When do enhanced indexation managers add alpha?

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Originally published:
October 15, 2003

Updated: March 1, 2004

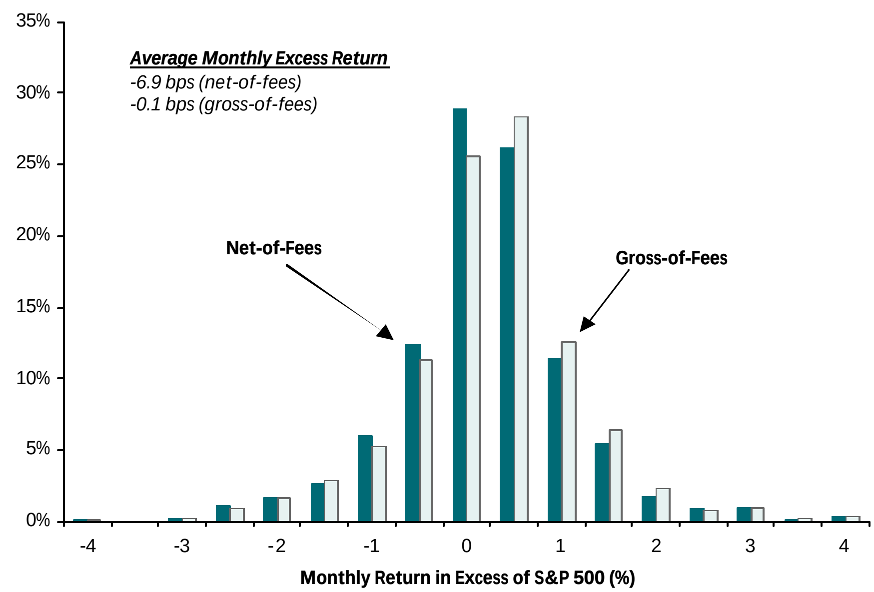
In previous papers,[1] we identified market circumstances that seem to have a positive influence on the ability of active equity managers and hedge fund managers to add alpha. This paper presents an extension to this research for enhanced indexation managers. We find that:

- **Enhanced indexation managers generated more alpha in momentum-driven and small-cap tilted markets.**
- **The importance of the momentum factor has increased through time.**

Positive performance on average before fees, negative performance after fees

To analyze enhanced indexation performance, we used monthly returns from January 1990 to February 2004 for a representative basket of enhanced indexation mutual funds benchmarked against the S&P 500.[2] We converted the monthly net-of-fees returns[3] to monthly gross-of-fees returns by adding back 1/12th of the current expense ratio of each fund.[4] **The distribution of gross-of-fees alphas across all enhanced indexation funds seems normally distributed and centered around zero basis points per month (Exhibit 1).**

Exhibit 1: Performance of enhanced indexation mutual funds covers a wide range
(Monthly data from January 1990 to February 2004)



Source: FAME Information Services, Standard & Poor's, Bloomberg and Goldman Sachs estimates.

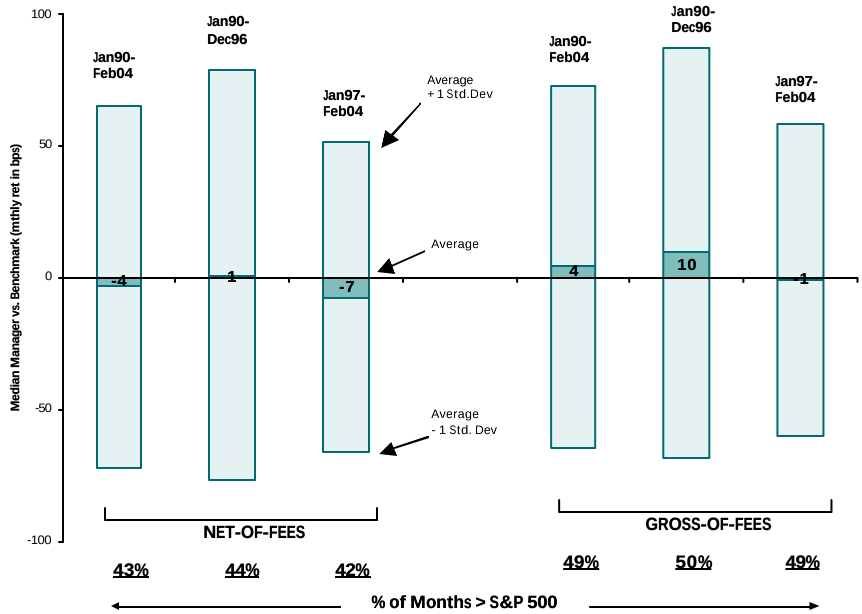
[1] *When do active equity managers add alpha?*, Joanne M. Hill and Ingrid Tierens, Updated March 1, 2004 and *When do hedge fund managers add alpha?*, Sandy Rattray and Venkatesh Balasubramanian, Updated March 1, 2004.

[2] The basket consists of enhanced indexation funds benchmarked against the S&P 500 index, and represented approximately $8.7 billion in assets under management at the end of 2003.

[3] Our study on active equity manager alpha used *quarterly gross-of-fees returns* for *institutional* core, value and growth managers in the Russell equity manager universe. Here, we use *monthly net-of-fees* returns for enhanced indexation *mutual fund* managers.

[4] We, therefore, implicitly assume that the expense ratio has been constant throughout the life of each fund. The median expense ratio for the funds in our basket is 99 bps per annum.

Exhibit 2: The median enhanced indexation fund marginally outperformed on a gross-of-fees basis *(Monthly data from January 1990 to February 2004)*

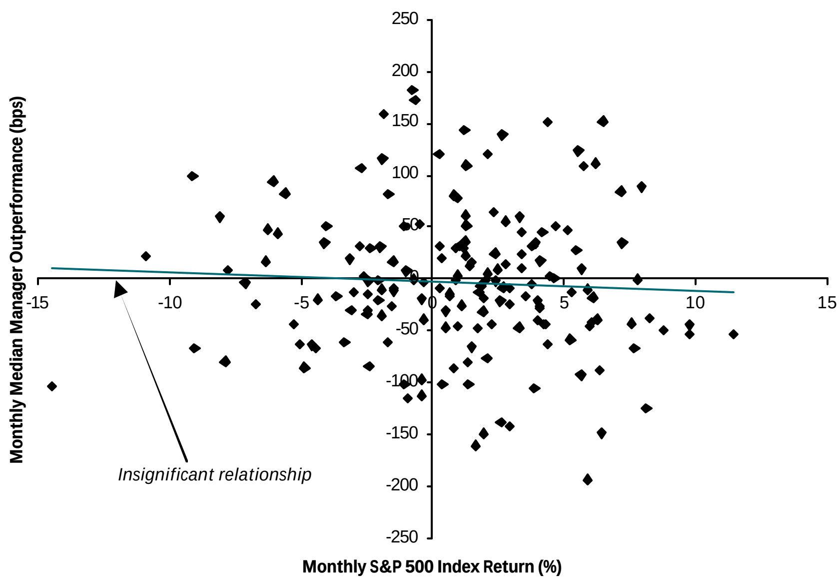


Source: FAME Information Services, Standard & Poor's, Bloomberg and Goldman Sachs estimates.

What market environments seem advantageous for enhanced indexation managers?

The common intuition that active managers tend to perform better in down markets does not hold up for enhanced indexation managers. While we found a significantly negative link between manager alpha and market returns for active institutional equity managers, **the alpha generated by enhanced indexation managers does not bear a significant connection with market direction** (Exhibit 3).

Exhibit 3: Median enhanced index manager performance does not seem to be driven by market direction *(Monthly data from January 1990 to February 2004, net-of-fees)*



Source: FAME Information Services, Standard & Poor's and Goldman Sachs estimates.

Exhibit 4: Factors used to explain relative performance of enhanced indexation managers

	Cash-drag	Small-cap tilt	Style dominance	Cross-stock dispersion	Momentum
Proxy for Factor	S&P 500 - Treasury Bill Return	S&P 600 - S&P 500*	S&P Value - S&P Growth	Ratio of Stock to Index Variance	High 11-Mth Price Return - Low 11-Mth Price Return
Expected Impact on Manager Excess Return	-	+	+	+	+

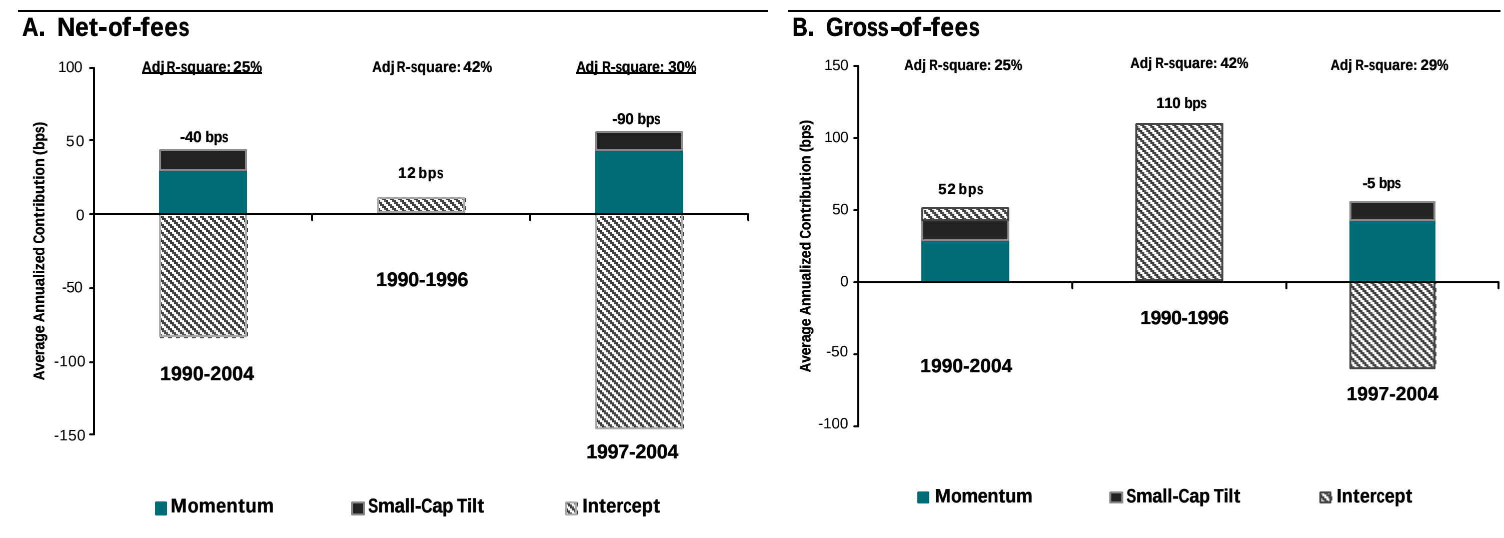
*Note: Russell 2000 - S&P 500 before inception of the S&P 600 index (January 1994)

Source: FAME Information Services, Standard & Poor's, Ibbotson Associates, Fama / French and Goldman Sachs estimates.

To identify market environments that might improve the ability of enhanced indexation managers to beat their S&P 500 benchmark, we focused on the same set of market drivers we used for the active institutional equity manager universe. Exhibit 4 summarizes these factors, the proxies we used to quantify them, and their expected impact on alphas.[5]

As some of the factors tend to be highly correlated, we performed a stepwise regression for the median fund return, both before and after fees. Our analysis suggests that **the largest contribution to enhanced index alpha has come from momentum, followed by small-cap tilt** (Exhibit 5). A comparison of the first half of the sample (1990-1996) with the second half of the sample (1997-2004) shows that **momentum has become the main market-wide driver in the second half of the sample**, while small-cap tilt was the only relevant factor earlier on. Our selection of market-wide factors explains about one quarter of the variation of median enhanced indexation alpha.

Exhibit 5: Momentum has become a more important performance driver for enhanced indexation alpha
(Monthly data from January 1990 to February 2004)



Source: FAME Information Services, Standard & Poor's, Bloomberg, Fama / French and Goldman Sachs estimates.

[5] For a motivation for each of these factors, see *When do active equity managers add alpha?*, Joanne M. Hill and Ingrid Tierens, Updated March 1, 2004.

Corresponding r-squares for traditional institutional equity managers were noticeably higher (between 40% and 60%). The lower r-squares indicate that **even though the overall market environment has some impact on the ability of enhanced index managers to beat the S&P 500, idiosyncratic rather than market-wide factors appear to be the main drivers**.

Looking at the funds on an individual basis, we find that **momentum plays a significant role to explain the alpha of about two-thirds of the funds.** Our basket of enhanced indexation funds does not include enhanced index managers who predominantly use non-equity instruments or derivatives to add alpha. We found that the alpha of those funds was not influenced by any of the factors we examined.

Conclusion

While the alpha of institutional active equity core and value managers, as well as long/short and market-neutral hedge fund managers, seems to improve when dispersion across stocks is high, **the alpha of enhanced indexation funds appears to be mainly driven by momentum in the market**. Small-cap tilted markets improve enhanced indexation alpha as well. These alpha drivers could potentially indicate biases embedded in the investment processes of the "typical" enhanced indexation manager.