Executive summary. Historically index funds have had favourable long-term performance compared with actively managed funds. Factors that contribute to this are indexing's low cost, broad diversification, minimal cash drag and a potential for tax efficiency. In any market, these factors combine to represent a significant hurdle that an active manager must overcome just to break even with a low-cost index strategy over time.

By design, an index fund seeks to match, rather than outperform, a target benchmark. Many investors, however, find the prospect of outperformance too alluring to resist. Not satisfied with average market returns, these investors choose active management strategies in the hope of achieving higher than average returns. Typically, active managers believe that their skill, perhaps mixed with good luck, will create this outcome. But aspirations aside, how have these active managers actually performed when investing across various Asian markets?
This paper addresses that question in both theoretical and practical terms. First, we outline the academic origins of indexing and examine the concept of the zero-sum game. We then analyse the results of actively managed portfolios across Asian markets from the perspectives of performance and cost.

We find several distinct features among active management performance that present significant challenges for investors in Asia, including:

- Wide dispersion of manager active returns over multiple timeframes
- Asymmetric outsized downside active performance
- Difficulty picking a consistently outperforming manager
- Wide variability of manager performance relative to broad-based benchmarks
- Limited persistence of favourable active return outcomes
- Significant active risk

By highlighting the inverse relationship between costs and long-term returns, we also underscore the importance of managing controllable expenses. Finally, we discuss several additional advantages of indexing, such as low tracking error, diversification and ease of use.

Throughout this paper we make reference to the fact that indexing offers consistent and competitive long-term performance. Please note that past performance is not an indicator of future performance; we aim to create our index products to closely track market returns before fees, expenses and taxes; investments are not guaranteed and may rise or fall in value.
Indexing and its origins

An index is a group of securities designed to represent a benchmark portfolio, often the broad market (e.g., the MSCI All Country Asia ex Japan Index) or a specific subset of the broad market (perhaps a country- or region-specific index such as the MSCI Singapore Index). An index investment strategy, such as a managed investment fund or an exchange-traded fund (ETF), tries to replicate the performance of a benchmark by assembling a portfolio that invests in the same group of securities as those in the index, or a sample of the securities.

The quantitative rationale for indexing is driven by the strategy’s low-cost structure and the inherent benefits of diversification, but the impetus for indexing grew directly from the concept of the zero-sum game. The foundation for indexing was born of research by several financial academics and Nobel laureates (Harry M. Markowitz, William F. Sharpe, Paul A. Samuelson, Eugene F. Fama, Kenneth R. French and Burton G. Malkiel, among others).

More than a half-century ago, initial research on the interrelationship between risk and return led quantitative theorists to conclude that a well-diversified portfolio is likely to reduce the risk of equity investments. This concept was then developed further with the suggestion that stock risk comprises two distinct components: (1) market—or systematic—or risk and (2) individual firm-specific—or idiosyncratic—risk. In a broadly diversified portfolio, idiosyncratic risk approaches zero because factors affecting the returns of an individual company are company-specific and thus will net out as securities are combined within the portfolio. However, even well-diversified portfolios composed of index funds retain systematic risk, because such risk stems from economy-wide factors that affect each security.

Indexing is often referenced in conjunction with the efficient market hypothesis (EMH), though it is not predicated on the EMH. The hypothesis, which became prominent in the mid-1960s, asserts that financial markets are “informationally efficient.” At the heart of the EMH is the idea that in well-informed and competitive speculative markets, price movements over time will be essentially random. As a result, current prices are the best estimate of a security’s true value. Those who subscribe to the EMH believe that an index fund can be an ideal way to capture the informed opinion of all investors because market-capitalisation-weighted indices reflect the consensus estimate of each company’s value at any given moment.

However, whether markets are efficient or not—whether price movements are predictable or not—does not affect the success (or lack of success) of indexing as a strategy. For example, conventional wisdom maintains that compared with their large-cap and mid-cap counterparts, small-cap active equity managers are more likely to outperform their market, due to the small-cap market being perceived as less efficient. However, research by Davis et al. (2007b) found that the perceived outperformance of small-cap managers could largely be due to weak benchmark construction.

While the precise validity of the EMH may be debatable, this discussion lies apart from the rationale for indexing’s success relative to active management. In evaluating indexing’s overall success, it is instructive to consider the market as a whole, in which outperformance is often referred to as a “zero-sum game,” as explained in the section following. In contrast, investing as a whole can be considered a “positive-sum game,” where the market has a long-run positive trajectory. Investors collectively demand a positive expected return to compensate them for accepting systematic market risk (also referred to as the “equity risk premium”). Accessing this long-run positive trajectory of the market through a low-cost diversified index vehicle can be a prudent long-term investment strategy.

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1 An index that is designed to track the performance of a given market would necessarily weight individual securities by their market capitalisation weights, where market capitalisation = shares outstanding multiplied by price per share. Throughout this paper, we use “index” to mean “market capitalisation-weighted index.”

2 In any efficient market, new information—economic, financial or company-specific—affects the price of one or more securities and is immediately reflected in the index via the change in its market capitalisation.
Understanding the zero-sum game

Investing is a zero-sum game because for every winner who outperforms the market there must be a loser who underperforms (Ellis, 1975). The zero-sum concept applies because the holdings of all investors in a particular market aggregate to form that market and earn the average market return (Sharpe, 1991). Thus the asset-weighted performance of all investors equals the performance of the market overall, but at any point the number of investors that have net negative returns may be greater than the number with net positive gains.

The aggregation of all investment returns can be thought of as a bell curve (see Figure 1), with the market return as the mean. In the figure, the market is represented by the green curve, with the market return as the green vertical dashed line. Over any given period, the asset-weighted active performance to the right of the market return in Figure 1 equals the inverse of the asset-weighted active performance to the left of the market, such that the sum of the two areas returns equals zero.

In reality, investors are exposed to costs, and, where applicable, taxes, both of which reduce realised returns over time. To the extent that active funds are involved in significant levels of securities trading, they are likely to suffer higher tax consequences than index funds. Index funds, which follow a buy-and-hold approach, sell only when the composition of the market changes, and thus have a very low turnover rate. On average, therefore, active funds may have a significantly greater proportion of their realized capital gains subject to higher short-term capital gains tax rates, depending on the tax regime in their market. In sum, the higher proportion of trading associated with active management implies a higher performance hurdle on an after-tax basis.

The aggregate result of these expenses shifts the curve in Figure 1 to the left. We represent the adjustment for costs in two separate moves, with the brown curve representing the impact of management expenses and transaction costs, and the blue curve representing the impact of taxes. Although a portion of the after-cost asset-weighted performance, represented by the white region in the figure, continues to lie to the right of the market return, a much larger portion is now to the left of the benchmark.

![Figure 1. Impact of cost on distribution of market returns](source: Vanguard)

To further clarify why the aggregate portfolio of all active investors cannot, as a group, produce superior returns, we lay out the components of the market in the form of an equation set forth in Sharpe (1991), which holds that the total market portfolio equals the combined returns of all index investors plus the combined returns of all active investors. By definition, the total market portfolio and the aggregate portfolio of all index investors reflect a cap-weighted market portfolio. For the equation to be true, the aggregate of all active investors must represent a market-cap market portfolio as well. Thus, it is impossible for active investors as a whole to outperform.

Consider a hypothetical universe defined as small-cap and large-cap stocks, in which there are many more small-cap than large-cap managers. The outperformance by a large number of small-cap managers must be absorbed by a small number of large-cap investors’ underperformance, such that on an asset-weighted basis, the zero-sum rule still holds.

This zero-sum equilibrium holds for any clearly defined (or “closed-loop”) market, such as domestic stock and bond markets, when properly measured. However, in practice, there can be complications. For example, an active manager who holds riskier securities outside the benchmark can affect tracking error. In such a case, actively managed funds may exceed or fall below the stated benchmark. As a result, it is critical to clearly define the universe of securities when examining a particular market. In the universe of all traded securities, the zero-sum game will always hold.

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green dashed line. After costs and taxes, most of the asset-weighted performance of investors falls short of the aggregate market return.

The low likelihood of sustainable outperformance by an individual manager is embedded in the zero-sum game. There is always an opportunity to outperform, regardless of the market, but actual outperformance is quite different from having the opportunity to outperform. Some may win by luck, but luck is fleeting. Other more skillful managers may earn positive alpha at the expense of other less skillful managers. However, a manager must have exceptional skill to consistently outperform this extremely competitive group. Great managers may exist, but such managers are also apt to charge high fees for this rare service.

Of note, zero-sum game theory in the context of investment outperformance does not depend on market efficiency; it’s merely a reflection of the arithmetic of the aggregate capital invested in a given market. Whether or not prices accurately reflect every security’s true fair value, the average before-cost asset-weighted performance of all investors will equal the market return.

Investors’ net returns equal the market returns less the cumulative cost of investing—advisory fees, transaction costs, consultant costs, operating costs and, where applicable, taxes. Beating the market before costs, then, is a zero sum game—but beating the market after costs is actually a negative-sum game (Bogle, 2004a). Thus, the higher the cost, the higher the hurdle rate for a manager to successfully deliver alpha to his or her clients. As a result, when examining the broad market, investors in index funds with minimal costs generally have the best chance of outperforming a majority of higher-cost actively managed funds.

The zero-sum game in the Asian marketplace

The remainder of this paper explores evidence supporting indexing’s intermediate- and long-term advantages in the Asian managed-investment-fund marketplace. Morningstar, whose data provide the largest coverage of funds for analysis on both the retail and institutional sides, was our primary data source. We filtered the entire universe of funds to include those whose primary regional focus was Asia ex Japan, Greater China, Hong Kong, and/or Singapore. We also limited our analysis to those funds that were classified in Morningstar as having a “core” style focus, to avoid potential biases in measuring size and growth/value tilted funds to a broad based index. Applying these filters provided a set of more than 2500 funds.

Although the zero-sum framework refers to broad markets, it may also be loosely applied to long-term managed-investment-fund performance. For the average active manager, the zero-sum game means they start the race for outperformance already trailing the benchmark by an amount equal to their cost ratio.

Figure 2 applies the theoretical framework of the zero-sum game to the actively managed equity fund universe obtained from the Morningstar data. Although funds account for only a portion of the equity markets, Figure 2 shows a result that the zero sum game theory would predict—that is, the active returns net of fees of the aggregate actively managed fund universe shift to the left of the returns of their respective market benchmarks over 3-, 5- and 10-year periods.

Note: Alpha refers to a portfolio’s active return, which is the difference between the portfolio and benchmark return measured over a given time period.

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6 To ensure a sufficient dataset, we did not exclude any funds based on country of domicile. Most funds in the sample were domiciled in Luxembourg or Ireland, with a number of other countries represented as well. We adjusted the returns to account for differences in the funds’ reporting currency, to ensure a fair comparison to the benchmark.
Figure 2. Distribution of active returns in the Asian fund marketplace

Active return distribution – 3 years ended 30 September 2011

Excluding missing funds: 67% under
Including missing funds: 75% under

Excluding missing funds: 33% over
Including missing funds: 25% over

Active return (per annum)
Less than -20%
-18% to -16%
-10% to -8%
-14% to -12%
-12% to -10%
-10% to -8%
-8% to -6%
-6% to -4%
-4% to -2%
-2% to 0%
0% to 2%
2% to 4%
4% to 6%
6% to 8%
8% to 10%
10% to 12%
12% to 14%
14% to 16%
16% to 18%
Greater than 20%

Regional benchmark return

Notes:
a. Each fund was evaluated relative to the net return of the relevant MSCI Investable Market Index benchmark, depending on its stated regional focus: Asia ex Japan (All Country Asia ex Japan Index), Greater China (Zhong Hua Index), Hong Kong and Singapore. Included funds are from the following global categories for open-end funds in the Morningstar Direct Global database: Asia ex Japan Equity, Greater China Equity, Hong Kong Equity, Singapore Equity
b. Fund data are net of fees.
d. Managed investment fund database survivor bias tends to overstate the average long-term returns reported by active manager databases. Survivorship bias results when managed investment fund returns are not adjusted for those funds that no longer exist, which causes the average returns to rise because as underperformers are removed, new funds replace them. To account for survivorship bias, we identified funds that existed at the start of the period and were either liquidated or merged during the stated period. Those funds identified as missing were added to the base sample of surviving managers to compute the percentage of all funds that underperformed the benchmark. It has been shown that when survivorship bias is present along with fees and benchmark mismatching, active managers—particularly small-cap managers—tend to underperform a given benchmark (Malkiel and Radisich, 2001; Ennis and Sebastian, 2002).

Sources: Vanguard analysis, based on data from Morningstar, Inc. Past performance is not a reliable indicator of future returns.
We observe that a majority of active funds significantly trailed their market benchmarks over the three and five years ended 30 September 2011. To the extent that the typical investor experience reflects a lump-sum buy-and-hold strategy of staying invested over the entire sample, this analysis can be generalised to realised investor returns.

While Figure 2 primarily demonstrates the difficulty in outperforming a market benchmark over different time periods, it’s also worth noting the wide distribution of active returns. Several factors contribute to this wide performance distribution in addition to differences in cost and any skill the managers exhibit: the type of funds included, the selected benchmark and the time period analysed can all affect the return distribution and the conclusions drawn.

For example, if managers exhibit a style or size bias over a given ten-year period, the relative performance of active managers in aggregate can change substantially, depending on the relative performance of one or more market segments, such as small-cap stocks. Similarly, to the extent that different benchmarks cover different groups of securities (even in the same region), the relative performance results can vary. It is worth reiterating the theoretical zero-sum game discussed previously: in aggregate, for every investor that overweights small-cap stocks or stocks from a certain region, another must be underweight in those same stocks. The distribution of relative performance will thus vary in terms of its dispersion, but we would expect it to always be centred on the market return, as we see in Figure 2.

Subsequent diagrams specifically address the difficulty of picking a winning manager (see Figure 3), the annual variability of active performance (Figure 4), the limited persistence of achieving top quartile active returns (Figures 5 and 6) and the risk-return trade-off within active management (Figure 7).

**Dispersion of returns.** The widespread appeal of index strategies has set a new standard of measurement, turning the focus away from absolute return and toward relative performance that either exceeds or falls short of the index benchmark. Given this standard, it is generally typical to see performance concentrated around the benchmark. When evaluating net returns, we observe a wide distribution of performance by active managers, mainly due to differences in cost and skill, as well as pure chance. In equity markets, risk-factor differentials such as size and style allocations relative to benchmarks amplify return dispersion. More notably, over each time period but the 10-year period, a majority of the funds underperformed broad-market benchmarks, suggesting that for the long term, a low-cost indexing strategy has an edge over active funds. The contradictory results for the longer horizon are significantly impacted by survivorship bias, a point discussed in a later section.

**Outsized risk.** Often the relative losses from downmarket moves are greater than the potential relative upside from luck or skill. To account for the magnitude of performance, we looked at average portfolio returns for all managers versus a benchmark. Such a measurement can provide investors with a sense of how active management has performed on average—whether delivering positive or negative active returns, and the amount of that difference. For instance, over the three-year period shown in Figure 2, 36% of managers underperformed the market by more than 4%, while 20% outperformed by the same quantity. These results are in line with the conclusions of McGuigan (2006), who found that the probability of selecting the “wrong” active fund in terms of the magnitude of possible underperformance relative to a benchmark was always greater than the probability of selecting actively managed large and mid-cap funds outperforming by the same amount for the 20 years ended 2003.
Difficulty of picking a winning manager. For investors, active management presents two major challenges. First, an investor must be able to select in advance a manager who they believe possesses sufficient skill to generate positive active returns greater than the fees and taxes incurred over their investment time horizon. Second, the manager chosen must then successfully execute upon that skill. Although some participants are able to beat the market on occasion, selecting a winning manager who is able to consistently perceive inefficiencies better than the rest of the players is very difficult. This is because the pool of managers searching for alpha is by nature extremely competitive. The incentives for winning are immense, leading to increased competition, which in turn makes alpha that much harder to attain.

Adjusting the relative outperformance numbers in Figure 2 to account for those funds that did not survive the entire period provides a clearer picture of the probability that an actively managed fund will not only survive but also outperform. The chance of selecting a fund that would both remain an ongoing concern and outperform its appropriate benchmark over a ten-year period is about 1 in 3 (33%)—see Figure 3. By Q3 2011, more than one-third (35%) of the funds available in Q3 2001 had closed.⁷ Moreover, a closer look at the performance figures of the available funds in 2001 reveals that only 33% (126 funds) beat the market by more than 2% per annum over the decade.⁸ The more recent figures over the three- and five-year periods indicate that just about one-quarter of the funds survived and outperformed.

Variability of out- and underperformance. The ability to select in advance a winning manager for any given year is subject to several factors, particularly manager skill and process along with market conditions. We would expect in the short-term that manager returns versus the market would vary, given the wide dispersion of returns of the underlying assets and manager positioning. Figure 4 reveals the difficulty in selecting a winner in any given year. For each year, and assuming all funds were in existence for the full 12 months, we calculated the percentage of Asia-region actively managed funds that beat their benchmark. We found that in only one year (2004) did a majority of the funds beat their benchmark. In every other year, the percentage of funds beating their broad market benchmark was less than 45%. The general failure of funds to outperform their market benchmark in any given year, combined with the variability in this percentage over time demonstrates the challenge of selecting truly superior performers either in the short term or for sustained periods of time.

Notes:
- Time periods are the same as referenced in Figure 2.
- Sample size was 1418 funds for three years, 1012 funds for five years and 383 funds for ten years.
- Sources: Vanguard analysis, based on data from Morningstar, Inc.

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⁷ It is possible for a closed fund to have been merged into another fund, and then subsequently out-perform the market. Intuition would suggest that this is not typical as funds would typically close or be merged due to poor performance. However, the available data make it difficult to determine if this is actually the case.

⁸ While fund performance is measured net of fees, taxes are not accounted for. To the extent that the funds in the green “survived and outperformed” category (in Figure 3) achieved this performance through excessive trading and turnover, the after-tax outperformance is likely to be lower than the percentages shown.
Limited persistence of greater than benchmark returns. The challenge to a manager in executing upon any skill can be measured by the persistence of returns. For years, academics have studied whether past performance has any predictive power regarding future performance. Dating back to Sharpe (1966) and Jensen (1968), researchers have found limited to no persistence. Carhart (1997) reported no evidence of persistency in fund outperformance after adjusting for the common Fama-French risk factors\(^9\) as well as for momentum. The Carhart study reinforced the importance of fund costs and highlighted how not accounting for survivorship bias can skew results of active/passive studies in favour of active managers. More recently, in 2009, Fama-French’s 22-year study suggested that it is extremely difficult for an actively managed investment fund to regularly outperform its benchmark.

Consider the relationship between the past and future performance of the surviving Asia-region managed investment funds during the six years ended 30 September 2011 as measured over two three-year periods against their appropriate region benchmarks. Splitting funds into quartiles based on the first three-year period, we examine the subsequent three-year performance of the top quartile funds. If we assume that a fund has the opportunity to end up in any performance quartile or close, there are five potential outcomes. If performance is random between time periods, we would expect the group of top performers to be divided equally across the potential outcomes (with 20% in each). Figure 5 shows the actual results: of the funds ranking in the top quartile during the first half of the time period, 26% ranked in the first quartile during the second half of the time period, nearly equal to what chance would suggest. On the other hand, of the funds that fell in the bottom quartile (not shown) during the first three years, 52% (more than half) remained there or closed during the second three-year period, whereas only 14 percent migrated to the top quartile. This analysis suggests there is greater persistency on the downside than on the upside.

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\(^9\) Fama and French (1993) identified, for stocks in the United States, market capitalisation and “value” as two factors beyond a stock’s market beta which have power in explaining differences in the distribution of returns across stocks.
In investing, past is not prologue. Over the ten years ended 30 September 2011, there has been close to no causal relationship between a fund’s rankings from month to month (see Figure 6). Spearman’s rank correlation coefficient\(^{10}\) is a test used to measure the strength of association between two variables. In this case, we computed the correlation of manager performance rankings on a year-to-year rolling basis, where the 12-month rankings in one year were compared to those in the following year. A higher correlation would imply persistence in fund performance, while a lower correlation would imply non-persistence (i.e. a fund consistently jumps from a high ranking to a low ranking in the following year, or vice versa). The mean correlation over the time period examined is 0.12, which is close to the value of 0.00 that would be expected if performance persistence were a random walk over time.

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**Figure 5.** Subsequent 3-year performance of top-quartile Asia-region equity funds is nearly random

- 1st quartile, second 3 years: 18%
- 2nd quartile, second 3 years: 20%
- 3rd quartile, second 3 years: 16%
- 4th quartile, second 3 years: 21%
- Closed, second 3 years: 26%

Notes: Examines the top-quartile equity funds as measured by the active return over the fund’s appropriate regional benchmark for the three years ending 30 Sept. 2008. These funds were then followed in the subsequent three years ending 30 Sept. 2011 to determine their relative performance. The results are similar when examining other time periods within our available sample.

Sources: Vanguard analysis, based on data from Morningstar, Inc.

**Figure 6.** The Asia region fund universe displays random performance rankings

\[\text{Mean coefficient: } 0.12\]

Sources: Vanguard analysis, based on data from Morningstar, Inc.

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\(^{10}\) Spearman’s rank correlation coefficient measures the extent to which, as one variable increases, another variable tends to increase. Perfect correlation would result in a value of 1. If, as one variable increases, the other decreases, the rank correlation coefficients will be negative.
**Risk-return trade-off.** The principle of the risk-return trade-off suggests there is a strong positive relationship between the potential rewards of a decision and the risk needed to realise those rewards. Inherently low levels of uncertainty (low risk) are associated with low potential returns, while high levels of uncertainty (high risk) offer the possibility of higher potential returns. There are various techniques for quantifying risk; however, these measures of perceived risk need to be aligned not only to the expected return but also to an investor’s own disposition to risk. Managers seeking to beat the market may choose a more concentrated portfolio that is subject to a higher degree of idiosyncratic risk. Importantly, idiosyncratic risk need not be rewarded with higher returns. While investors collectively demand a higher premium for taking on systematic risk, the same is not true for idiosyncratic risk, as this risk can be eliminated through diversification. As a result, concentrated active portfolios often experience greater volatility than that of the overall market, without the expectation of a higher return.

**Figure 7** shows the annualised returns and volatility of various active Asian equity funds relative to their broad market benchmark for the three years ended September 2011. An investor may think that there is a 1-in-2 chance (on a asset-weighted basis) of beating the market, and may be willing to take those odds. Over the three years ended 30 September 2011, however, only 18% of active managers (roughly 1 in 6) actually beat the market as defined by higher returns and lower volatility. Moreover, 34% posted lower-than-average returns coupled with greater risk. Given the short time frame, these results should be interpreted with caution.
The indexing cost advantage

According to the zero-sum theory, investors as a group must earn precisely the market return. However, they do so only before the costs of investing are deducted. Thus, whether the investor is an individual or an institution, minimising costs is important to achieve long term investment success. Not surprisingly, we found this to be no less true for Asian institutional funds than for Asian retail or US funds.

It is also worth emphasising that, unlike performance, costs are more predictable and more controllable. A fund’s expense ratio is the most reliable predictor of future performance (Financial Research Corporation, 2002, Wallick, et al., 2011) and it is one of the few factors which influence fund performance that is known in advance.

Index funds generally operate with lower costs than actively managed investment funds, regardless of asset class or sub-asset class. Index funds derive their low-cost structure from their low management fees, low trading cost and low turnover. Actively managed funds, on the other hand, typically have higher management fees coupled with higher transaction costs. The higher fees are often the result of costs associated with the research and investment process that an active fund manager conducts. Higher transaction costs are attributable to the generally higher turnover associated with active management’s attempt to outperform the benchmark11. From an after-tax perspective, broad index funds and exchange-traded funds (ETFs) may provide an additional advantage over actively managed funds. Such funds, which are managed by buying and selling asset-weighted lots, rarely realise and distribute capital gains to shareholders.

The inverse relationship between investment performance and cost within the equity managed investment fund universe is shown in Figure 8. The negatively sloping trend line highlights the fact that the greater the costs, the lower the net returns. It is important to note that because of the economies of scale associated with managing large sums of money, most institutional fees are lower than retail fees, whether they be for index or active funds.

As there is no adjustment for survivorship bias, a slight majority of the observation points have active returns greater than zero, but the trend as expenses rise is for active returns to fall. Over shorter three- and five-year time periods, a similar negative relationship also exists.

11 For more details on turnover and trading costs, see Philips (2010b)
Over time, the relative cost advantages of indexing compound. Every dollar paid for management fees, trading costs and taxes is a dollar less in potential return. Consider the example of two hypothetical 30-year $100,000 investments: one using indexing, the other using active management. Assuming an 8% per year average return, the first investor pays an estimated 0.35% in all-in costs, a typical expense ratio for an index fund. This investment compounds over time to $910,000. Based on the average expense ratio from Figure 8, the second investor pays an estimated 1.5% in all-in costs and the investment compounds to $660,000. By paying an additional 1.15% in all-in costs over 30 years, the investor has, in essence, provided $250,000—around 2½ times the initial investment—to the managed investment fund industry. This example highlights the importance of capturing the maximum possible portion of returns by keeping costs low. Note that in the future it is possible that the all-in cost differentials between index funds and active funds may change.

Other benefits of indexing in portfolio makeup

Historically, style consistency and broad diversification of index funds have helped to provide more predictable returns relative to actively managed funds. Indexing offers investors the opportunity to obtain the market return (through style consistency) and to reduce a fund’s volatility (through diversification) around a benchmark. Both objectives are central to determining a strategic asset allocation, which is the primary determinant of the variation of portfolio returns (Brinson, Hood and Beebower, 1986; Davis et al., 2007a). An index mandate also allows greater control and transparency over a portfolio’s risks. As a result, index funds and ETFs play an important role in the portfolio construction process.

Style consistency

An index fund maintains its style consistency and low tracking error by attempting to closely track the characteristics of its benchmark index. An investor who desires exposure to a particular market and selects an index fund that tracks that market is more likely to have a consistent allocation. On the other hand, active managers can choose to vary their investments, betting on whichever segments they expect to perform best. Even if a manager has a well-defined mandate, the decision to hold more or less of a security than the index holds will lead to performance differences.

Diversification

Index funds typically are more diversified than actively managed funds, a result of the way indices are constructed. The broad range of securities dampens the risk associated with specific securities and removes a component of return volatility. Actively managed funds, on the other hand, tend to hold fewer securities with varying degrees of return correlation.

Indexing at the core

For investors interested in achieving market returns and mitigating idiosyncratic risk, indexing at the core can be a useful tool in a long-term investment strategy. Investors can replace the indexed core to the extent that they have very high confidence that the actively managed fund will deliver consistent positive alpha, net of all costs. These non-core options become the satellite strategies that complement the performance of the core. Furthermore, with index-based strategies at the core of the allocations, rebalancing becomes relatively simple. The transparency helps investors see exactly what they need to buy or sell to rebalance the portfolio.

Conclusion

Indexing as an investment strategy is grounded in irrefutable academic research. By choosing an index fund that mirrors an entire market as part of their investment strategy, investors can efficiently capture the long-run average positive trajectory of equity markets. A number of features of active management performance present significant challenges for investors, including but not limited to the magnitude of return dispersion, difficulty of picking, on a sustained basis, a winning manager and the limited persistence of achieving above benchmark returns. Therefore, on average indexing’s low-cost advantage offers the opportunity for long term outperformance relative to a majority of actively managed funds.

12 Core-satellite investing has become a standard practice among investment professionals. It involves combining index funds with highly focused actively managed mandates. The core index funds provide low-risk diversification and cost-effectiveness. The satellite funds can consist of other more or less-risky assets to add value beyond the relative benchmark.
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