

Why Index When You Can Enhance?

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For years, equity investors have pursued the holy grail of earning excess return without commensurate levels of excess risk. Successfully achieving most investment objectives demands this “alpha” in the long run. The problem is few stock managers have consistently reached this goal, leaving plan sponsors and consultants in search of creative ways to meet their investing needs. This issue is particularly acute in the largecap area where “alpha” is rarely earned by active management. In fact, according to Lipper roughly two-thirds of active largecap equity managers have underperformed the S&P 500 Index after fee over the past 20 years. Just as astonishing, only 7% of managers have provided at least 100 basis points of annualized excess return over this same time period. No wonder so many investors have given up their pursuit of the grail and turned to indexing. Unfortunately, traditional indexing cannot produce the positive alpha required by most investors.

Is there a better way to Index?

In its essence, traditional indexing is the confession that losing is inevitable in the investment arena. Investors turn to this passive management approach to simply match the performance of a targeted benchmark, both in terms of return and volatility, and are willing to pay a small fee to guarantee this modest – but not significant – underperformance. Through the years equity index management has grown markedly as more and more investors simply give up and accept the market’s returns. Recent estimates by Morningstar indicate there is more than a trillion dollars invested in equity index funds with at least \$600 billion in the largecap space alone. Index management is clearly a well accepted investment approach and is at the core of many portfolios. But is it the most optimal way to achieve index-like performance? *If there was a way to add alpha, while simultaneously tracking an underlying benchmark index, wouldn’t investors be better off? In fact there is an investment approach that has historically matched the market’s volatility characteristics, but with modest and reasonably consistent outperformance.* This paper will explore the use of such an Enhanced Index approach as a superior method of investing in the equity market, particularly for domestic largecap stocks.

Two ways to Enhance

There are two primary methods of enhancing the equity market. Stock enhanced indexing seeks to outperform its benchmark through superior stock selection, while simultaneously keeping volatility close to the index (low variability, or tracking error). This is accomplished by owning a large number of stocks from a market benchmark, with modest active bets in specific securities. Fees are higher than traditional indexing, but normally less than typical actively managed portfolios. Synthetic enhanced indexing also seeks to outperform an equity index by investing a small portion of the assets in equity index futures to gain market exposure and investing the remaining assets in a portfolio of other securities, like low risk bonds. If the returns from this investment portfolio can exceed the cost of entering into the futures contracts, the overall portfolio will outperform the benchmark it is replicating. Fees are also low, typically ranging between the traditional and stock picking methodologies.

Both of the methods that seek to enhance an index’s performance have the potential to provide alpha over the benchmark. The stock picking approach is reliant on the research skills of the manager, which may lead to a degree of performance variability or tracking error compared to the market. Any stock selection process can move in and out of favor, making consistent relative success often difficult to achieve. Whatever the method of selecting or weighting individual stocks, consistent enhancing of the index’s return is dependent on the ability of the manager to “tilt” the portfolio toward the better stocks in the index. With so few active managers able to do this consistently well, it raises the question whether enhancers would have any greater success. On the other hand, the synthetic enhanced approach uses index futures to replicate the market and has no such equity variability risk. Instead, it is the skill of the manager in constructing an investment portfolio with the excess funds that determines the success of this strategy. Consistent performance of the investment portfolio above the financing cost of the futures position will result in the positive alpha desired by investors.

Exhibit 1 – Comparison of Synthetic and Stock Enhanced Strategies

Largecap Equity Enhancing Approach	Annual Alpha	Information Ratio	Tracking Error	Standard Deviation	R-Squared
Synthetic Approach using Short Duration Bonds ¹	1.10	0.78	1.35	16.17	0.99
Stock Picking Approach: Median Manager ²	0.49	0.32	1.67	16.73	0.99

Comparing this synthetic approach to enhancing the equity market with the historical results from managers using a stock picking methodology reveals the potential for greater consistency of success from the synthetic strategy. We examined the performance results of the median stock enhanced index manager found in the eVestment Alliance database, contrasting the results against a synthetic approach using short duration bonds. The results summarized in Exhibit 1 show that enhancing with short duration bonds would have added more return at lower levels of volatility, and with a smaller tracking error. While both approaches added excess return to the S&P 500 over time, the synthetic enhancing approach seems to be a more efficient method, providing the ability for greater tracking consistency around the market benchmark.

Synthetic Approach – Adding Alpha through Bonds

To better understand how the synthetic method is able to enhance the market’s performance requires an understanding of how an equity index futures contract works. Any liquid futures contract will provide the return of its index less an implied financing cost. This cost is essentially the dividend yield foregone and a time value premium on the contract. Historically, this implied cost equates to approximately LIBOR. Since it only requires a limited amount of margin to enter into these contracts, the majority of the portfolio is available to be invested in other assets. As a result, the approach is segmented into two components: synthetic replication of the equity market through an unleveraged futures position and an actively managed investment portfolio. The futures contracts are used to track the price movements of the relevant stock index (beta), but the key to outperforming is clearly the value added from the investment portfolio (alpha).

The dual goals of tracking close to the variability of the equity benchmark while simultaneously adding alpha requires an approach that can be a reasonably consistent source of enhanced return. Our analysis shows this alpha is more consistently available from a short duration bond portfolio

than other approaches.¹ Over the past 20 years this strategy would have provided 121 basis points of annualized alpha over the S&P 500, with volatility characteristics that are slightly lower than the market index. As Exhibit 2 shows, the performance has also been relatively consistent, providing excess return to the benchmark 70% of annual periods, 89% of rolling 3 year time frames, and never lagging over a 5 year horizon. The two primary sources of value from the bond market that can be used to enhance results come from the yield curve and yield spread. By properly positioning the bond portfolio to take advantage of both sources of return, investors will achieve the enhanced results they are seeking. A blended bond portfolio built from Treasury Bills and short duration corporate bonds best accomplishes this objective. This strategy has historically resulted in the highest information ratio compared to other fixed approaches, providing an optimal blend of excess return with minimal tracking error relative to the implied financing cost of LIBOR. Exhibit 3 compares the results of several fixed strategies to LIBOR over the past 20 years.

Exhibit 2 - Synthetic Enhanced Alpha

Rolling Time Period	% of Periods Outperforming	Average Alpha
Quarter	60%	0.29%
1 Year	70%	1.21%
3 Years	89%	1.35%
5 Years	100%	1.47%

Exhibit 3 - Enhancing Strategies relative to LIBOR

Enhancing Strategy	Information Ratio	Tracking Error
Blended Bond Portfolio	0.82	1.34
1 Year Treasury Index	0.33	0.78
1-3 Year Government Index	0.60	1.67
1-3 Year Gov't/Corporate Index	0.66	1.66
Lehman Intermediate Index	0.63	3.23
Lehman Aggregate Index	0.67	3.65

CONCLUSION:

Enhanced index strategies are a viable alternative to traditional indexing and should be considered by investors in the largecap equity market. Over time, the performance results have proven to be superior to the market and are relatively

consistent. Synthetic strategies that utilize equity futures contracts to replicate the S&P 500 index and a short duration bond portfolio to enhance performance have shown to have a higher level of success than a stock enhancing approach. An optimal bond portfolio to enhance the futures contracts is a portfolio consisting of Treasury Bills and short duration corporate bonds. This strategy can enhance results, lower volatility and provide a higher degree of tracking consistency relative to the market than other approaches. Equity investors can indeed find the grail, and it is found by taking alpha from the fixed income market.

¹ Using bond indices supplied by Merrill Lynch, our analysis blended together U.S. Treasury Bills with investment grade corporate bonds in the 1-3 year maturity range. Historically, the optimal blend to provide alpha (in terms of amount and consistency) averaged approximately 25% T-Bills and 75% corporate bonds. Performance is derived by overlaying equity futures contracts with this blended bond portfolio and comparing to the returns of the S&P 500 Index.

² The median manager results were determined through a screen in the eVestment database for all domestic largecap enhanced equity managers with a stock picking strategy for enhancing and at least 10 years of data. Performance comparison is from 1/1/98 to 3/31/08 and compared to the S&P 500 Index. The standard deviation of the S&P 500 over this time period was 16.73.