time, and in greater magnitude, than those held by active managers who do not hold index positions.

This problem has been compounded as certain equity and bond markets do not look cheap compared to their long-term average valuation levels. For instance, cyclically adjusted price earnings (CAPE) ratios – a measure of long-term value – are currently higher than average for US equities, while US government bonds yields are lower (Figure 6). These high valuations may unwind over the medium term, hitting returns for passive investors who buy now. At the time of writing this report, US equities, which make up approximately 50% the global equity market, have one of the more expensive valuations of all region.

Figure 6: Both equities and bonds look expensive on long-term measures



Source: Robert Shiller's Online Data http://www.econ.yale.edu/~shiller/data.htm, Schroders, June 2015. Yields fluctuate over time.

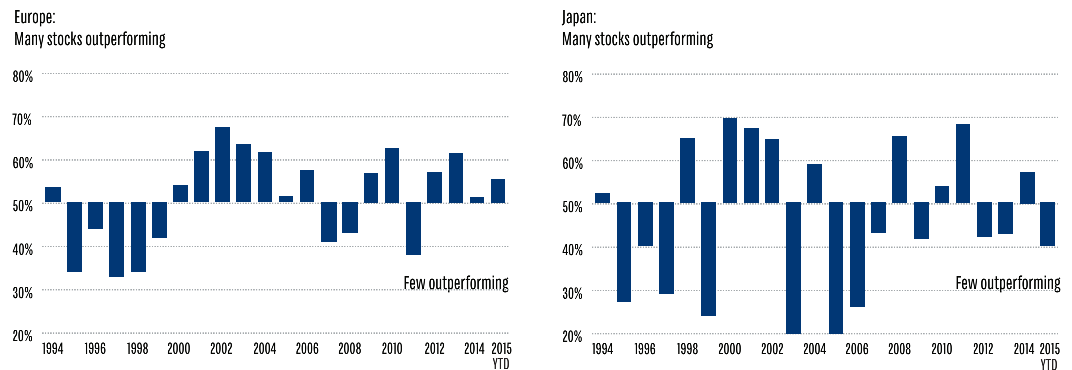
Breaking free from the index

Of course, an active manager with the latitude to pick and choose across the market may still be able find pockets of value, while avoiding expensive regions and individual stocks. For instance, they would be in a position to under-weight the US and over-weight cheaper regions, giving them the potential to outperform global indices over the long term.

Their ability to do so should be helped by their freedom to pick and choose among those markets from around the world which display above-average proportions of outperforming stocks. For instance, the left-hand chart in Figure 7 shows that at the end of April 2015 a net 56% of stocks in the European market had outperformed year to date, compared with a net 51% in the previous year. By contrast, the Japanese market (right-hand chart) has swung in the opposite direction over the two years. So, while a passive global manager would have been forced to buy both markets indiscriminately, there has been a significant opportunity for an active manager to add value through stock selection in Europe, while – if they had had the authority – underweighting certain Japanese stocks.

> These were 'stock pickers'... in other words, those who had a high active share.

Figure 7: The performance opportunities are constantly changing in global markets: net percentage of shares outperforming or underperforming the MSCI regional indices



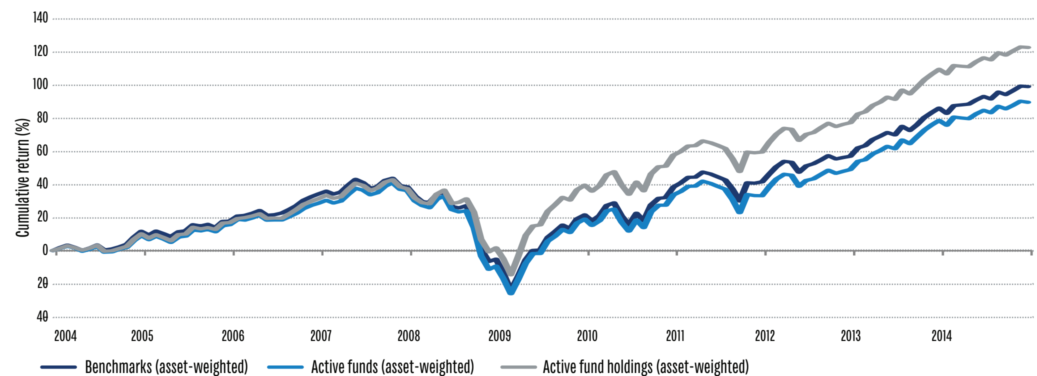
Source: Schroders, April 30, 2015. The proportion of global stocks outperforming the MSCI Regional Indexes using the QEP Mega to Small universe. Performance shown is past performance. Past performance is not a guide to future performance. The value of an investment can go down as well as up and is not guaranteed. Regions shown are for illustrative purposes only and should not be viewed as a recommendation to buy/sell.

> Those managers who had the ability to take significantly different views to the benchmark tended to outperform, with the 'stock pickers' group outperforming markedly both in terms of gross and net performance.

Despite its manifest drawbacks, investors may feel that they should consider passive management if they do not have the resources to find an active manager that can outperform over the long term. Certainly, over the years, research has contested whether active managers can demonstrate such an ability. One well-documented study[1] by Joseph Mezrich and Yasushi Ishikawa of Nomura, the investment bank suggests the reason might be to do with fees. The authors looked at the performance of actively managed mutual funds in the US equity market, one of the most efficient in the world and hardest to outperform. The study found that, in aggregate, the underlying stocks held by US mutual funds outperformed their benchmarks by over 2% a year from January 2004 to December 2014. However, it also suggested that the running costs ate up all the outperformance and a bit more, leading the funds themselves to underperform. The authors' conclusion was that investing in an active US equity mutual fund can generate outperformance, but investors need to be aware of the associated fees and expenses of the active funds that they invest in. Investors should take care that expenses do not outweigh any gains.

1 'Your Fund Managers Really Can Pick Stocks', Joseph Mezrich and Yasushi Ishikawa, Nomura Securities International, May 4, 2015.

Figure 8: Active US equity mutual fund holdings outperformed benchmark indices. However fund expenses can offset this



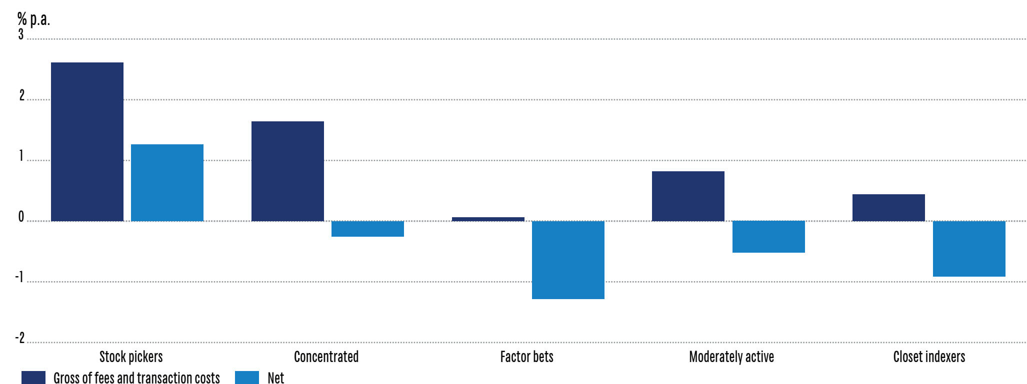
Source: 'Your Fund managers Really Can Pick Stocks', Joseph Mezrich and Yasushi Ishikawa, Nomura Securities International, May 4, 2015, CRSP S&P, Russell, Schroders. The chart shows the cumulative returns of U.S. large-cap active funds (asset-weighted, light blue line), the benchmarks (asset-weighted, dark blue line), and aggregated fund holdings in the Russell 1000 universe (grey line) from January 2004 through December 2014. The funds belong to U.S.-equity large-cap core, large-cap value, and large-cap growth funds based on Lipper's fund classification, with fund holdings data available in the CRSP database. Past performance is no guarantee of future results.

The importance of active share

This finding is confirmed by another recent study[2]. Antti Petajisto, a finance professor at the NYU Stern School of Business, found that, on average, US active equity managers do have the ability to outperform the index, but this outperformance is often eroded by fees and transaction costs. Interestingly, though, one type of manager was found to have been more likely to outperform net of these costs over the long term from 1990 to 2009. These were 'stock pickers' whose portfolios diverged markedly from the index – in other words, those who had a high active share. Interestingly this relationship wasn't found over a shorter term time horizon by Mezrich and Ishikawa.

This outperformance was particularly notable given that the US equity market is commonly considered to be the most efficient of world markets and the hardest in which to outperform. The gross and net outperformance by different types of active managers over 20 years is shown in Figure 9. Those managers who had the ability to take significantly different views to the benchmark tended to outperform, with the 'stock pickers' group outperforming markedly both in terms of gross and net performance.

Figure 9: Not all active managers are alike: active US equity managers relative returns to the index 1990 to 2009



Source: 'Active Share and Mutual Fund Performance', Antti Petajisto, July 2013 (http://www.petajisto.net). The chart shows the annualized equal-weighted benchmark adjusted performance of US all-equity mutual funds, excluding index funds, sector funds,and funds with less than $10 million in assets. Performance shown is past performance. Past performance is not a guide to future performance. The value of an investment can go down as well as up and is not guaranteed. Strategies shown are for illustrative purposes only and should not be viewed as a recommendation to buy/sell.

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2 Active Share and Mutual Fund Performance, Antti Petajisto, Financial Analysts Journal 2013, volume 69, number 4.

This group took positions that were significantly different to the benchmark, yet their risk relative to the benchmark was lower than the concentrated managers group. The study therefore reaffirmed the long term case for active management.

Conclusion

In this paper we have found that it is hard to escape making active decisions when setting investment strategy. There is no such thing as a passive asset allocation policy, yet it can make an important difference – and in certain cases, the greatest difference – to return potential. Therefore, investors should regularly review their specific asset allocation to ensure it is appropriate for their purposes as market and economic conditions evolve.

Once that decision has been made, there may be reasons for adopting passive investment approaches, but investors should realise that they may face unforeseen risks. These include undesirable concentrations of stocks, systemic risk and buying at too high valuations. Investing passively should not be seen as a low governance 'set-and-forget' option.

While it is not a panacea, active management can overcome some of these issues. It can also have a significant impact on returns. Indeed there is evidence that active fund managers' portfolios can outperform. However investors should be careful not to let high fees and expenses cancel out excess returns. Furthermore certain types of fund managers may offer a greater likelihood of outperforming over the long term, such as those managers that are dedicated to maintaining high active share portfolios.

We believe that, whatever decisions investors finally take, they need to understand the issues raised in this paper and to have considered them thoroughly. Only then can they be satisfied that they have chosen the best options for their needs and circumstances.

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