Arnerich Massena
& ASSOCIATES, INC.

Active Versus Passive Investment Management

Analysis Update

Arnerich Massena & Associates, Inc.

August 2010

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The original analysis

In 2007, Arnerich Massena analyzed the performance of an actively managed strategy relative to a passively managed strategy. Our objective was to evaluate whether the higher cost of active management provided a relative premium in performance and how different market environments affected the success of actively managed funds versus passively managed funds. Specifically, we looked at U.S. large and small cap funds: active management was represented by the Morningstar large and small cap universes of actively managed funds, which were then compared to the S&P 500 and Russell 2000 Indexes, respectively. An overall summary of our findings in 2007 is as follows:

- Large cap active managers in aggregate struggled to outperform the S&P 500 Index, with an average of 63% doing so for seven of the 27 calendar years between 1980 and 2006. For the other 20 calendar years in the period, an average 33% of active managers outperformed the Index.
- Large cap active managers had the greatest outperformance over the S&P 500 Index during periods of a declining market.
- Small cap active managers provided a higher premium over a passive strategy, outperforming the Russell 2000 Index in aggregate for 16 calendar years between 1980 and 2006 and only underperforming the Index in aggreggate for 11 calendar years.
- As with large cap, the greatest outperformance premium for small cap active managers came during times of market recession.

Our conclusion was twofold: first of all, the results show that active management provides greater downside protection than a passive strategy. The prospect theory of behavioral economics [1] tells us that people are risk-averse, the potential for loss psychologically outweighing the possibility of gains. For this reason, investors derive the greatest perceived benefit from outperformance during times of market stress; since active management tends to provide the greatest premium during these times, the value of that outperformance is amplified.

Secondly, while an aggregate study shows large cap active managers did not outperform the S&P 500 Index, the results make no allowance for careful and prudent manager selection. For the ten years ending March 31, 2007, 37% of the active large cap managers in Morningstar outperformed the S&P 500 on an annualized basis, adding an average annualized premium of 1.8%. Active small cap managers had an even better track record, with 65% outperforming the Russell 2000 Index over the ten-year period ending in March, providing an average annualized premium of 2.8%. The key element to a successful strategy of active management is manager selection.

At the time of this analysis, our recommendation was that in most cases, a combination of active and passive management would be optimal, depending on an investor's specific goals and directives. While we found that manager selection through active management can add value in all asset classes, our research showed it to be of particular value in less efficient asset categories such as small cap stocks.

Here, we revisit our research and execute an updated analysis of this issue. Following is our 2010 review of active versus passive investment management strategies.

[1] *Prospect Theory: An Analysis of Decision Under Risk* by Daniel Kahneman and Amos Tversky; Econometrica, vol. 47, issue 2, March 1979, pages 263-292

Abstract

Our objective with this analysis was to evaluate active investing relative to passive investing from a broad perspective, identifying the reasons why we believe active management provides an opportunity for investors to take advantage of the insight, knowledge, and skill of investment professionals and, in most cases, to better meet their investment objectives. We also wanted to delineate those situations and market environments which lend themselves to the potential for a more passive approach.

We provide an initial evaluation, exploring the attributes of both active and passive investing, followed by an analysis of return patterns. In this update, we repeated our analysis of 2007, reviewing historical calendar year performance for U.S. large and small cap indexes and active fund universes. We added data for international funds as well. Because the market experienced such severe dislocation in 2007 and 2008, we felt it would be useful to review the data for longer time periods, so as to gain a picture of the long-term patterns of active and passive investing over full market cycles. This update includes a review of 10-year historical returns for U.S. large cap, U.S. small cap, and international indexes and active fund universes. Active management is represented as an aggregate by the Morningstar universe of active managers in each asset class. Growth, value, and blended styles are all included. Passive management is represented by the S&P 500 Index (U.S. large cap), the Russell 2000 Index (U.S. small cap), and the MSCI ACWI ex-U.S. (International).

Active versus passive: initial discussion

According to efficient market theory, the sum of the choices of all investors should be an efficient portfolio; this would make the market as a whole the most efficient investment. Yet if all investors truly believed that, active investing would quickly become obsolete. Purely by virtue of its demand, we know that active investing must provide some perceived added value for investors. In fact, there are a number of reasons why active investing can add a premium over and above a passive investment strategy.

Actively managed investments *refer to products in which holdings are actively selected with the objective of outperforming a particular market, as represented by an index. Active investment managers make deliberate choices based on their research, analysis, and knowledge of the market.*

Passively managed investments *are structured to replicate the holdings of a market index and seek therefore to match the index's returns. No active choices are made in the management of passive (or index) funds.*

First of all, the market is not entirely efficient. Investors are overwhelmed with available information; it would be virtually impossible to assimilate and analyze it all. Furthermore, behavioral economics tells us that even if we are capable of the thorough analysis of vast quantities of information, we will not necessarily make rational choices. Our investment decisions are frequently emotional choices, with fear and greed often driving us more than objective evaluation. The result is that there are plenty of mispricings in the market, creating opportunities for active investors. An active manager has the capability and mandate to seek out these mispricing opportunities.

In any market, there will be strong and weak performers. Whereas an index fund must include all the performers of a market segment, an active manager has the potential to make selections that eliminate the poor performers and focus on the best performers. Most index funds are market cap-weighted, potentially resulting in higher allocations to stocks or sectors that are poised to fall. Not all active managers can outperform the index, but with knowledge and resources, an active manager has the opportunity to make skilled investment decisions. Furthermore, active managers can allocate their investments strategically for best effect under given market conditions.

In addition to the potential for choosing strong performers, active managers are also able to take defensive positions. When the market is struggling, passive managers must simply ride the wave, whereas active managers can take proactive action with the expectation of improving the absolute return of their fund, including the simple defensive strategy of holding cash when appropriate. This property of an active strategy can be a tremendous advantage over passive investing.

Finally, we are of the mind that manager selection is the key to reaping the value of active management. Some active managers, as we will see, do outperform the market consistently. A skilled adviser, with access and careful research, is able to make informed and strategic selections.

There are instances in which we have found that passive management may be an appropriate alternative. Active management has historically provided the greatest value in inefficient asset classes, where there are more potential mispricing opportunities and a greater possibility for strategic investment moves. In efficient asset classes, such as U.S. large cap, active management may not provide as much premium. In circumstances where cost is a major factor, such as in defined contribution retirement plans, index funds may be the most appropriate solution.

CHART 1: S&P 500 Index Calendar year returns 1980-2009

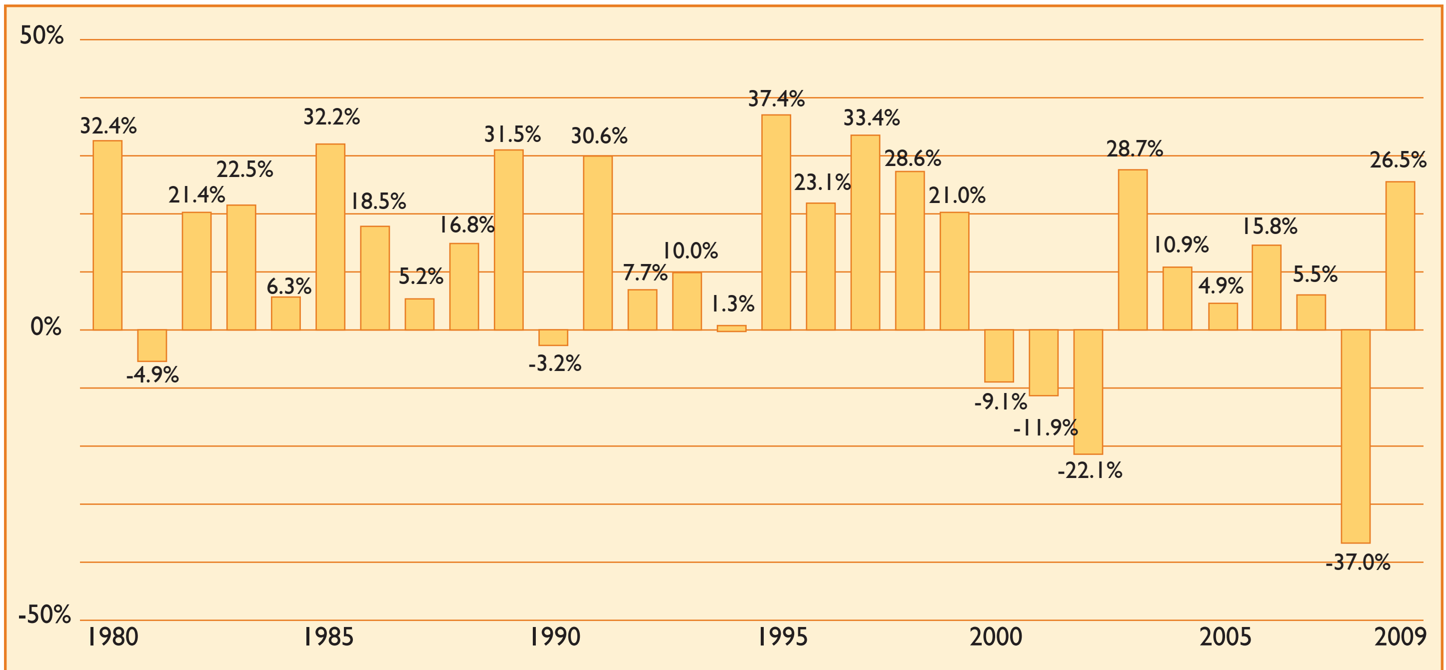


CHART 2: Percentage of U.S. large cap active managers that outperformed the S&P 500 Index: calendar years 1980-2009

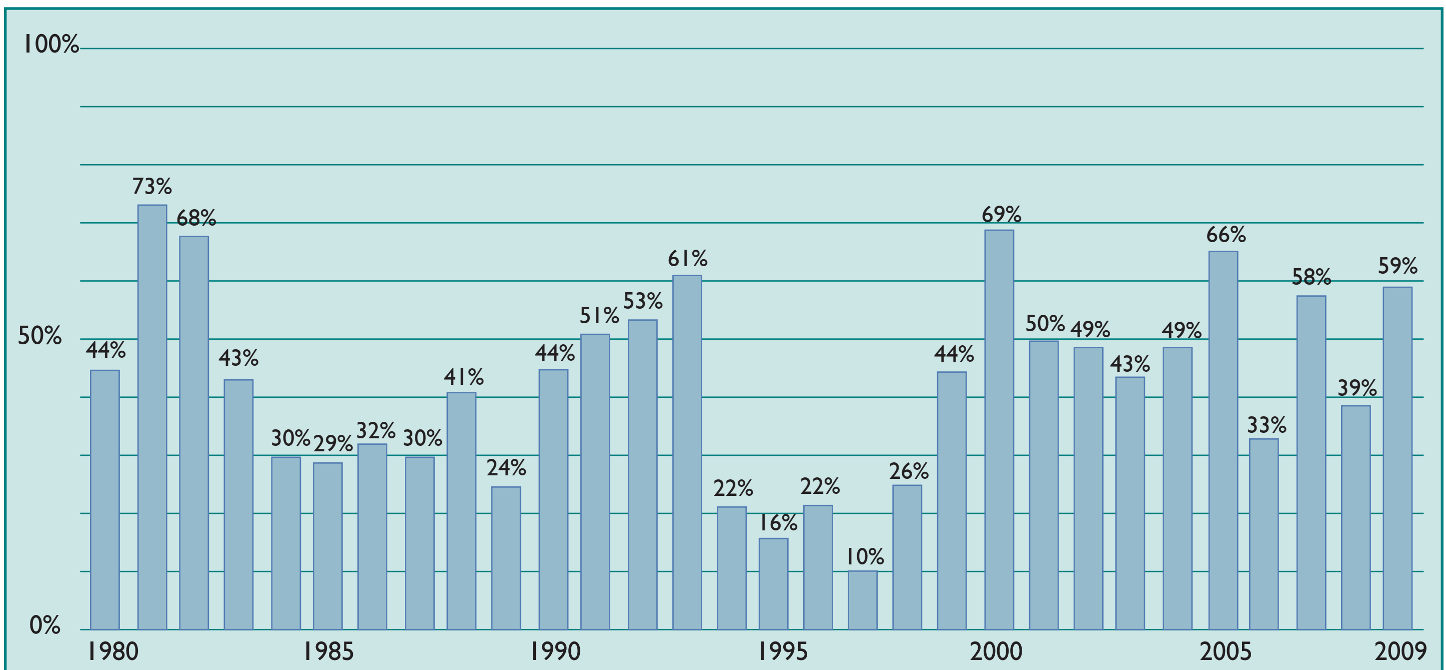
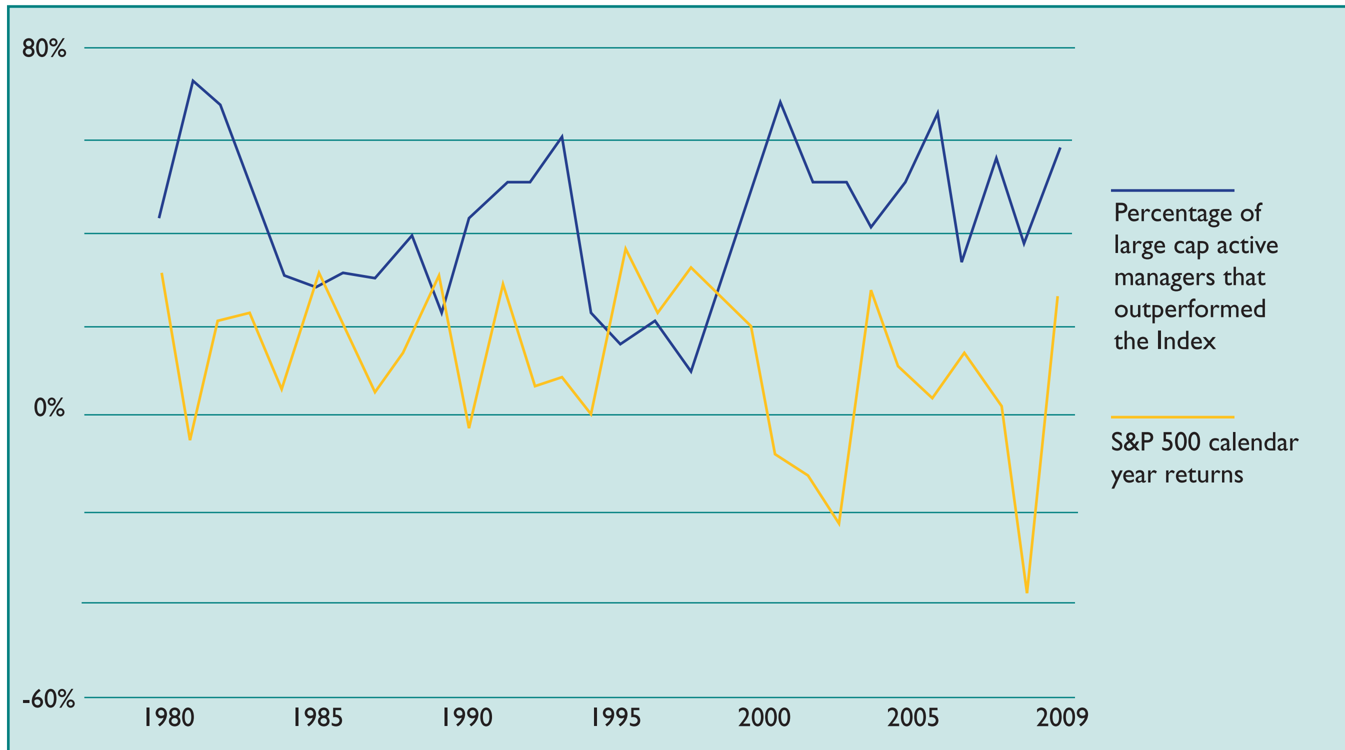


CHART 3: S&P 500 Index Calendar year returns 1980-2009 compared to percentage of U.S. large cap active managers that outperformed the Index



The analysis

Calendar-year performance: U.S. large cap

Charts 1 and 2 show the calendar-year performance of the S&P 500 Index between 1980 and 2009 and the percentage of large cap active managers that outperformed the Index each year during that time. In ten of the 30 years, the majority of active large cap managers outperformed the Index. As in our previous analysis, in general, the greatest level of outperformance occurred during times of market stress and the times of aggregate active manager underperformance occurred largely during booming markets. For instance, the smallest percentage of active outperformance, 10%, occurred in 1997, in which the S&P 500 experienced its second-highest calendar-year return during the period studied. In chart 3, which overlays the data from charts 1 and 2, one can see something of a mirror effect. Although the negative correlation is not perfect, the effect is marked.

CHART 4: S&P 500 Index 10-year returns

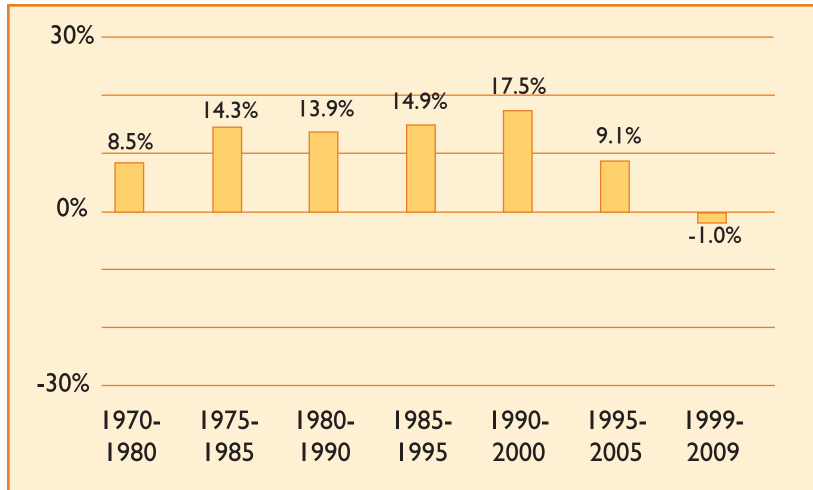
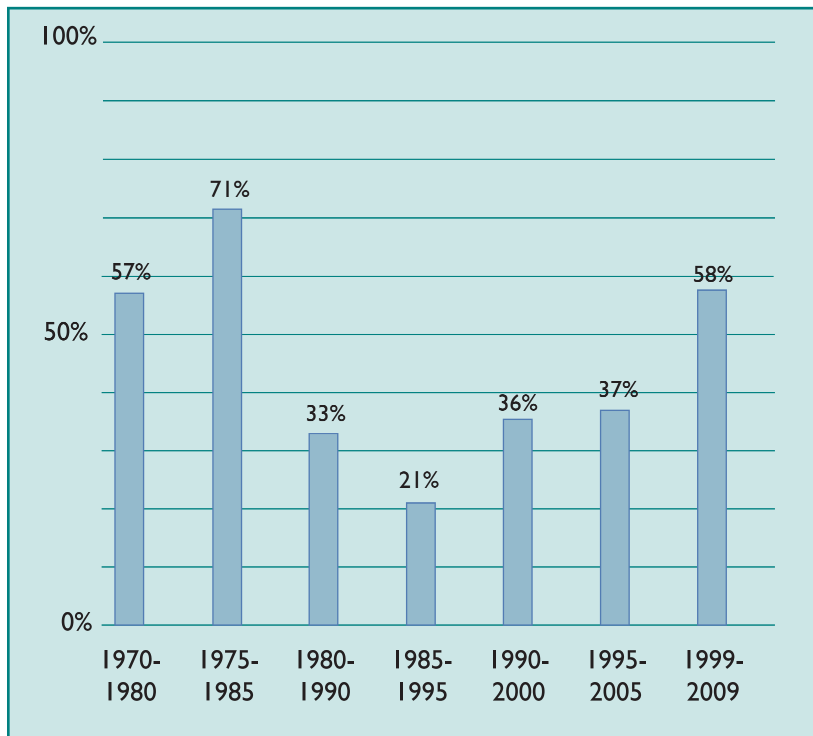


CHART 5: Percentage of U.S. large cap active managers that outperformed the S&P 500 Index: 10-year periods



Ten-year performance: U.S. large cap

Charts 4 and 5 show the same data but for ten-year periods rather than calendar years, giving us a broader perspective. The general result is similar, with active managers outperforming a passive strategy in three of the seven periods. The mirror effect is not as consistent but persists to some degree, suggesting that active management provides more downside protection than passive management, even in this efficient asset class.

CHART 5: Russell 2000 Index calendar year returns 1980-2009

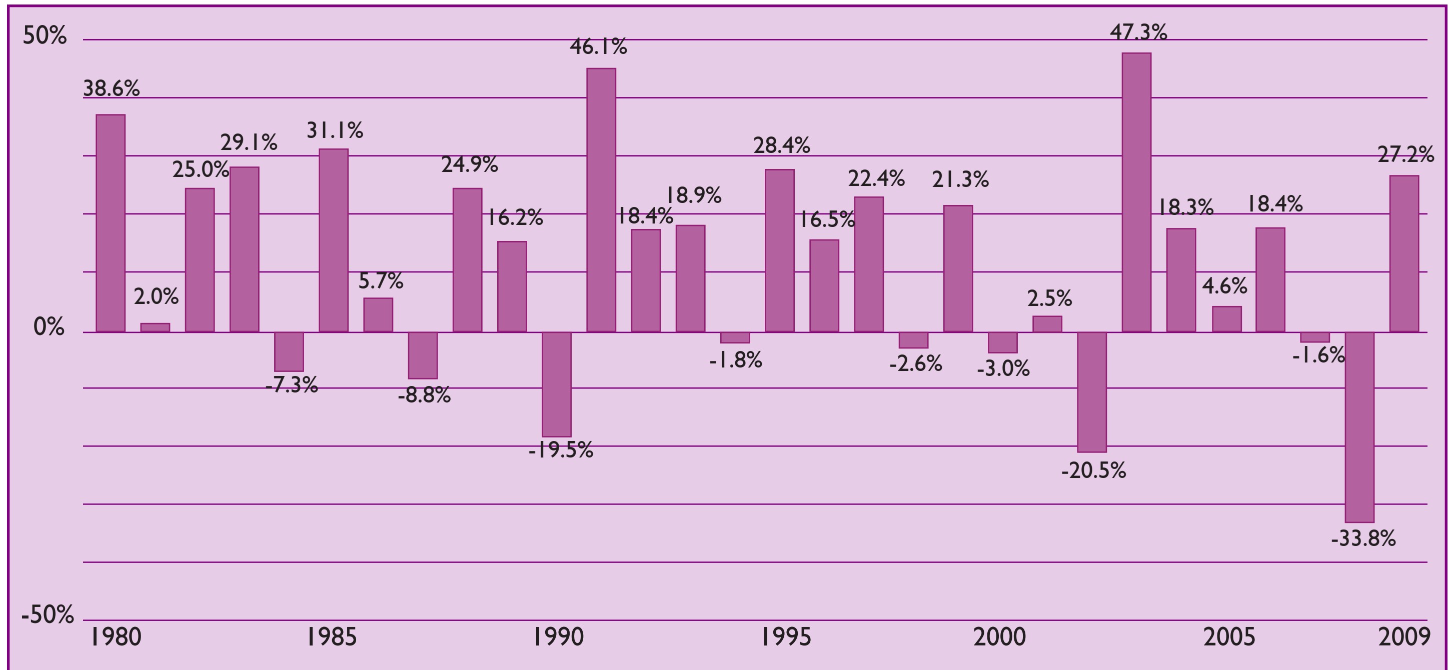


CHART 6: Percentage of U.S. small cap active managers that outperformed the Russell 2000 Index: calendar years 1980-2009

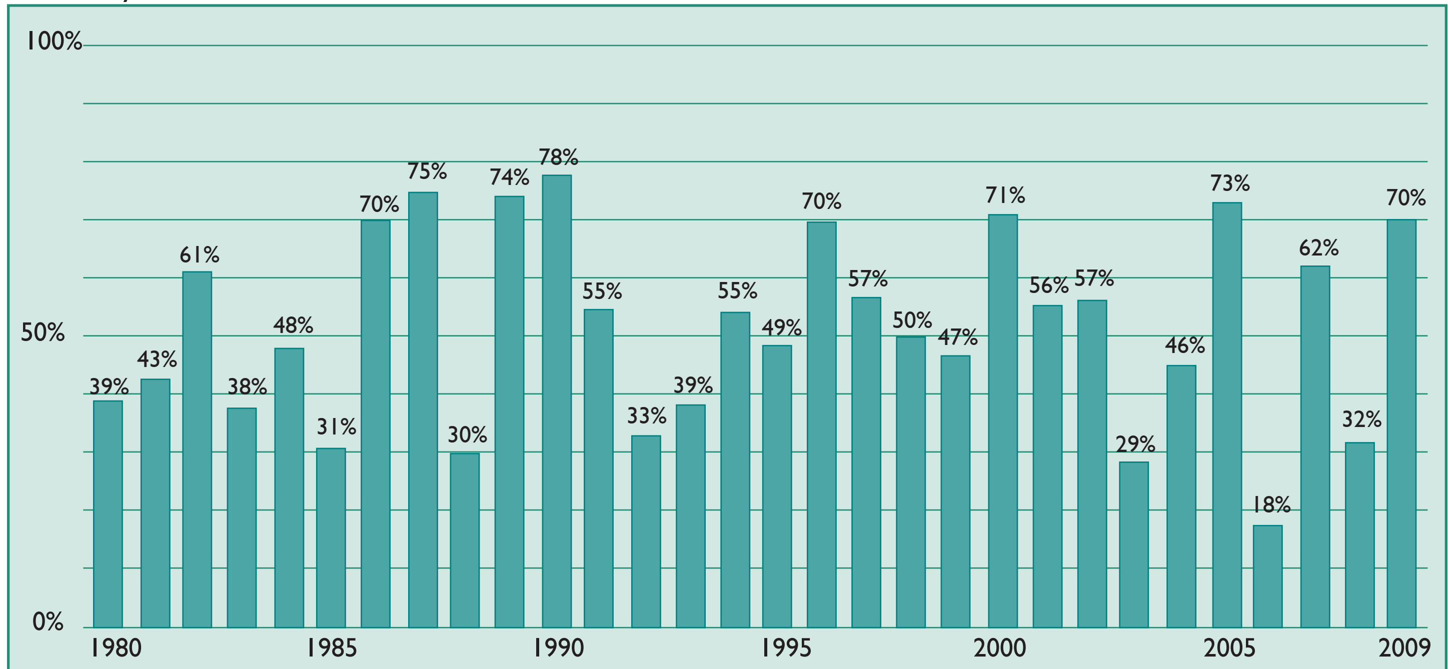
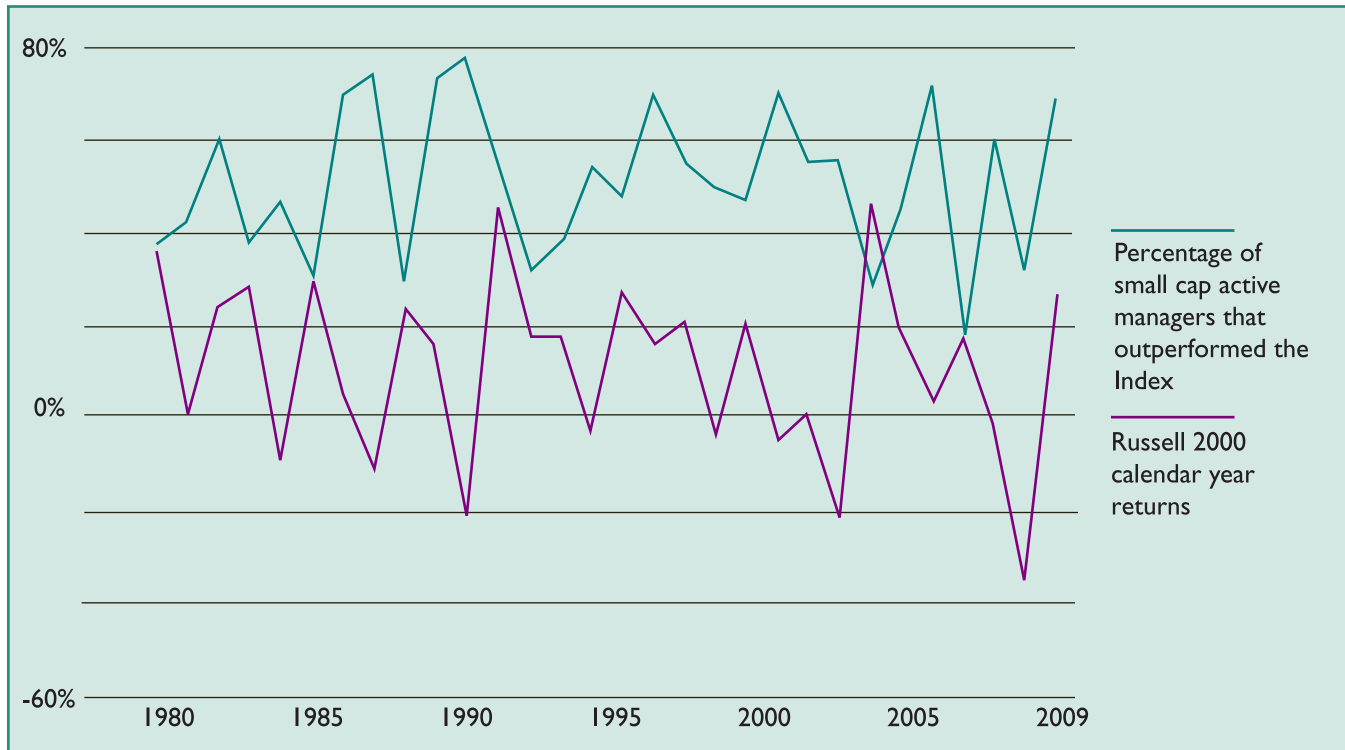


CHART 7: Russell 2000 Index calendar year returns 1980-2009 compared to percentage of U.S. small cap active managers that outperformed the Index



Calendar-year performance: U.S. small cap

Charts 5 and 6 show the calendar-year performance for the Russell 2000 and the percentage of small cap active managers that outperformed the Index each year. In 16 of the 30 years, a majority of small cap active managers outperformed the Russell 2000 Index. As shown in chart 7, the mirror effect is even stronger in this asset class, with active management outperforming the most during periods when Index returns were low and providing somewhat less premium (in aggregate) when Index returns were strong.

CHART 8: Russell 2000 Index 10-year returns

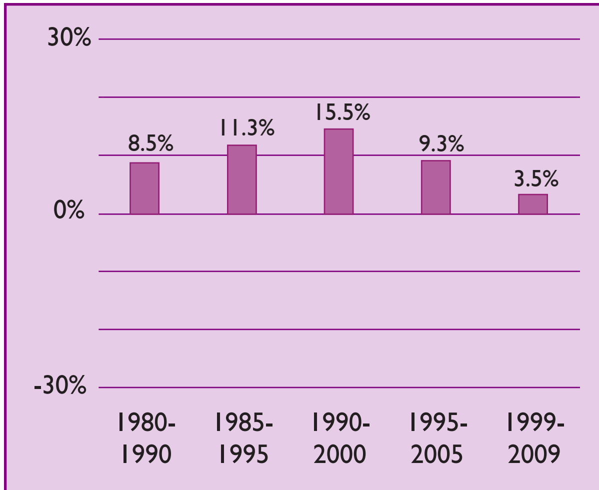
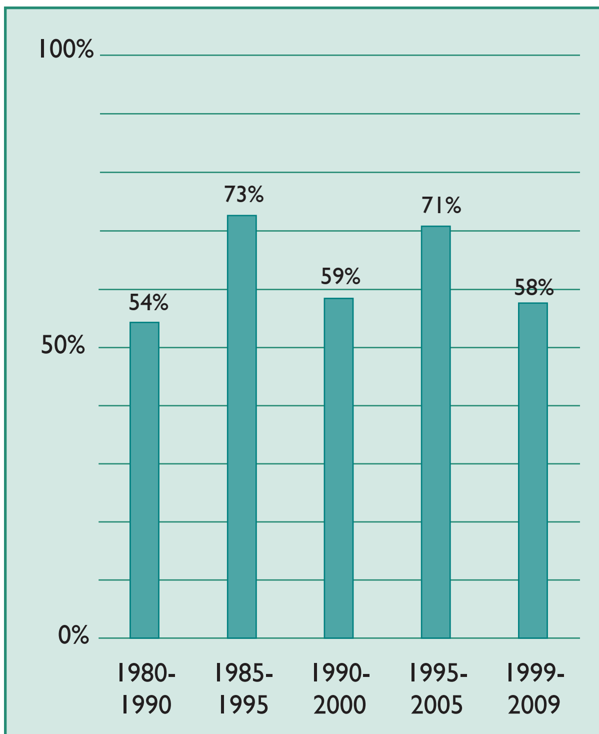


CHART 9: Percentage of U.S. small cap active managers that outperformed the Russell 2000 Index: 10-year periods



Ten-year performance: U.S. small cap

In the U.S. small cap universe, a majority of active managers outperformed the Index in all of the ten-year periods examined. This is a clear indication of the value active management can provide over a passive strategy in the small cap asset class. Over full market cycles, active strategies (in aggregate) have provided greater value than passive strategies in this less efficient asset class.

CHART 10: MSCI ACWI ex-U.S. Calendar year returns 1988-2009

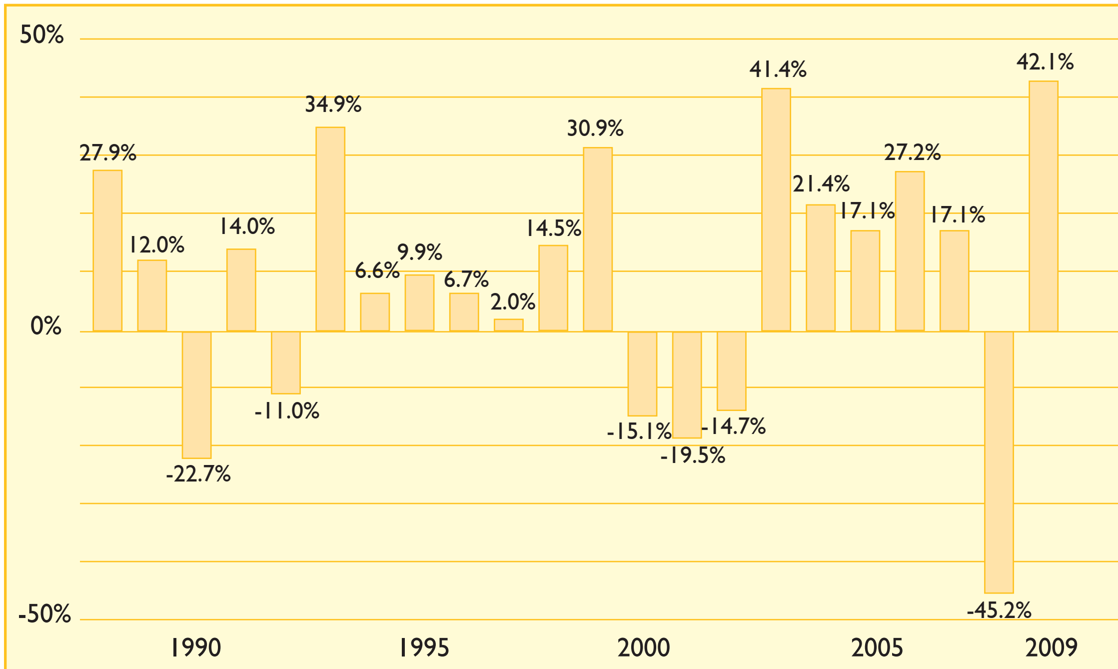


CHART 11: Percentage of international active managers that outperformed the MSCI ACWI ex U.S. Index: calendar years 1988-2009

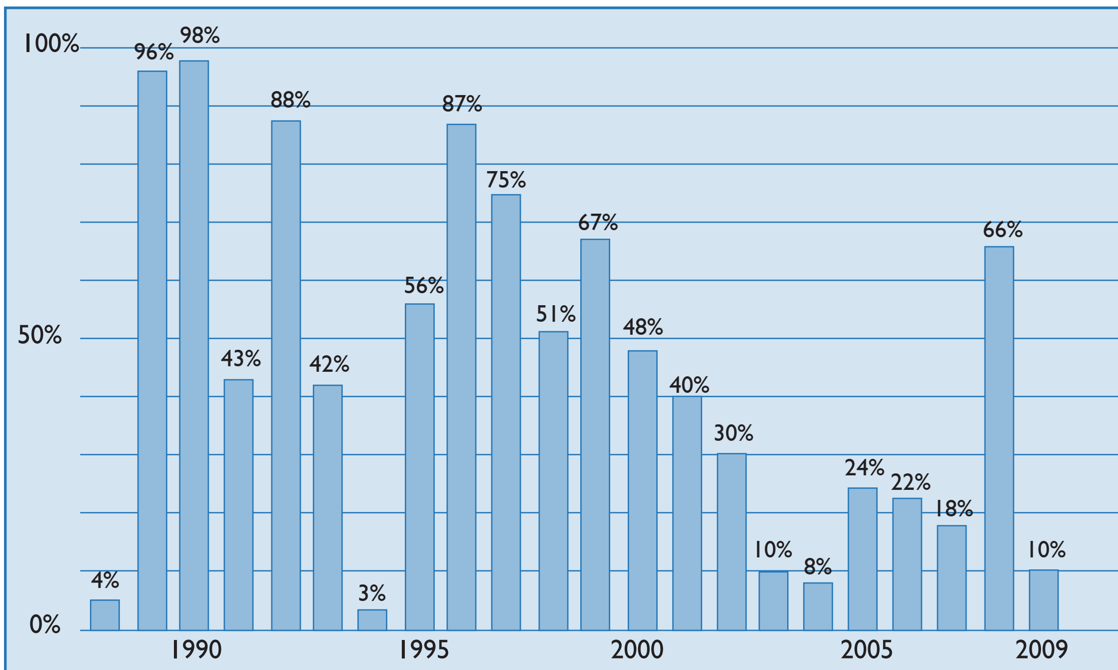
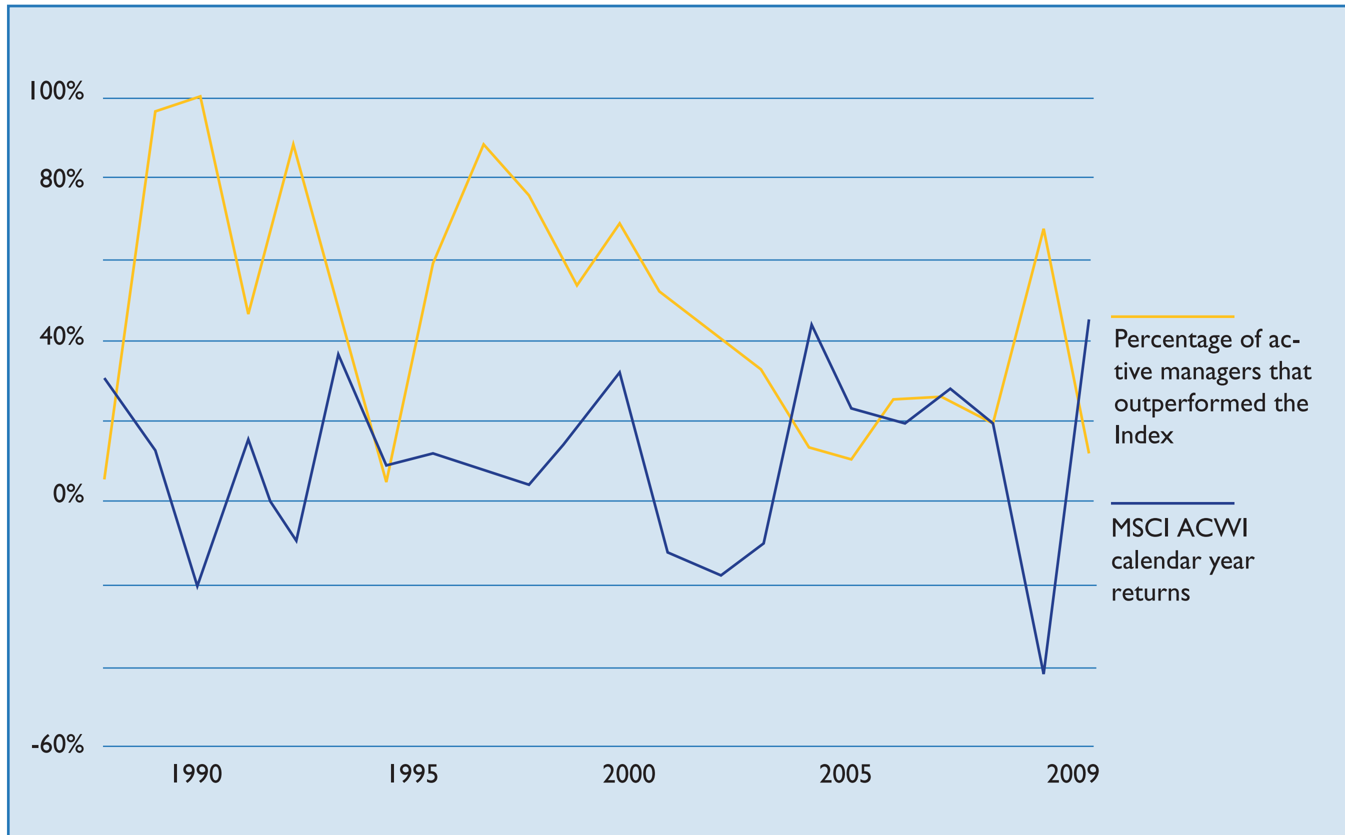


CHART 12:MSCI ACWI ex-U.S. Calendar year returns 1988-2009 compared to percentage of international active managers that outperformed the Index



Calendar-year performance: International

Charts 10 and 11 show the calendar-year performance for the MSCI ACWI ex-US and the percentage of international active managers that outperformed the Index each year. A majority of active international managers outperformed the Index in nine of the 22 years. In five of those years, at least three-quarters of active managers outperformed the MSCI ACWI ex-U.S. Chart 12 illustrates a strong mirror effect.

Passive strategies have enjoyed an increasing trend of success since the early 1990s. Two phenomena in particular illustrate the challenge of active strategies in the international asset class: Japan and Emerging Markets. In the early 1990s, Japan had grown to a sizeable portion of the International Index. As Japan began to decline, active managers were able to outperform the Index simply by underweighting Japan. However, over the course of the decline in the 1990s, Japan became a smaller proportion of the Index, resulting in active versue passive performance resembling that of domestic markets.

CHART 13: MSCI ACWI ex-U.S. 10-Year Returns

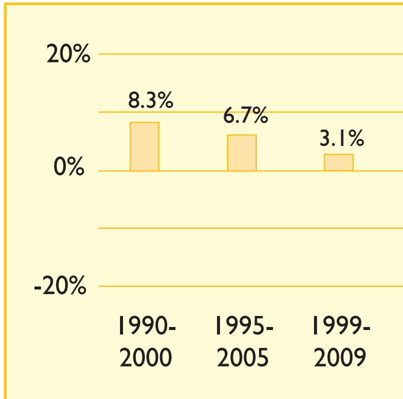
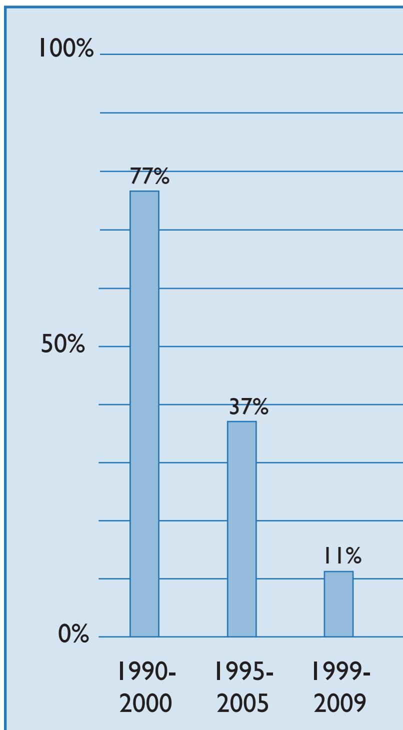


CHART 14: Percentage of international active managers that outperformed the MSCI ACWI ex-U.S.: 10-Year Periods



Emerging markets stocks have become an ever-increasing component of the International Index, driven by strong returns and growing interest from global investors. Many active international managers have lower allocations to Emerging Markets than the Index and relative returns have suffered as a result. The trend in active management is toward greater Emerging Markets allocations, but because many investors allocate separately to Emerging Markets, there is less need for broad international managers to maintain exposure to Emerging Markets.

This bifurcation of markets leads to measurement difficulties when comparing strategies. We expect that international markets will continue to evolve as investors embrace more global portfolio design, promising to keep the active/passive debate alive and well for some time to come.

Ten-year performance: International

With only three ten-year periods, it is difficult to come to any firm conclusion about how active management fares over long-term periods in the international asset class. In the one period in which a majority of active managers outperformed the Index, it was a significant majority that did so. However, the other two periods show less than half of active international managers outperforming the Index — only 11 percent in the most recent period.

Conclusion

The conclusion of our analysis has not changed significantly since our previous comparison in 2007. The market volatility of 2007 and 2008 did not alter our long-term expectations regarding active versus passive investments. We continue to be convicted that active management, overall, provides enough additional value to be worth the higher cost. In some situations, an active strategy is of particular value: in inefficient asset classes, where there are more mispricing opportunities, and in struggling or declining markets, when active managers can take defensive positions. The downside protection active management may offer provides investors with significant value at the margin, since the pain of a loss is felt more acutely than the pleasure of a gain.

The effective utilization of active managers in a portfolio relies upon skilled manager selection. Because the returns of an actively managed investment are dependent upon the manager's choices, selecting managers who are intelligent and strategic will likely be the best driver of consistent outperformance. We believe that a major strength of our firm is in our manager selection and that this is one area in which we can provide our clients with signficant value.

Passively managed investments may also be an appropriate option at times. Used wisely in a portfolio, index funds can reduce costs and risk. Often, a combination of active and passive investing, strategically applied, is an optimal solution. When choosing the balance of active and index funds, we look carefully at our clients' specific objectives and requirements.