Executive Summary

Academics and investment experts have debated the merits of active and passive investment management for decades. Similar to opposing political parties, the two investment camps see the world in very different ways. Passive managers contend that they deliver the greatest return over the long term by owning the market. Active managers assert that their stock picking can beat the market. While scores of academic studies have presented compelling data to document the advantages of the passive approach to investment management, active managers often counter that they are equipped to add alpha in both up and down markets. Accordingly, the extreme and diverging market conditions over the last several years have pulled the active versus passive debate into much sharper focus.

To guide investment professionals in evaluating the passive and active applications for investment management, this paper presents performance data of actively managed mutual funds and corresponding benchmarks by asset class over the 15-year period from January 1, 1996 to December 31, 2010, and the 1-year period from January 1, 2010 to December 31, 2010. The paper also examines the 2008 market downturn and subsequent recovery.

For the 15-year period ended December 31, 2010, the majority of actively managed funds outperformed indexes in just three asset classes—small cap blend, small cap growth, and international. While active management fared relatively well in these less efficient, less liquid areas of the market, excess return proved to be much more difficult to obtain for active managers in the nine remaining categories, particularly in large cap blend, mid cap blend, and fixed income where 65% to 85% of active managers underperformed the given benchmark.

Small cap value, mid cap value, international, and fixed income active managers fared best for the 1-year period ended December 31, 2010. More often than not, active managers in these categories were able to outperform the benchmark. This was not the case for the eight remaining categories.

Interestingly, more than 80% of active managers in large cap, mid cap, and small cap blend funds beat their respective Dow Jones size benchmark over the bear market period of March 2000 through December 2001. It was a different story during the Great Recession. In late 2008, as correlations converged and nearly all asset classes declined, managers of actively managed mutual funds generally failed to protect on the downside. What’s more, when the market recovery in 2009 provided another opportunity for active managers to demonstrate their ability to add value, the majority of active managers outperformed a relative index in only four of twelve categories, a trend that continued into 2010.

The paper’s lesson is a familiar one: in general, markets tend to be fairly efficient and managers who try to exploit market inefficiencies through active management often prove to be ineffective. Yet, the paper concludes that active and passive management investment styles are not mutually exclusive. In fact, sophisticated investors may benefit from a strategy that employs both passive and active management. Finally, the paper introduces exchange traded funds (ETFs) as a passive investment vehicle that compares favorably to both actively-managed mutual funds as well as index mutual funds—and has applications for investors seeking inexpensive beta from traditional asset classes as well as those looking to add value by investing in a specific market niche, whether it be a particular sector, country, or region.
DEFINING PASSIVE AND ACTIVE MANAGEMENT

PASSIVE MANAGEMENT, also known as index investing, is an investment strategy that attempts to replicate the returns of an index or benchmark by owning the same assets, in the same proportions, as the underlying index. Passive investing does not seek to capture any excess returns, but rather to match the performance of the index. Indexed Mutual Funds and ETFs are common vehicles used for passive investing.

Passive management rests on the assumption of market efficiency and a concept called the Efficient Market Hypothesis (EMH). Developed by Eugene Fama in 1965, EMH is a cornerstone to the passive versus active debate because it contends that stocks will always trade at a fair value price that reflects all available information at that time, thus no one stock can be deemed over- or undervalued at a given point. Modern Portfolio Theory (MPT) is primarily based on the EMH concept.

ACTIVE MANAGEMENT, in contrast to passive management, is an investment strategy where managers attempt to add value over the returns of an index by picking stocks based on models, insights, and analytical research. Unlike passive managers, active managers will not seek to match the risk and return profile of an index. They believe that markets are inefficient and, therefore, stocks are often mispriced. Active managers will try to identify those stocks and exploit pricing inefficiencies to obtain excess return.

ADVantages of Passive Management

Passive portfolios, or indexed portfolios, are market-driven, not manager-driven. Their broad, diversified exposure to the market, delivers the following benefits:

- **Diversified, Risk-Controlled Exposure** Passive portfolios, or indexed portfolios, are market-driven and not manager-driven. As such, they generally deliver broad, diversified exposure to the market and can effectively eliminate style drift or capitalization “bets” as requested by the investor or client.

- **Lower Expenses and Improved Tax Efficiency** Index portfolios are usually less expensive to maintain than active funds. Conventional wisdom implies that the cost of managing an index fund should be significantly less than that of managing an active fund. Since passive portfolios do not require managers to expend resources researching the market or selecting stocks, passive management should be less costly than active management. Because passively managed investments track a market index, such funds usually enjoy relatively low portfolio turnover. Because low turnover decreases transactions, transaction costs are also decreased. Additionally, low turnover generates less capital gains and lower tax costs. As a result, indexing can be inherently tax-efficient.

- **Competitive Performance** Within the context of the efficient market hypothesis, investing becomes a zero-sum game since markets are efficient and, as a result, fully reflect all relevant information. In theory, after adjusting for the impact of costs, the returns of passively managed portfolios should be higher than most active portfolios. Nobel laureate William Sharpe illustrates this most succinctly in his 1991 article, “The Arithmetic of Active Management”:

  “If active and passive management are defined in sensible ways, it must be the case that:

  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.

  These assertions hold for any time period. Moreover, they solely depend on the laws of addition, subtraction, multiplication and division.”

In theory, indexed portfolios should deliver higher risk-adjusted returns (returns adjusted for volatility). Passive management should potentially reduce the risk of manager underperformance over longer time horizons. In fact, much empirical evidence and academic research supports the notion that it is nearly impossible to beat a market portfolio over time after accounting for fees, costs, capital gains and taxes.

Disadvantages and Risks of Passive Management

While its advantages are compelling, there may also be some potential disadvantages to passive management.

- **Market Returns Only** Indexing is not about timing the market or hand-picking stocks. Rather, it seeks to generate market returns and does not seek to “beat” a benchmark. Investors in search of—and who believe they can achieve—better-than-market returns will not realize those excess returns utilizing a passive investment approach.

- **No Ability to Defend Against Down Markets** A second potential disadvantage to a passive approach is its inability to provide defensive measures during market downturns. Indexes offer purity, and therefore, when markets are up, indexes take full advantage of the benefits. However, when markets decline, indexes have no reprieve from the fall.
ADVANTAGES OF ACTIVE MANAGEMENT

There are two primary advantages that often prompt investors to pursue an active, manager-driven investment strategy:

- **POTENTIAL TO BEAT THE MARKET**  Active management proponents argue that pricing inefficiencies can be exploited by highly skilled managers. By taking active “bets” relative to the benchmark, or by assuming more risk, active management contends that investors have the potential to realize excess returns relative to market returns.

- **POTENTIAL FOR PROTECTION IN DOWN MARKETS**  In theory, active management potentially provides protection in down markets. Unlike indexed portfolios, which have no discretion to adjust cash reserves to serve as a cushion in declining markets, active proponents suggest that an actively managed fund could hold more cash reserves, defensively positioning a portfolio to serve as a buoy in bear markets.

Active management proponents also believe that highly skilled active managers can successfully predict market downturns. This assumption is founded upon the claim that the downside protection active management potentially delivers will compensate for any underperformance in rising markets.

DISADVANTAGES AND RISKS OF ACTIVE MANAGEMENT

While its advantages are obvious, the disadvantages of active management are less visible.

- **HIGHER COSTS AND FEES**  If we accept the assumptions presented in Sharpe’s article on the arithmetic of active management, then we must acknowledge that, in order to beat or simply break even with a passive strategy, actively managed portfolios must create enough added value to offset the higher fees and costs associated with this management style.

Some of the cost differential is a result of the higher turnover rate associated with the maintenance of active portfolios. Passive portfolios simply replicate the index and therefore buy or sell securities only when the index changes or redemptions must be met. This reduces the number of transactions that take place in the open market, which generally results in lower fees and greater tax efficiency for the investor. Active portfolios will buy and sell stocks more frequently as they assess and reassess the value of each stock they hold. This high relative turnover will require the active manager to spend much more on transaction costs.

A closer look at the average fees of active and passive managers help demonstrate this point. Figure 1 provides the average fees for active and passive managers, including exchange traded funds, by asset class. Average fees for active management are significantly higher in most asset classes when compared to their passive counterparts. For instance, if an investor were to use active management for the large cap blend portion of their portfolio, they would need to outperform by at least 0.67% to compensate for the additional fees charged by active managers in this space.

The evolution of ETFs has made passive investing even more cost effective. In fact, ETFs offer a significant fee advantage in virtually every asset class, most notably in the small cap growth space. Small cap growth ETFs cost just 0.33% on average, while their active mutual fund counterparts charge an average of more than four times that amount at 1.57%. This creates a significant expense hurdle rate of 1.24% annually in this space.

At the very least, this relative outperformance hurdle rate would need to be achieved to substantiate the argument for using active management in any given asset class. This, of course, is before any consideration is given to the potential additional costs of higher portfolio turnover, capital gains, and taxes.

- **RISK AND UNPREDICTABILITY**  Active management requires that investors have complete confidence in their ability to hire the right manager who has the skill and ability to consistently outperform the market over time. Some studies suggest that most managers do not outperform the market and that any short-term outperformance has typically been unsustainable. This may give investors additional cause to carefully consider utilizing passive management for at least some portion of their investment dollars.

**FIGURE 1: AVERAGE EXPENSE RATIOS: ACTIVE MUTUAL FUNDS, INDEX MUTUAL FUNDS AND ETFS**

![Average Net Expense Ratio Chart](chart.png)

Source: Morningstar Direct, SSgA Global ETF Strategy & Research, as of 12/31/2010.

Average Net Expense Ratio for Active Funds, Passive Index Funds, and Exchange Traded Funds by size and style categories.
EVALUATING PASSIVE VERSUS ACTIVE PERFORMANCE

While the theoretical case for passive and active investing is fairly straightforward, the actual performance of passive versus active varies greatly by asset class and time period. However, some patterns emerge.

Historical evidence suggests, for example, that, on average, active management may not add value—especially within the broader asset classes. Research conducted in the 1960s by Jensen (1968), Sharpe (1966) and Treynor (1965) found that, on average, active funds underperform their benchmarks on a risk-adjusted basis and that the magnitude of underperformance directly relates to the level of expenses. Notably, this level of underperformance reported in the 1960s and as presented in this study may be understated as a result of “survivorship bias” whereby funds that previously merged or no longer exist due to poor performance could not be counted. Later research conducted from 1970 to 1990 that made adjustments for survivorship bias and risk exposures also concluded that the average active fund fails to add value relative to its passive benchmark.

LONG-TERM RESULTS

Research conducted by State Street Global Advisors and SPDR® ETFs for the 15-year period ended December 31, 2010 found that more than half of actively managed funds outperformed relative indexes in only three less-efficient, less-liquid asset classes—small cap blend, small cap growth, and international (Figure 2).

Most strikingly, over the past 15 years, less than 15% of active fixed income managers added value over the corresponding benchmark. For large cap value, blend and growth managers, only 35 to 43% of funds outperformed. Mid cap funds also struggled; only 24% of mid cap blend funds and 35% of mid cap value funds added value. Actively managed mid cap growth funds fared slightly better, with 41% outperforming.

It was only in the small cap and international categories that actively managed funds demonstrated their ability to generate excess returns. Although just 39% of small cap value funds outperformed, a more impressive 54% of small cap blend funds and 59% of small cap growth funds outperformed.

International equities, generally considered a less efficient asset class and, therefore, one in which active managers stress their ability to add value, also delivered mixed results. For developed market international equities, 65% of the funds outperformed the index. And while 42% of emerging market funds outperformed, the sample size was small as only 50 emerging market mutual funds had a 15-year record.

FIGURE 2: PERCENT OF ACTIVE MANAGERS OUTPERFORMING WITH AVERAGE EXCESS RETURN FOR OUTPERFORMING FUNDS

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>% Outperform</th>
<th>% Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Cap Blend</td>
<td>34.6</td>
<td>43.0</td>
</tr>
<tr>
<td>Large Cap Growth</td>
<td>1.4</td>
<td>1.6</td>
</tr>
<tr>
<td>Large Cap Value</td>
<td>1.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Mid Cap Blend</td>
<td>0.0</td>
<td>24.2</td>
</tr>
<tr>
<td>Mid Cap Growth</td>
<td>1.2</td>
<td>41.0</td>
</tr>
<tr>
<td>Mid Cap Value</td>
<td>1.9</td>
<td>35.0</td>
</tr>
<tr>
<td>Small Cap Blend</td>
<td>1.9</td>
<td>54.1</td>
</tr>
<tr>
<td>Small Cap Growth</td>
<td>2.3</td>
<td>59.1</td>
</tr>
<tr>
<td>Small Cap Value</td>
<td>1.1</td>
<td>42.0</td>
</tr>
<tr>
<td>International</td>
<td>1.1</td>
<td>64.5</td>
</tr>
<tr>
<td>Emerging Markets</td>
<td>1.4</td>
<td>42.0</td>
</tr>
<tr>
<td>Fixed Income</td>
<td>1.1</td>
<td>42.0</td>
</tr>
</tbody>
</table>


Based on Morningstar data for the past 15 years, ending 12/31/2010. Chart shows the percent of active strategies that outperform the corresponding benchmark by category. Mutual fund performance is net of fees; index performance is gross of fees. The following indexes were used as benchmarks: Barclays Capital Aggregate Bond Index for Fixed Income, Dow Jones U.S. Total Stock Market Indexes for the respective domestic equities, the MSCI EAFE Index for international equities and the MSCI Emerging Markets Index for emerging market equities. For illustrative purposes only. Past performance is not indicative of future results.
Also of note is the magnitude of outperformance for those funds that did generate excess returns. For example, the outperforming large cap value funds added 95 basis points, or 0.95%, on average. The 24% of mid-cap blend funds that outperformed added 1.7% on average over the index. The 59% of small cap growth funds that outperformed added, on average, 2.3%. In general, when progressing from large cap to small cap, and value to growth, the percentage of outperforming funds and their average excess return increased. Across international equities, outperforming funds added 2.1% on average in developed markets and 1.4% in emerging markets.

Evaluating whether outperformance will persist requires determining the factors that contribute to outperformance. In other words, does outperformance result from skill or luck? After adjusting for factor exposures to control for risk-taking and survivorship bias, studies found that repeated positive performance compares to the toss of a coin—with a probability of approximately 50%. It would seem, then, that luck has as much to do with outperformance as manager skill.

Consider the 15-year results in Figure 2—nearly 35% of active large cap blend managers outperformed over that time period. Yet, on a year-by-year basis (Figure 3), the results vary considerably, ranging from as few as 15% to as many as 87% outperforming the Dow Jones Large Cap U.S. Total Stock Market Index. From 1996-1999, active funds consistently underperformed—fewer than 20% outperformed in 1997 and 1998. In 2000 and 2001, the trend reversed and, respectively, 87% and 70% of active funds outperformed. In the following nine years, the percentage of funds outperforming ranged from a high of 55% (2009) to a low of 19% (2010).

The amount of excess return varied considerably as well, following a similar pattern to the percentage of outperformers (Figure 4). Over the entire 15-year period, the median active large cap fund outperformed by as much as 7.4% and underperformed by as much as 9.4%. From 1996 to 1999, the median active fund underperformed the index by between 1.7% (1996) and 9.4% (1998). From 2000 to 2002, the median active large cap fund added between 1.3% (2000) and 7.4% (2002) over the index. In the following eight years, the results were mixed as the median active fund underperformed by as much as 1.4% (2010) and outperformed by 1.7% (2009). Predictably, index mutual funds generally underperformed the index by approximately the amount of their expenses—0.5% to 0.6% on average.

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Another way to view the consistency of active manager returns is to track the subsequent performance of a group of outperforming funds, as seen in Figure 5. In 2005, 50.8% of active large blend mutual funds outperformed the Dow Jones Large Cap U.S. Total Stock Market Index by an average of 2.9%. This group of 552 funds provided mixed results in the subsequent five years—outperforming in two years and underperforming in three. On average, this group of managers underperformed the index by 0.41% over the following five-year period.

![Figure 5](https://example.com/figure5.png)

**FIGURE 5: AVERAGE SUBSEQUENT EXCESS RETURNS OF LARGE CAP BLEND FUNDS THAT OUTPERFORMED IN 2005**

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Average Excess Return (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2006</td>
<td>2.8</td>
</tr>
<tr>
<td>2006-2007</td>
<td>-0.7</td>
</tr>
<tr>
<td>2007-2008</td>
<td>-1.7</td>
</tr>
<tr>
<td>2008-2009</td>
<td>-2.3</td>
</tr>
<tr>
<td>2009-2010</td>
<td>1.9</td>
</tr>
</tbody>
</table>


Average outperformance of Large Cap Blend Universe for year 2005, subsequent performance for the same group of managers by year. Outperformance is relative to the Dow Jones Large Cap U.S. Total Stock Market Index. Members of the Morningstar Large Cap Blend Active universe include non index funds in the Morningstar US Large Blend category. Mutual fund performance is net of fees; index performance is gross of fees.

Performance data varied even more considerably when the time frame was extended to measure outperformance in consecutive years (Figure 6). Again, in 2005, approximately 51% of large cap blend funds outperformed the index. Tracking this same group of funds over the following five years demonstrates how difficult it is for active funds to maintain their outperformance. Only 18.1% of the funds were able to outperform in both 2005 and 2006. The results then drop dramatically, with only 9.5% outperforming for three consecutive years, 2.5% for four consecutive years and 1.1% for five consecutive years. From this original group of greater than 1,000 managers, only five outperformed every year from 2005 to 2010.

Looking deeper into the outperformance of active funds, a research study published by Russ Wermers in April 2003, “Are Mutual Fund Shareholders Compensated for Active Management Bets,” concluded that active management does provide value but that the value is reflected in only a minority of funds that take relatively large volatility bets. The study found that funds taking large bets away from the market, or style portfolios, generally performed well during simultaneous time periods. While the study results cast a somewhat positive light on some active managers, the results also indicated a higher potential of underperformance of funds taking higher levels of risk.

Returning to the 15-year performance chart (Figure 2) clearly illustrates the probability that active managers can add the most value in less-efficient, less-liquid areas of the markets, including small cap and international stocks. Making active bets in small cap stocks, and more specifically small cap growth stocks, provides for a higher relative probability of success since more than 59% of small cap growth funds beat their corresponding index by an average excess return of 2.3%. Developed international funds offer an increased probability of outperformance, with 65% of active managers outperforming, offering an average alpha of 2.1%.

**ACTIVE PERFORMANCE IN DOWN MARKETS**

One of the potential benefits of active management is the ability to defend against down markets. Analysis of active large cap, mid cap, and small cap blend funds over the bear market period of March 2000 through December 2001, revealed that more than 80% of active managers in each of these three categories beat their respective Dow Jones size benchmark. Eighty-one percent of active large cap blend funds outperformed, providing average excess return of 7.5%. Eighty-two percent of mid cap funds outperformed, providing 12.1% of excess return, and 87% of active small cap blend managers outperformed while providing an impressive 18.7% in average alpha. Again, the less efficient asset class produces the highest probability of outperformance and the highest average excess return.

Analysis of a more extensive time period—the 10-year period from 1996 to December 2006—again reveals greater active outperformance in less efficient asset classes. Active international stock funds returned an annualized average return of 8.76%, topping the 8.06% return of the Morgan Stanley Capital International Europe, Australasia, and the Far East Index (MSCI EAFE). The 10-year return for active small cap core funds averaged 10.65%, again topping the 9.44% return of the Russell 2000® Index. The average return of active emerging markets funds over that same 10-year period at 10.29% bested the MSCI Emerging Markets Index (MSCI EMI), which delivered an annualized return of 9.40%.^5

![Figure 6](https://example.com/figure6.png)

**FIGURE 6: PERCENTAGE OF FUNDS OUTPERFORMING IN CONSECUTIVE YEARS**

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Percentage of Funds Outperforming (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2006</td>
<td>18.1</td>
</tr>
<tr>
<td>2005-2007</td>
<td>9.5</td>
</tr>
<tr>
<td>2006-2007</td>
<td>2.5</td>
</tr>
<tr>
<td>2006-2008</td>
<td>1.1</td>
</tr>
<tr>
<td>2007-2008</td>
<td>0.5</td>
</tr>
</tbody>
</table>


Average outperformance of Large Cap Blend Universe for year 2005, subsequent performance for the same group of managers by given time periods. Outperformance is relative to the Dow Jones Large Cap U.S. Total Stock Market Index. Members of the Morningstar Large Cap Blend Active universe include non index funds in the Morningstar US Large Blend category. Mutual fund performance is net of fees; index performance is gross of fees.
Based on these statistics and as evidenced in other studies, empirical evidence supports the notion that active funds can sometimes outperform passive funds in less efficient markets over certain down market periods and sustained time horizons.

Analysis from our most recent down market period—December 2007 to February 2009—yielded different results. Fifty-one percent of active large cap blend funds outperformed and provided average excess return of 3.4%. Fifty-seven percent of mid cap blend funds outperformed with 5.6% of excess return, and 65% of active small cap blend managers outperformed while resulting in an average alpha of 4.9%.

SHORT-TERM RESULTS
Relatively stable market conditions prevailed in 2010. The market volatility of 2008 and 2009 gave way to a more tempered extension of the recovery that existed in 2009. However, the ability for active managers to outperform the market continued to be weak. In 2010, active managers outperformed in just four categories: fixed income, mid cap, small cap value and international (Figure 7). Large cap funds lagged dramatically in 2010 which is in line with historical trends.

In 2009, extremes in manager excess return were pronounced. Funds that did outperform tended to do so by a much wider margin than in years past. This was generally not the case in 2010 as excess return results tended to fall into a more familiar pattern. For instance, in 2009, 55% of large cap blend funds outperformed the Dow Jones Large Cap U.S. Total Stock Market Index. This group of funds outperformed the index by 670 basis points on average. In 2010, a less extreme 19% of large blend funds outperformed by an average of 330 basis points.

Extremes in underperformance also existed in 2009. Managers that underperformed the index realized much deeper levels of underperformance on average. In 2010, the average underperformance of large cap blend funds that did not beat the index was -3.5%. In 2009, this average underperformance was substantially lower at -5.2%.

While the degree to which over and under performance has varied substantially over the past two years, one historical constant has been relative average alpha when comparing categories. Not surprisingly, average under and over performance of small cap and international funds have been more extreme on a relative basis when compared to other asset classes.

MAKING THE DECISION: PASSIVE VERSUS ACTIVE
Statistics presented here and evidenced in other studies support the notion that active funds can sometimes outperform passive funds in less efficient markets over certain down market periods and sustained time horizons. Yet, there is no question that future theoretical and empirical research on the passive versus active argument will continue to fuel the passionate debate. Investors who continue to seek out and digest this abundance of information should be wary of any expectation that they will be led to a definitive conclusion as to which approach is best. As articulated in this analysis, compelling arguments can be—and will continue to be made—for both management approaches. Rather than ask whether passive or active management is better, the more fundamental question advisors must address is: How can I help clients make the best decisions with respect to which approach most appropriately pursues their individual goals and objectives?

FIGURE 7: PERCENT OF ACTIVE MANAGERS OUTPERFORMING IN 2010

Based on Morningstar data for the year 2010. Chart shows the percent of active strategies that outperform the corresponding benchmark by category. Mutual fund performance is net of fees; index performance is gross of fees. The following indexes were used as benchmarks: Barclays Capital Aggregate Bond Index for Fixed Income, Dow Jones U.S. Total Stock Market Indexes for the respective domestic equities, the MSCI EAFE Index for international equities and the MSCI Emerging Markets Index for emerging market equities. For illustrative purposes only. Past performance is not indicative of future results.
The decision to employ active or passive management should be made by the advisor in the context of an investor’s overall investment objectives and their ability to tolerate risk. In making the active/passive decision, there are several questions advisors and their clients should carefully consider:

1. What is your tolerance for underperformance?
2. How comfortable are you with taking on active risk?
3. Do you believe markets are more likely to behave efficiently or inefficiently?
4. Do you believe skill-based managers can add value?
5. How confident are you in your ability to select the top-performing active managers?

The answers to the questions above could help guide investors in making the active/passive decision. Additional indicators investors might use as guidelines to determine which approach best suits their individual needs appear below.

**PASSIVE PERSONALITY INDICATORS**
- Believe markets are efficient
- Unwilling to tolerate a high level of active risk or variance in return potential vs. the benchmark
- Believe performance of individual asset classes and styles is unpredictable

**ACTIVE PERSONALITY INDICATORS**
- Believe markets are inefficient and assets are priced above or below fair market value
- Believe skilled managers are able to identify mispriced assets in advance
- Able to identify skilled managers in advance
- Willing to assume higher level of risk and variance in return potential

Another helpful approach to assessing your (and your client’s) investment personality is outlined in Figure 8. Ask yourself each of the questions in sequence; your answer will determine your inclinations toward active or passive investing.

Some investors, when considering the questions and guidelines presented here, may find that they and their beliefs do not neatly fit into one category or the other, but rather lie somewhere in between. Sophisticated advisors and investors, upon close examination of the rationales for passive and active management, may find themselves fluctuating between the two. Does a middle ground exist? Is a compromise between active and passive management possible?

Given the results presented in this paper, it may make sense to allocate a greater portion of one’s risk budget to those areas where the opportunities to add value are statistically probable. It stands to reason that passive strategies should be relied upon when the potential to beat the market is relatively poor. That is, employ active managers in asset classes where the manager has a greater chance of outperforming, and utilize passive for those market segments deemed to be efficient.

When employing active management within a portfolio, it is again important to note the considerations that should be taken with respect to excess fees and tax liabilities that often accompany these strategies. After having accounted for a wide variety of preferences and objectives, investors should decide at which point and in what space it makes sense to utilize active management.
ETFs as a Passive Investment Option

When choosing index funds for their significant advantages relative to actively managed funds, it is important to recognize that there is considerable variability within index funds in terms of expense ratios, ability to track the index, and tax efficiency. In many cases, ETFs can be the most attractive index choice. ETFs generally offer a fee advantage—not just over actively managed mutual funds, but also over index mutual funds (Table 1).

### TABLE 1: ETF EXPENSE ADVANTAGE

<table>
<thead>
<tr>
<th>ASSET CLASS</th>
<th>INDEX MUTUAL FUND AVERAGE EXPENSE RATIO</th>
<th>ETF AVERAGE EXPENSE RATIO</th>
<th>ETF EXPENSE ADVANTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMALL CAP VALUE</td>
<td>1.43</td>
<td>0.41</td>
<td>1.02</td>
</tr>
<tr>
<td>SMALL CAP GROWTH</td>
<td>1.31</td>
<td>0.33</td>
<td>0.98</td>
</tr>
<tr>
<td>MID CAP VALUE</td>
<td>1.29</td>
<td>0.41</td>
<td>0.88</td>
</tr>
<tr>
<td>MID CAP GROWTH</td>
<td>1.16</td>
<td>0.47</td>
<td>0.69</td>
</tr>
<tr>
<td>LARGE CAP GROWTH</td>
<td>1.01</td>
<td>0.44</td>
<td>0.57</td>
</tr>
<tr>
<td>LARGE CAP VALUE</td>
<td>0.91</td>
<td>0.37</td>
<td>0.54</td>
</tr>
<tr>
<td>SMALL CAP BLEND</td>
<td>0.89</td>
<td>0.47</td>
<td>0.42</td>
</tr>
<tr>
<td>MID CAP BLEND</td>
<td>0.74</td>
<td>0.45</td>
<td>0.29</td>
</tr>
<tr>
<td>INTERNATIONAL</td>
<td>0.76</td>
<td>0.50</td>
<td>0.25</td>
</tr>
<tr>
<td>LARGE CAP BLEND</td>
<td>0.69</td>
<td>0.46</td>
<td>0.23</td>
</tr>
<tr>
<td>FIXED INCOME</td>
<td>0.42</td>
<td>0.23</td>
<td>0.19</td>
</tr>
<tr>
<td>EMERGING MARKETS</td>
<td>0.68</td>
<td>0.68</td>
<td>0.00</td>
</tr>
</tbody>
</table>


In addition to any expense and performance advantages, ETFs have also proven to be relatively tax-efficient. Traditional mutual funds are required to pass any realized capital gains on to investors as a capital gains distribution. These realized capital gains could be the result of portfolio turnover related to portfolio manager decisions. Capital gains can also be realized due to fund redemptions, when the portfolio manager must sell securities to raise cash for redemptions. This distribution is taxable to the investor regardless of how long he or she held onto the fund shares (the decisive factor is the record date for the distribution).

Capital gains distributions for ETFs have historically been substantially lower than for mutual funds (Table 2). This is due to the way ETFs are structured. For most investors, ETFs are bought and sold on the secondary market. As a result, unlike a traditional mutual fund, when an investor sells ETF shares, there is no impact to the portfolio and the portfolio manager is not required to sell securities to raise cash for the redemption. For very large purchases and redemptions, there will be a creation or redemption of ETF shares as a basket trade with the ETF’s market makers. This is considered an in-kind transaction. Such transactions are not subject to capital gains taxes. As you can see in Table 2, the average ETF capital gain distribution has historically only been a fraction of the average capital gain distribution for a mutual fund.

### TABLE 2: AVERAGE CAPITAL GAINS DISTRIBUTION OF ETFS VS MUTUAL FUNDS

<table>
<thead>
<tr>
<th>YEAR</th>
<th>AVERAGE MUTUAL FUND CAPITAL GAIN DISTRIBUTION</th>
<th>AVERAGE ETF CAPITAL GAIN DISTRIBUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>1.79</td>
<td>0.13</td>
</tr>
<tr>
<td>2001</td>
<td>0.33</td>
<td>0.02</td>
</tr>
<tr>
<td>2002</td>
<td>0.11</td>
<td>0.00</td>
</tr>
<tr>
<td>2003</td>
<td>0.13</td>
<td>0.01</td>
</tr>
<tr>
<td>2004</td>
<td>0.45</td>
<td>0.03</td>
</tr>
<tr>
<td>2005</td>
<td>0.76</td>
<td>0.05</td>
</tr>
<tr>
<td>2006</td>
<td>1.03</td>
<td>0.04</td>
</tr>
<tr>
<td>2007</td>
<td>1.48</td>
<td>0.08</td>
</tr>
<tr>
<td>2008</td>
<td>0.32</td>
<td>0.00</td>
</tr>
<tr>
<td>2009</td>
<td>0.04</td>
<td>0.04</td>
</tr>
<tr>
<td>2010</td>
<td>0.12</td>
<td>0.06</td>
</tr>
</tbody>
</table>


ETFs also offer potential tax advantages relative to other types of index funds. Table 3 shows the average capital gain distribution for the SPDR S&P 500® ETF (SPY) relative to the average S&P 500 Index fund. Over the analysis’ 5-year period, SPY had no distributions, versus 0.36% for the average S&P 500 Index mutual fund.

### TABLE 3: CAPITAL GAINS DISTRIBUTIONS AS A PERCENTAGE OF NAV*

<table>
<thead>
<tr>
<th>YEAR</th>
<th>SPDR S&amp;P 500 ETF (SPY)</th>
<th>AVERAGE OPEN END S&amp;P 500 INDEX FUND**</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>0.00</td>
<td>0.24</td>
</tr>
<tr>
<td>2006</td>
<td>0.00</td>
<td>0.43</td>
</tr>
<tr>
<td>2007</td>
<td>0.00</td>
<td>1.21</td>
</tr>
<tr>
<td>2008</td>
<td>0.00</td>
<td>0.14</td>
</tr>
<tr>
<td>2009</td>
<td>0.00</td>
<td>0.10</td>
</tr>
<tr>
<td>2010</td>
<td>0.00</td>
<td>0.03</td>
</tr>
<tr>
<td>AVERAGE</td>
<td>0.00</td>
<td>0.36</td>
</tr>
<tr>
<td>CUMULATIVE</td>
<td>0.00</td>
<td>2.51</td>
</tr>
</tbody>
</table>

Source: Bloomberg, Morningstar, MSSB Research, as of 12/31/2010. * Year End NAV. **Average open-end S&P 500 fund. Does not include funds that liquidated.

ETFs now enable investors to reach every corner of the global market. In addition to functioning as a cost-efficient, passive investment in traditional core asset classes, ETFs can also serve as low-cost satellite plays to express particular sector or geographical bets where investors believe managers could outperform.
LOOKING AHEAD
Assets invested in index investments, including mutual funds and ETFs, are on the increase. Although active funds continue to dominate market share (76.5% of mutual fund assets were invested in active funds at the end of 2010), over the last nine years, active managers have consistently lost market share to their passively managed counterparts. Given that actively managed funds failed to protect during the Great Recession and today’s investors continue to reassess their risk tolerance, it’s likely the trend toward passive investing will continue.

As articulated in this analysis, compelling arguments can be made—and will continue to be made—for both investment approaches. Amid this ever-widening sea of information and potential misinformation, it is important that advisors provide guidance and direction to help their clients understand the key distinctions, advantages and disadvantages of both passive and active management. We believe this paper illustrates that both approaches have their merits. The benefits of passive investing include reduced costs and tax efficiency—and, historically, passive funds have outperformed a majority of active funds over long time horizons. However, active funds often outperform in less efficient markets and active management proponents stress that there are always market anomalies that can potentially be exploited by active managers.

Apart from what will be an ongoing debate, when constructing a portfolio, advisors must work with their clients to discover personal risk tolerance levels to craft an investment solution that best meets their needs. In today’s transitioning market, for many clients the best approach may be a sophisticated solution that leverages both passive and active management. In this way, investors can look to incorporate the best that each strategy has to offer.

FIGURE 9: INDEX FUNDS’ MARKET SHARE CONTINUES TO RISE
PERCENT OF FUND ASSETS FOR ACTIVE FUNDS, INDEX FUNDS AND ETFS

<table>
<thead>
<tr>
<th>Year</th>
<th>% in Active Funds</th>
<th>% in Index Funds</th>
<th>% in ETFs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>9.8</td>
<td>88.7</td>
<td>1.5</td>
</tr>
<tr>
<td>2002</td>
<td>5.3</td>
<td>87.5</td>
<td>7.2</td>
</tr>
<tr>
<td>2003</td>
<td>9.6</td>
<td>86.8</td>
<td>3.5</td>
</tr>
<tr>
<td>2004</td>
<td>10.5</td>
<td>85.0</td>
<td>4.5</td>
</tr>
<tr>
<td>2005</td>
<td>10.5</td>
<td>84.3</td>
<td>5.3</td>
</tr>
<tr>
<td>2006</td>
<td>10.6</td>
<td>83.5</td>
<td>6.0</td>
</tr>
<tr>
<td>2007</td>
<td>10.7</td>
<td>82.0</td>
<td>7.3</td>
</tr>
<tr>
<td>2008</td>
<td>11.1</td>
<td>79.4</td>
<td>9.5</td>
</tr>
<tr>
<td>2009</td>
<td>11.3</td>
<td>78.5</td>
<td>10.2</td>
</tr>
<tr>
<td>2010</td>
<td>12.3</td>
<td>76.5</td>
<td>11.2</td>
</tr>
</tbody>
</table>

Source: Morningstar Direct, SSgA Global ETF Strategy & Research as of 12/31/2010. Data is US open-end mutual funds and ETFs as defined by Morningstar. Mutual funds used are exclusive of money market funds and fund of funds.
WHAT IS PASSIVE MANAGEMENT?
First, what is meant by “passive?” Passive management rests on the assumption of market efficiency, a topic upon which the academic community has focused exhaustive theoretical and empirical studies. As understood today, Modern Portfolio Theory (MPT) is based primarily on the pioneering research of two Nobel Prize winners, Eugene Fama and Harry Markowitz.

Though it emerged as a concept years earlier, the theory of market efficiency was first formalized and supported by empirical evidence from Eugene Fama in 1965, when the Journal of Business published Fama’s doctoral thesis: “The Behavior of Stock Market Prices.” In his thesis, Fama posited the Efficient Market Hypothesis (EMH).

Conventional wisdom asserts that individuals or institutions who invest in the stock market do so with the aim of generating a return on the capital invested. In addition to generating profitable returns, many investors try to outperform a particular benchmark. EMH, however, suggests that it is impossible to beat the market because, at any given time, prices fully reflect all available information on a particular stock and/or market. The nature of the information does not have to be limited to financial news and research alone; indeed, information about political, economic and social events, combined with how investors perceive such information, whether true or rumored, will be reflected in the stock price.

Thus, according to the theory of market efficiency, no investor has an advantage in predicting a return on a stock price because no one has access to information that is not already available to everyone else. Given that prices only respond to information available in the market, and all market participants are privy to the same information, no one will have the ability to “out-profit” anyone else.

As a result, the Efficient Market Hypothesis suggests that investors may be best served by owning the broad market. Investors can use an expansive market index or a series of specialized indices to build a portfolio that replicates the market. This investment approach, called indexing, is the basis for passive management.

WHAT IS AN INDEX?
An index tracks a group of investments that are representative of an entire asset class or market, as a way of measuring that asset class’ performance. Designed to match market performance, an indexing strategy invests in the same securities and in the same proportions that the market or benchmark index holds. There is no aim to outperform or to obtain excess returns.

Most indexes today are capitalization-weighted as opposed to price-weighted or equal-weighted. That is, each stock impacts the index in proportion to its market value—the number of shares outstanding multiplied by the share price. Today, investors can choose from literally thousands of index mutual funds and ETFs that track all major asset classes, regions and sectors.

While still not as popular among retail investors as active investment strategies, indexing has experienced tremendous growth over the past several years, especially with the recent evolution of exchange traded products. In the US, these investment vehicles have grown from less than $100 billion in assets under management in 2001 to more than $500 billion today. What accounts for such tremendous growth? The surge may be attributed to wider recognition of the potential benefits such an approach can deliver.

WHAT IS ACTIVE MANAGEMENT?
Unlike passive management, active management rests on the assumption that markets are inefficient. One of the premises upon which this theory is based is the notion that investors are not rational beings as Modern Portfolio Theory suggests. In fact, active proponents posit that inefficiencies develop as a result of the irrationality of investors.

The existence of financial bubbles and historical anomalies suggests such inefficiencies may exist. Active management attempts to exploit those inefficiencies with the objective of beating the market on a risk-adjusted basis, as measured by a particular index or passive benchmark. Unlike indexing, which seeks to own all stocks within a particular market, active managers only buy what they perceive as the most attractive stocks and in some cases, sell short perceived unattractive stocks within a particular market.
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6 http://www.investopedia.com

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