

Active Versus Passive: The Great Debate Continues

by David M. Blanchett, CFP®, CLU, AIFA®, QPA, CFA, and Craig L. Israelsen, Ph.D.

David M. Blanchett, CFP®, CLU, AIFA®, QPA, CFA, is an institutional consultant at Unified Trust Company in Lexington, Kentucky, where he is responsible for helping 401(k) advisors with fiduciary, compliance, operational, and investment issues relating to Unified Trust's retirement plan services.

Craig L. Israelsen, Ph.D., is an associate professor in the School of Family Life at Brigham Young University in Provo, Utah, where he teaches family finance. Primary among his research interests is the analysis of mutual funds.

Few topics in the field of finance have generated as much interest and spirited debate as the issue of active versus passive investing. Empirical evidence in support of the superiority of passively managed portfolios is persuasive (see, for example, Davis (2001); Arnott, Berkin, and Ye (2000); Sorensen, Miller and Samak (1998); Carhart, (1997); Gruber (1996); Malkiel (1995); or Brinson, Hood, and Beebower (1995). Conversely, equally sound empirical or logical evidence in defense of the value of active portfolio management has been presented (see, for example, Pastor and Stambaugh (2002); Wermers (2000); Elton, Gruber, and Blake (1996); or Etzioni (1992)). Moreover, "behavioral" arguments in favor of actively managed funds have been offered (Timbers (1997)).

A recent article by Holmes (2007) provided findings that were relatively consistent with several previous studies: on an aggregate basis, actively managed mutual

Executive Summary

- The debate over active versus passive investing is confounded by several issues that are not always recognized or dealt with properly.
- Our article highlights the deficiencies common in studies on the benefits of active management, which include (1) problematic survivor bias methodology, (2) counting funds rather than fund assets, (3) not accounting for multiple share classes, and (4) using a single index to represent passive index performance. This last issue is often referred to *index dependency*.
- A recent article by Holmes (2007)

dealing with the active-versus-passive debate contained several of these potential issues, which likely influenced the results.

- We find considerable variation in the percentage of actively managed funds that beat indexes based on what indexes are used as benchmarks. Moreover, there are material differences in the results when using asset-weighted performance data of actively managed funds rather than simply conducting a head count, and when properly accounting for funds with multiple share classes.

funds have not outperformed their passive peers, net of fees. Holmes provided a comprehensive analysis of the active/passive debate versus much of the previous research. Several of the above studies share one or more methodological problems, and in this paper we will use the Holmes study as a basis for demonstrating these biases and how they can be corrected. Thus, this paper is best viewed as an extension of the work by Holmes.

Potential survivorship bias. A common method to create a sample population for analysis is to look back at the all funds as of a current date (for example, December 31, 2004). This is a "reach-back" technique and is common in active-versus-passive

studies due to its simplicity. While simple, this strategy exposes the data set to survivorship bias since only those funds in existence as of the look-back date are included in the analysis. In Holmes's analysis (as best the authors can determine), the author used the year-end 2004 Morningstar data to create a data set of all U.S. equity funds that were in existence as of December 31, 2004 (hence, the look-back date was December 31, 2004). Since Holmes's study covered a ten-year period, there is significant potential for survivor bias using a reach-back technique.

Head count versus invested assets. The majority of active versus passive studies have determined the aggregate benefit of

active management as the average performance of the active managers in the study population. Such a strategy ignores the actual assets invested in each fund and consequently the net returns to investors. For example, an analysis based entirely on head count would equally consider the performance the Growth Fund of America A Share (AGTHX) and the Credit Suisse Large Cap Growth A (CUAAX), even though (as of December 31, 2006) the assets for AGTHX were \$80 billion versus \$1 million for CUAAX. Measuring active versus passive methodologies using assets rather than fund head count is a more correct approach and has been previously employed (see Israelsen (2006)).

Culling the data set to distinct shares. Including multiple share classes in active versus passive analysis is common since investors actively invest in different share classes. However, the primary difference in expenses related to varying share classes is the costs associated with distribution, which is not directly related to the question of whether active management adds value after fees. 12b-1 fees and other forms of revenue share represent fees for distribution, not active management. Also, a fund with more share classes would have a larger impact on the results in a pure head-count analysis. For example, American Funds has as many as 14 different share classes for a single fund. This means such a fund would have 14 times the weight of an investment with only one share class. This is not a trivial issue. For instance, as of year-end 2006 there were 11,824 U.S. equity mutual funds in the Morningstar Principia database. This total includes all share classes. When employing the “distinct funds” filter (which selects only one share class of a multiple share class fund), the number of funds was reduced to 4,186—or a reduction in the number of funds by nearly 65 percent for the entire period. As best we can tell, the Holmes study included all share classes.

Index dependency. The index selected to represent passive management can have a substantial impact on whether active

management successfully adds value, since the performance of different indexes can vary considerably. While it is the case that many index funds use S&P indexes as their bogey, using S&P indexes solely to represent the performance of “passive management” is inaccurate and misleading. There are many other index providers (MSCI, Lipper, Morningstar, Dow Jones, for example) and there is wide variance among the performance of various prominent equity indexes, as demonstrated previously by Carlson (1970) and Israelsen (2005). Holmes’s conclusions on the benefit of active management are based entirely on the S&P indexes; Holmes does not consider the benefit relative to other equity market proxies (such as Russell or MSCI).

Again, we want to note that while Holmes’s piece is the primary source for comparison for this analysis, other recent papers have been published that contain a variety of the before-mentioned errors (see, for example, McGuigan (2006) and Fortin and Michelson (2002)). Apart from previous research by Israelsen (2006), Carosa (2005) provides the only analysis that addresses the majority of the before-mentioned errors. However, Carosa’s analysis only uses a single benchmark for comparison purposes (the S&P 500) and fails to consider each asset category as a distinct asset class. It is also worth noting that Carosa’s piece was subject to a formal challenge by Allan Roth, questioning the asset weighting methodology of the analysis (“Results of Appeals Process”).

Our Methodology

We conducted an analysis of the performance of actively managed funds in comparison with prominent U.S. equity indexes. Our intent was to demonstrate the impact of the above-mentioned methodological issues when conducting “active versus passive” comparisons. Our time frame was the ten-year period from 1997 to 2006, whereas Holmes’s study covered the ten-year period from 1995 to 2004. A different period was selected because the authors

did not have the necessary data to mirror the same period of analysis as Holmes did. While some may question the ability to compare studies of differing periods, there is no one standard period to compare active management. Even a cursory review of previous research reveals little overlap in the sample time periods used in previous research.

Similar to the analysis performed by Holmes, the authors analyzed only those funds that had the same Morningstar fund category and equity style box. Only those domestic equity mutual funds that were not classified by Morningstar as index funds, enhanced index funds, or ETFs were included as actively managed funds for the analysis. While Holmes provides additional analysis on two international equity categories, Foreign Large and Foreign Mid/Small, this analysis will focus only on the nine domestic style boxes.

The performance data used in this analysis were acquired by means of annual “snapshots” in an attempt to minimize any type of survivorship bias in the dataset. In Holmes’s piece, it appears she used the January 2005 Morningstar database (with 2004 year-end data) to collect the fund and index performance data for the previous ten years. Reaching back ten years increases the likelihood of introducing survivor bias. In our analysis, year-end performance data were retrieved from ten separate year-end Morningstar certificates of deposit over the ten-year period from 1997 to 2006 (that is, Morningstar Ascent for 1997, Morningstar Principia Pro Plus for the years 1998–2001, and Morningstar Principia for the years 2002–2006). Our methodology of gathering fund performance annually, rather than reaching back over a ten-year period, substantially reduces the potential impact of survivor bias because we minimized the time frame in which a fund could “die” (from ten years down to one year). In short, our reach-back for performance data was ten one-year periods, whereas Holmes reached back ten years all at once. As noted in the oft-cited 2002 Carhart et al. study, the

impact of survivor bias over a one-year period is a mere 7 bps survivor bias, but increases to 66 bps over ten years.

In an attempt to account for survivorship bias, the Holmes study used a survivor bias “minimized” database by Lipper. There is no discussion of how the Morningstar database and the Lipper database were integrated. Interestingly, the annual performance of actively managed funds in the survivor bias minimized database beat the performance of comparable funds in the survivor-biased database (see Table 2, page 50 in the Holmes article) 38 percent of the time. Such findings may surprise the reader, since the survivorship bias found had the opposite direction as is normally assumed. The notion of survivorship bias makes an implicit assumption that survivor bias is a bias that inflates historical performance; however, a study published by Lipper (Clark 2005), as well as some of Holmes’s findings, indicates that survivorship bias can both inflate and/or deflate the historical performance of a universe of active managers.

Our analysis of active versus passive was conducted at three levels: (1) the fund level (that is, head count of all funds); (2) using only distinct funds (where all the redundant share classes were removed); and (3) at the asset level. Analyzing funds at the asset level is accomplished by weighting the performance of each fund by its share of the total assets in that cohort of funds. This provides the most accurate measure when comparing performance of funds versus passive indexes because, in the end, we need to measure dollars that beat a benchmark of index, not the number of funds that did so. While this approach may appear to favor funds with larger asset bases (due to lower expense ratios as a result of economies of scale), we find little evidence of widespread economies of scale among mutual funds. One well-known observer has said, “We’ve imposed soaring costs on our investors that belie the enormous economies of scale in money management.” (Bogle 2005).

The purpose of filtering each fund to a

distinct share class was to reduce multiple share class funds down to one representative fund. The distinct fund selected was the share class with the lowest expense ratio. The fund with the lowest expense ratio was selected because it would traditionally be the fund with the lowest 12b-1 fee, our rationale being that a 12b-1 fee represents a fee for *distribution*, rather than a fee for *active management*.

Finally, rather than comparing actively managed funds against comparable index funds within the same style box, we used style-specific indexes as the performance benchmark against which actively managed funds were compared. We have several reasons for using this approach. First, as noted in the article, Holmes was unable to conduct a full ten-year analysis in four of the 11 style categories (mid-cap value, mid-cap growth, small growth, and international mid/small) because of the absence of index funds in the early years of the test period. By using actual indexes, we were able to compare active fund management against index performance over the full ten years in each of the nine style boxes. An additional reason to consider different indexes is that financial advisors do not all use the same indexes for benchmarking purposes. Including a variety of indexes helps each financial advisor determine the benefit of active management relative to his or her selected bogey.

Second, while we acknowledge that index funds represent the real-world comparison for actively managed funds, the fact remains that actively managed funds continue to be compared against raw indexes in countless magazines, journals, and data products. Since it is impossible to directly purchase an index (that is, one must buy an investment to track that index), the costs of doing so will be inversely related to the size of the investment. The larger the investment in an index fund, the lower the expense ratio. The same can also be said for active managers. Thus, if there is a bias in favor of funds with larger asset bases, it applies to both actively managed and passively man-

aged funds.

We selected style-specific indexes from five different index makers to represent an aggregated benchmark against which actively managed funds were measured: Dow Jones/Wilshire, Lipper, MSCI, Russell, and S&P. The actual indexes used in our analysis are listed below.

1. **Dow Jones Wilshire:** Dow Jones Large Value, Dow Jones Wilshire U.S. Large-Cap, Dow Jones Large Growth, Dow Jones Midcap Value, Dow Jones Wilshire U.S. Mid-Cap, Dow Jones Midcap Growth, Dow Jones Small Value, Dow Jones Wilshire U.S. Small-Cap, and Dow Jones Small Growth
2. **Lipper:** Lipper Large Cap Value, Lipper Large Cap Core, Lipper Large Cap Growth, Lipper Mid Cap Value, Lipper Mid Cap Core, Lipper Mid Cap Growth, Lipper Small Cap Value, Lipper Small Cap Core, and Lipper Small Cap Growth
3. **MSCI:** MSCI US Large Cap Value, MSCI US Large Cap 300, MSCI US Large Cap Growth, MSCI US Mid Cap Value, MSCI US Mid Cap 450, MSCI US Mid Cap Growth, MSCI US Small Cap Value, MSCI US Small Cap 1750, MSCI US Small Cap Growth
4. **Russell:** Russell 1000 Value, Russell 1000 Growth, Russell Midcap Value, Russell Midcap, Russell Midcap Growth, Russell 2000 Value, Russell 2000, and Russell 2000 Growth
5. **S&P:** S&P 500/Citigroup Value, S&P 500, S&P 500/Citigroup Growth, S&P Midcap 400/Citigroup Value, S&P Midcap 400, S&P Midcap 400/Citigroup Growth, S&P Small Cap 600/Citigroup Value, S&P Small Cap 600, and S&P Small Cap 600/Citigroup Growth

The number of actively managed mutual funds included in our analysis each year (both total head count and distinct funds) for each style box are shown in Table 1. Note that the number of funds used when calculating asset-weighted performance is the same as the head count.

Table 1: Sample Size of Actively Managed U.S. Equity Funds

| | Headcount | | | | | | | | | |
|----------------|-----------|------|------|------|------|------|-------|-------|-------|-------|
| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
| Large Value | 315 | 353 | 473 | 558 | 629 | 682 | 824 | 897 | 909 | 982 |
| Large Blend | 360 | 356 | 196 | 542 | 647 | 806 | 843 | 871 | 751 | 839 |
| Large Growth | 146 | 336 | 351 | 533 | 675 | 983 | 1,140 | 1,210 | 1,269 | 1,255 |
| Mid-Cap Value | 99 | 160 | 189 | 143 | 134 | 117 | 174 | 199 | 184 | 211 |
| Mid-Cap Blend | 61 | 101 | 48 | 49 | 107 | 169 | 195 | 163 | 177 | 174 |
| Mid-Cap Growth | 97 | 243 | 278 | 333 | 484 | 573 | 648 | 670 | 700 | 684 |
| Small Value | 169 | 131 | 187 | 124 | 112 | 116 | 151 | 214 | 192 | 221 |
| Small Blend | 24 | 101 | 85 | 94 | 142 | 192 | 214 | 257 | 245 | 312 |
| Small Growth | 53 | 192 | 242 | 291 | 369 | 499 | 559 | 579 | 541 | 620 |
| | Distinct | | | | | | | | | |
| | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
| Large Value | 177 | 187 | 221 | 250 | 267 | 254 | 273 | 281 | 265 | 285 |
| Large Blend | 222 | 193 | 96 | 263 | 295 | 330 | 317 | 322 | 283 | 304 |
| Large Growth | 94 | 177 | 176 | 251 | 283 | 393 | 402 | 397 | 398 | 409 |
| Mid-Cap Value | 69 | 84 | 92 | 70 | 73 | 54 | 65 | 62 | 58 | 66 |
| Mid-Cap Blend | 44 | 60 | 27 | 29 | 46 | 73 | 75 | 63 | 79 | 76 |
| Mid-Cap Growth | 53 | 129 | 136 | 161 | 197 | 220 | 227 | 224 | 226 | 223 |
| Small Value | 109 | 86 | 110 | 75 | 63 | 56 | 58 | 77 | 71 | 82 |
| Small Blend | 16 | 58 | 48 | 46 | 61 | 88 | 88 | 91 | 91 | 113 |
| Small Growth | 31 | 122 | 141 | 152 | 181 | 224 | 212 | 210 | 197 | 219 |

Table 2: Ten-Year Geometric Annualized Return (1997–2006) for Actively Managed Funds

| | Headcount | Distinct | Weighted Assets |
|----------------|-----------|----------|-----------------|
| Large Value | 8.44% | 8.92% | 9.46% |
| Large Blend | 7.38% | 7.83% | 8.26% |
| Large Growth | 6.02% | 6.85% | 7.55% |
| Mid-Cap Value | 11.79% | 12.10% | 12.04% |
| Mid-Cap Blend | 9.60% | 10.08% | 9.93% |
| Mid-Cap Growth | 7.44% | 8.12% | 8.00% |
| Small Value | 12.40% | 12.80% | 12.26% |
| Small Blend | 11.61% | 12.28% | 12.54% |
| Small Growth | 7.81% | 8.56% | 8.26% |
| Average | 9.16% | 9.73% | 9.81% |

The importance of reducing the head count population to distinct investments becomes increasingly important in the later years of the study. For the first year of the analysis, 1997, using distinct investments only reduced the test population by 36.85 percent; however, in 2006, using distinct funds reduced the test population by 65.11 percent, or almost two-thirds.

Group Results

The three different test populations—total head count, distinct funds, and asset-weighted performance—had differing average returns for each of the nine domestic asset categories tested. Table 2 includes average performance over the test period.

Asset-weighted performance tended to outperform the performance of distinct funds, which in turn tended to outperform a simple fund head count. These results represent the results from a population of funds available, not a sample. Therefore, any difference is significant.

One reason the distinct funds dataset outperformed the head count dataset is because the share class with the lowest expense ratio was selected to represent each investment for the distinct group. The expense ratio is an explicit cost that directly influences performance. The average asset-weighted performance, though, is based on the weighted performance of all funds (head count, in other words). Therefore, the average asset-weighted performance figures include assets invested in B and C shares (which with their higher 12b-1 fees place a clear drag on performance). Despite that, the average asset-weighted performance of actively managed funds was higher than the average head count performance in eight of the nine style boxes.

Index Dependency

Holmes notes that "...index funds can periodically be unsuccessful in replicating their respective indices" (that is, tracking error). The authors agree. However, there is a much larger issue that impinges on the comparison of active management versus index performance. That issue is the dramatic differences in performance that can exist between different indexes within the same style box. This is referred to as index variance. An example of the performance variance that can exist among different indexes is demonstrated in the mid-cap blend style box category during 1997–2001 (the first half of our test period). Table 3 contains annual returns for each of the five different mid-cap blend indexes used in our analysis from the 1997–2001 period.

As shown, the choice of index selected to represent the passive or index return within a specific style box can have a dramatic impact on the results of an active versus passive comparison. In 1999, for instance, the difference between the one-year return of the S&P Midcap 400 Index and the MSCI US Midcap 450 Index was 19.60 percentage points (or 1,960 basis points). Notice also that in the next year (2000), the relationship between these two

indexes reversed, with the S&P Midcap 400 Index having a 1,936 bps higher return than the MSCI US Midcap 450 Index. This simple illustration underscores the potential differences in performance between major indexes.

Table 4 reports the ten-year annualized returns for five different index providers across the nine different domestic style boxes. We note with considerable interest the dramatic difference in the ten-year annualized return of the S&P Midcap 400/Citigroup Growth Index and the other four Mid-Cap Growth indexes. Very simply, during our ten-year time frame, using the performance of the S&P Mid-Cap Growth Index as the benchmark in an active-versus-passive study would lead to very different results among mid cap growth funds than if any of the other four mid-cap growth indexes were used.

Overall, the style-specific S&P/Citigroup indexes had the best performance during our ten-year analysis period and therefore represented the highest hurdle for active management to overcome. Holmes chose to use the S&P/Citigroup indexes for the study.

Performance: Head Count Versus Distinct Versus Weighted by Assets

The differences between the test groups (head count performance, distinct funds performance, and asset-weighted performance) increase when comparing the results against the five different index families. Table 5 contains the results for each test group for each asset category. The results are obtained from geometrically linking the relative out- or underperformance for each year (which is why the values in Table 5 do not match the values in Table 4 minus Table 2). Cells highlighted in yellow indicate that actively managed funds had a higher average return than the respective index. The figures in Table 5 represent the average amount of over- or under-performance (in percentage terms) of actively managed funds in comparison with the five different indexes using geometrically

Table 3: Annual Mid-Cap Blend Performance for a Variety of Indexes from 1997 to 2001¹

| | Annual Return | | | | | Geometric Average |
|-----------|---------------|--------|--------|--------|--------|-------------------|
| | 1997 | 1998 | 1999 | 2000 | 2001 | |
| Dow Jones | 26.17% | 4.36% | 28.22% | -0.98% | -1.79% | 10.42% |
| Lipper | 26.84% | 11.57% | 32.52% | 11.00% | -4.43% | 14.75% |
| MSCI | 28.58% | 9.26% | 34.32% | -1.85% | -6.38% | 11.64% |
| Russell | 29.01% | 10.10% | 18.23% | 8.25% | -5.62% | 11.40% |
| S&P | 32.25% | 19.12% | 14.72% | 17.51% | -0.61% | 16.11% |
| Minimum | 26.17% | 4.36% | 14.72% | -1.85% | -6.38% | 10.42% |
| Maximum | 32.25% | 19.12% | 34.32% | 17.51% | -0.61% | 16.11% |
| Range | 6.08% | 14.76% | 19.60% | 19.36% | 5.77% | 5.69% |

1. For more recent and additional information on the variance among index providers please see "Variance Among Indexes" by Craig Israelsen in the May/June 2007 edition of the *Journal of Indexes*.

Table 4: Style Box Geometric Average Returns for the Ten-Year Test Period (1997–2006)

| | Dow Jones | Lipper | MSCI | Russell | S&P |
|----------------|-----------|--------|--------|---------|--------|
| Large Value | 9.76% | 8.74% | 10.14% | 11.00% | 9.45% |
| Large Blend | 8.53% | 7.00% | 7.96% | 8.65% | 8.42% |
| Large Growth | 3.42% | 6.05% | 5.60% | 5.45% | 6.65% |
| Mid-Cap Value | 14.25% | 12.60% | 14.84% | 13.65% | 11.52% |
| Mid-Cap Blend | 11.06% | 12.24% | 12.14% | 12.14% | 13.47% |
| Mid-Cap Growth | 8.03% | 8.89% | 8.12% | 8.61% | 15.51% |
| Small Value | 13.53% | 12.72% | 13.74% | 13.27% | 12.73% |
| Small Blend | 10.76% | 11.81% | 11.88% | 9.44% | 11.57% |
| Small Growth | 6.75% | 8.96% | 8.97% | 4.88% | 10.19% |
| Average | 9.57% | 9.89% | 10.38% | 9.68% | 11.06% |

linked annual returns for each test set for the entire ten-year test period.

Similar to results in Holmes's analysis, if S&P/Citigroup Indexes are used as the benchmark, actively managed funds in the mid-cap value and small blend style boxes outperform. However, the results of our analysis of the performance of actively managed funds versus the performance of indexes varied somewhat depending on the index selected as the performance benchmark. For example, if the Lipper indexes were selected as the performance benchmark, actively managed funds outperformed in all but one of the large cap style boxes (large value head count); however, if MSCI were the benchmark index, active managers would have only been found to outperform the benchmark in two of the nine different tests (large growth distinct

and large growth weighted assets).

But the primary insight to be gleaned from Table 5 is that active management was more advantageous when conducting the analysis of active versus passive from a net investor wealth perspective (that is, when using an asset-weighted methodology) rather than using a simple head count of actively managed funds that outperformed or underperformed their peer index.

A second analysis was conducted to determine the percentage of funds that outperformed their respective style box index (using style specific indexes from each of the five index makers). The overall period percentages were calculated by averaging each of the one-year outperformance percentages. The results are shown in Table 6. Cells highlighted in yellow indi-

Table 5: Ten-Year Performance of Actively Managed Funds Relative to Different Indexes (1997–2006)

| | Headcount | | | | |
|----------------|-----------------|--------|--------|---------|--------|
| | Dow Jones | Lipper | MSCI | Russell | S&P |
| Large Value | -1.64% | -0.31% | -1.87% | -2.71% | -1.30% |
| Large Blend | -1.34% | 0.54% | -1.12% | -1.38% | -1.21% |
| Large Growth | 1.20% | 0.42% | -0.71% | 0.51% | -0.62% |
| Mid-Cap Value | -3.09% | -0.80% | -3.25% | -2.03% | 0.16% |
| Mid-Cap Blend | -1.70% | -2.96% | -3.10% | -2.69% | -4.00% |
| Mid-Cap Growth | -1.58% | -1.15% | -1.71% | -1.20% | -7.66% |
| Small Value | -1.31% | -0.33% | -1.50% | -1.21% | -0.39% |
| Small Blend | -0.12% | -0.32% | -0.59% | 1.56% | 0.08% |
| Small Growth | 0.07% | -1.24% | -1.05% | 2.64% | -1.76% |
| | Distinct | | | | |
| | Dow Jones | Lipper | MSCI | Russell | S&P |
| Large Value | -1.16% | 0.17% | -1.39% | -2.23% | -0.82% |
| Large Blend | -0.92% | 0.96% | -0.70% | -0.96% | -0.79% |
| Large Growth | 2.10% | 1.31% | 0.20% | 1.39% | 0.28% |
| Mid-Cap Value | -2.90% | -0.56% | -3.03% | -1.80% | 0.39% |
| Mid-Cap Blend | -1.26% | -2.51% | -2.68% | -2.24% | -3.53% |
| Mid-Cap Growth | -0.89% | -0.48% | -1.02% | -0.54% | -7.01% |
| Small Value | -0.92% | 0.07% | -1.11% | -0.81% | 0.00% |
| Small Blend | 0.60% | 0.39% | 0.13% | 2.27% | 0.77% |
| Small Growth | 0.87% | -0.44% | -0.26% | 3.42% | -0.99% |
| | Weighted Assets | | | | |
| | Dow Jones | Lipper | MSCI | Russell | S&P |
| Large Value | -0.65% | 0.67% | -0.89% | -1.73% | -0.31% |
| Large Blend | -0.48% | 1.39% | -0.25% | -0.52% | -0.35% |
| Large Growth | 2.98% | 2.17% | 1.08% | 2.25% | 1.13% |
| Mid-Cap Value | -2.98% | -0.59% | -3.08% | -1.87% | 0.31% |
| Mid-Cap Blend | -1.16% | -2.43% | -2.54% | -2.25% | -3.64% |
| Mid-Cap Growth | -1.19% | -0.76% | -1.32% | -0.79% | -7.27% |
| Small Value | -1.52% | -0.55% | -1.72% | -1.42% | -0.60% |
| Small Blend | 0.67% | 0.48% | 0.21% | 2.35% | 0.89% |
| Small Growth | 0.10% | -1.21% | -0.93% | 2.77% | -1.47% |

cate more than 50 percent of the actively managed funds (or assets) beat their respective index.

Data in the far right column of Table 6 (S&P) of the “Head Count” section in Table 6 simulates the methodology used by Holmes. Notice the differences in the results when using different indexes as the performance benchmarks and when using more precise methodology as shown in the lower two sections of Table 6 (that is, moving beyond simple head count to distinct actively managed funds and then to asset-weighting the performance of funds).

Recall that our methodology consisted of using actual indexes as the benchmark. If index funds were used, our results would be slightly more favorable toward active management because of the expense ratio that is imposed by actual index funds. So, do the results in Table 6 demonstrate that active management is superior to passive investing? No, that is not our argument. We simply wish to show that methodology makes a considerable difference when conducting an active-versus-passive investment analysis.

Conclusion

As we indicated at the beginning of this article, we have reworked the Holmes study to (1) demonstrate the effect of several biases in the methodology, (2) that Holmes’s study is not unique in this regard, and (3) that many other studies share one or more of these biases. Overall, we concur with Holmes’s general conclusion that active management does not consistently outperform a similar passive (that is, index) strategy. All things considered, though, this should not surprise the reader. In the aggregate it should be expected that active management will underperform the index by the costs (both explicit and implicit) associated with active management, assuming the benchmark is correctly specified. Having said that, we must remember that individual investors do not invest at or in the aggregate; rather they invest in specific funds—and there will inevitably be funds that generate performance that meets or exceeds the performance of peer indexes. However, the research conducted for this paper suggests that the possibility of consistently superior active management is the exception, not the rule, and that advisors should take a buyer-beware approach when selecting active management for client portfolios.

Finally, when conducting active management performance comparisons there are a number of important assumptions that must be clarified, the most obvious being the benchmark chosen to represent a passive return. We have attempted to demonstrate that those assumptions can have a material impact on the results of such comparisons.



Notes

For more recent and additional information on the variance among index providers, see “Variance Among Indexes” by Craig Israelsen in the May/June 2007 edition of the *Journal of Indexes*.

References

Arnott, R. D., A. L. Berkin, and J. Ye. 2000. "How Well Have Investors Been Served in the 1980s and 1990s?" *Journal of Portfolio Management* Summer: 84–93.

Bogle, J. 2005. "The Relentless Rules of Humble Arithmetic." *Financial Analysts Journal* 1 (September): 127–144.

Brinson, G. P., L. R. Hood, G. L. Beebower. 1995. "Determinants of Portfolio Performance" *Financial Analysts Journal* 51, 1 (January/February): 133–138.

Carlson, R. S. 1970. "Aggregate Performance of Mutual Funds." *Journal of Financial and Quantitative Analysis* 5, 1:1–32.

Carhart, M. 1997. "On Persistence in Mutual Fund Performance." *Journal of Finance* 52, 1 (March): 57–82. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=8036

Carhart, M.M., Carpenter, J.N., Lynch, A.W., and Musto, D.K. 2002 "Mutual Fund Survivorship." *Review of Financial Studies* 15, 5:1439–1463.

Carosa, Christopher. 2005. "Passive Investing: The Emperor Exposed?" *Journal of Financial Planning* 18, 10 (October): 54–60.

Clark, A., 2005. "Survivorship Bias in Mutual Funds: Is It As Important as Others Claim?" *Lipper Fund Industry Insight Reports* May 9: www.lipper.com.

Davis, J. L. 2001. "Mutual Fund Performance and Manager Style." *Financial Analysts Journal* 57, 1 (January/February): 19–27.

Elton, E., M. Gruber, and C. Blake. 1996. "The Persistence of Risk-Adjusted Mutual Fund Performance." *Journal of Business* 69, 2 (April): 133–157.

Etzioni, E. S. 1992. "Indexing Can Be Beat." *Journal of Portfolio Management* Fall: 24–26.

Fortin, Rich and Stuart Michelson. 2002. "Indexing Versus Active Mutual Fund Management." *Journal of Financial Planning* 15, 9 (September): 82–91.

Gruber, M. J. 1996. "Another Puzzle: The Growth in Actively Managed Mutual

Table 6: Percentage of Actively Managed Funds (or Assets) that Outperformed a Peer Index (1997–2006)

| | Headcount | | | | |
|----------------|-----------------|--------|--------|---------|--------|
| | Dow Jones | Lipper | MSCI | Russell | S&P |
| Large Value | 39.46% | 47.62% | 34.44% | 27.36% | 34.80% |
| Large Blend | 34.70% | 51.38% | 42.08% | 34.06% | 35.69% |
| Large Growth | 54.15% | 48.36% | 46.08% | 47.71% | 43.19% |
| Mid-Cap Value | 30.60% | 45.54% | 27.65% | 32.24% | 47.09% |
| Mid-Cap Blend | 41.85% | 43.93% | 36.49% | 32.63% | 31.00% |
| Mid-Cap Growth | 39.65% | 43.51% | 37.27% | 37.69% | 26.98% |
| Small Value | 42.16% | 46.89% | 38.06% | 43.66% | 43.61% |
| Small Blend | 45.50% | 48.31% | 46.07% | 53.55% | 46.71% |
| Small Growth | 42.69% | 41.58% | 34.74% | 50.00% | 37.20% |
| | Distinct | | | | |
| | Dow Jones | Lipper | MSCI | Russell | S&P |
| Large Value | 43.33% | 52.29% | 38.47% | 30.37% | 37.57% |
| Large Blend | 38.17% | 55.49% | 45.20% | 37.47% | 38.77% |
| Large Growth | 56.18% | 51.82% | 48.91% | 51.16% | 46.29% |
| Mid-Cap Value | 32.54% | 47.49% | 30.45% | 34.28% | 48.09% |
| Mid-Cap Blend | 45.22% | 46.04% | 37.74% | 35.04% | 34.63% |
| Mid-Cap Growth | 43.10% | 46.79% | 40.50% | 41.14% | 29.29% |
| Small Value | 44.81% | 48.89% | 40.78% | 44.54% | 46.15% |
| Small Blend | 46.78% | 50.26% | 47.96% | 56.27% | 48.55% |
| Small Growth | 45.38% | 44.05% | 38.43% | 52.87% | 40.07% |
| | Weighted Assets | | | | |
| | Dow Jones | Lipper | MSCI | Russell | S&P |
| Large Value | 43.56% | 54.57% | 41.74% | 32.36% | 39.48% |
| Large Blend | 41.38% | 58.00% | 48.00% | 40.84% | 40.57% |
| Large Growth | 61.92% | 57.30% | 55.77% | 56.59% | 49.13% |
| Mid-Cap Value | 28.89% | 45.68% | 26.93% | 34.47% | 50.96% |
| Mid-Cap Blend | 44.32% | 44.87% | 35.48% | 37.09% | 35.43% |
| Mid-Cap Growth | 44.91% | 50.30% | 42.75% | 42.19% | 32.71% |
| Small Value | 44.01% | 48.96% | 36.76% | 39.96% | 44.61% |
| Small Blend | 46.65% | 48.61% | 47.76% | 55.45% | 53.03% |
| Small Growth | 43.43% | 44.06% | 35.87% | 53.32% | 42.12% |

Funds." *Journal of Finance* 51, 3 (July): 783–810.

Holmes, M. 2007. "Improved Study Finds Index Management Usually Outperforms Active Management." *Journal of Financial Planning* 20, 1 (January): 48–58.

Israelson, C. L. 2005. "Variance Among U.S. Equity Indexes." *Journal of Financial Planning* 18, 6 (June): 62–69.

Israelson, C. L. 2006. "Things Are Not Always What They Seem" *Journal of Indexes* 8, 2 (March/April): 18–24.

Malkiel, B. G. 1995. "Returns from Investing in Equity Mutual Funds 1971–1991."

Journal of Finance 50, 2 (June): 549–572.

McGuigan, Thomas P. 2006. "The Difficulty of Selecting Superior Mutual Fund Performance." *Journal of Financial Planning* 19, 2 (February): 50–55.

Pastor, L. and R. Stambaugh. 2002. "Investing in Equity Mutual Funds." *Journal of Financial Economics* 63, 3 (March): 351–380.

"Results of Appeals Process" http://www.fpanet.org/journal/articles/2005_Issues/jfp1005-art6-Appeal.cfm

Sorensen, E. H., K. L. Miller, and V. Samak. 1998. "Allocating Between

Active and Passive Management.” *Financial Analysts Journal* 54, 5

(September/October): 18–31.

Timbers, S. 1997. “The Case for Active or Passive Investment Management.” *Journal of Financial Planning* February: 53–58.

Wermers, R. 2000. “Mutual Fund Performance: An Empirical Decomposition Into Stock-Picking Talent, Style, Transactions Costs, and Expenses.” *Journal of Finance* 55, 4 (August): 1655–1703.