

# The Index Investor

*Why Pay More for Less?*

## Model Portfolio Update

The objective of our first set of model portfolios is to deliver higher returns than their respective benchmarks, while taking on no more risk. The benchmark for the first portfolio in this group is an aggressive mix of 80% domestic equities, and 20% domestic bonds. Through the end of April, this benchmark had returned (4.2%), while our model portfolio had returned (0.8%). For the sake of comparison, we have also compared our model portfolios to a set of global benchmarks. In this case, the global benchmark is a mix of 80% global equities, and 20% global bonds. Through the end of April, it had returned (1.0%).

The benchmark for the second portfolio in this group is a mix of 60% domestic equities and 40% domestic bonds. Through the end of April, it had returned (2.7%), while our model portfolio had returned 0.3%, and the global benchmark had returned (0.3%).

The benchmark for the third portfolio in this group is a conservative mix of 20% domestic equities and 80% domestic bonds. Through the end of April, it had returned 0.2%, while our model portfolio had returned 1.7% and the global benchmark 1.2%.

The objective of our second set of model portfolios is to deliver less risk than their respective benchmarks, while delivering at least as much return. The benchmark for the first portfolio in this group is an aggressive mix of 80% domestic equities, and 20% domestic bonds. Through the end of April, this benchmark had returned (4.2%), while our model portfolio had returned (0.9%). For the sake of comparison, we have also compared our model portfolios to a set of global benchmarks. In this case, the global

benchmark is a mix of 80% global equities, and 20% global bonds. Through the end of April, it had returned (1.0%).

The benchmark for the second portfolio in this group is a mix of 60% domestic equities and 40% domestic bonds. Through the end of April, it had returned (2.7%), while our model portfolio had returned (0.7%), and the global benchmark had returned (0.3%).

The benchmark for the third portfolio in this group is a conservative mix of 20% domestic equities and 80% domestic bonds. Through the end of April, it had returned 0.2%, while our model portfolio had returned 2.5% and the global benchmark 1.2%.

The objective of our third set of model portfolios is not to outperform a benchmark index, but rather to deliver a minimum level of compound annual return over a ten year period. Thus far this year, our 12% target return portfolio is down (0.1%), our 10% target return portfolio is up 0.7%, our 8% target return portfolio is up 3.5%, and our 6% target return portfolio is up 3.8%.

Overall, our model portfolios' performance so far this year has demonstrated the virtues of diversifying across multiple asset classes. For example, while the U.S. equity market (as measured by the Dow Jones Total Market ETF) is down (5.7%), and the U.S. bond market (as measured by the Vanguard Total Bond Market Fund) is up only 1.7%, other asset classes have done considerably better: high yield bonds are up 2.8%, inflation protected U.S. Treasury Bonds are up 4.3%, REITs are up 8.7%, emerging market equities are up 10.8%, and commodities are up 15.4%.

## **Morningstar Rating Change Should Benefit Index Funds**

This month Morningstar announced an important change in its methodology for rating mutual fund performance. Up until now, the company has rated a fund's performance (including return, risk, and expenses) relative to other funds grouped into four broadly defined asset classes, including U.S. equity, international equity, taxable bonds (both

domestic and international), and municipal bonds. Critics have complained that these broad definitions resulted in high ratings (e.g., five stars) being assigned to funds whose styles were enjoying the most success (e.g., large cap growth stocks), rather than reflecting relative fund manager skill. Starting this July, funds will be placed into one of forty eight separate categories, and the top ten percent of funds within each category will be assigned five stars, even if their performance is below that of funds in other categories. At the same time, the way that risk is taken into account in developing a fund's rating will also change, with more emphasis being placed on downside risk rather than standard deviation. Our guess is that over time, this should result in more index funds getting five star ratings, because it makes it easier to compare them to actively managed funds within their respective style categories.

### **Eliot Spitzer = Eliot Ness?**

For those of you who don't know him, Eliot Spitzer is the Attorney General of the State of New York. For the past ten months, his office has been investigating the many conflicts that have long been alleged to exist between the investment banking and investment research departments of the world's leading securities firms.

The crux of the problem is that in recent years, the independence of these firm's research analysts has been increasingly compromised by their growing involvement with the investment banking department. For example, in order to win an equity underwriting mandate, the investment bankers might bring their company's equity analyst to a meeting with a potential corporate client, and discuss having the firm "start coverage" of the company (i.e., start publishing research reports on its stock), and "making a market" in its shares (i.e., start having its trading desk provide liquidity to investors by standing ready to buy or sell shares in the potential client company). If the analyst in question was highly visible, the prospects of a favorable research report (which would be expected to raise the company's stock price) could prove to be the factor that won the investment banking business. However, once the company had become an investment banking

client, the analyst would face a new set of pressures, this time to issue research reports that painted the company in a favorable light. As important, these potential conflicts of interest were reinforced by securities firms' compensation systems, which have increasingly tied investment analysts' compensation to the amount of investment banking business they helped to bring in.

If you were in on this game (as was the case with virtually all institutional investors), and understood that, for example, a firm's recommendation to "hold" a stock really meant "sell it as fast as you can", then things weren't so bad. However, if you weren't in on the game, then things could be very bad indeed. Many small investors who thought "hold" meant "don't buy anymore, but don't sell it either", lost a great deal of money due to the trust they mistakenly placed in the research reports issued by large securities firms like Merrill Lynch. Thankfully, some of these investors sued the securities companies in question, and in so doing inspired Mr. Spitzer to initiate a long over due investigation of the conflicts of interest in question.

After ten months, the investigation apparently hit the jackpot when it reviewed the internal emails sent between Merrill Lynch's research analysts and its investment bankers. In these emails, companies whose shares were listed on Merrill's "recommended list" were characterized using terms that implied something less than sterling investment prospects, including "piece of shit", "dog", "falling apart", "piece of crap", and "powder keg." Our favorite, however, is the email that honestly noted that there was nothing "interesting" about the company "except for the [investment] banking fees."

Most recently, Mr. Spitzer's department has asked for similar email records from many other firms besides Merrill Lynch, and the Securities and Exchange Commission, after an embarrassing delay, has finally launched its own investigation of this issue. In short, it appears that this investigation is only beginning, and its full consequences have yet to be seen. Looking forward, we at The Index Investor strongly support Mr. Spitzer's efforts, not only because they will help small investors avoid big losses in the future, but also

because they will further demonstrate just how difficult it is to consistently succeed at the active management game, and why over the long term index investing make so much sense.

## **How Often Should You Review Your Portfolio's Performance?**

Well, that's obvious isn't it? At least once per year, right?. Well, not quite. One of the more interesting findings of behavioral finance research has been the phenomenon called "myopic loss aversion." Without going into great detail, the gist of it is that the more frequently we review our portfolio's performance, the more prone we are to making the psychological errors cited in the research. Here's a concrete example. Last year, after much careful research and consideration, Susan decided on the asset allocation that was right for her, and implemented it through a mix of index funds. At the end of the first quarter after doing this, she received her first set of statements from her mutual fund company, and saw that while her U.S. equity index fund had increased in value (compared to the price at which she had bought it), her international bond fund had suffered a loss about equal to the equity fund's gain. This raises two key questions: what does she feel, and how should she act?

Prospect theory predicts that she will be more bothered by the loss than she will be happy with the gain. Fair enough – this seems to be human nature. The more important question is therefore how our friend Susan will behave in light of these feelings. If Susan is like most people, she will be very tempted to "play it safe" and sell the equity fund to realize the gain, while holding onto the international bond fund hoping that its price will eventually rise above breakeven. The question then becomes, what should she do with the money she just realized (net of trading costs and taxes, of course) from the sale of the equity fund?

But wait. What is she doing? The whole purpose of diversifying your portfolio across different asset classes is to reduce its overall risk. And this means that in different years, different asset classes will have positive and negative returns. The key point that Susan

needs to keep in mind is that the benefits of this strategy only become apparent (and get bigger, to boot) over time. In short, the biggest challenge for Susan is to avoid overreacting to the fact that one of her funds is down on the year. Human nature tells us that this is not an easy task. And the more frequently we review our portfolio's performance, the more we subject ourselves to the temptations of hindsight bias and overtrading, which, over the long term, will hurt us more than they help us.

So, back to our original question. How often should you review your portfolio's performance? Undoubtedly, at least once per year, not only for tax reasons, but also to check if the portfolio needs to be rebalanced to keep it in line with your target asset allocations (that is, you may have to sell some of your winner to ensure that its weight in the portfolio doesn't rise too much above your target, and invest the proceeds in some of your losers, to keep them around their target weights). Beyond that, however, and our advice is to avoid the temptation to evaluate your portfolio every month (or worse, every day!), because doing so only increases the chances that you will fall prey to normal human emotions and take action that works against your best interests over the long term.

### **Should You Use A Financial Planner?**

This is a question that many readers have raised with us from time to time. Does our emphasis on asset allocation and indexing mean that we don't think people should use the services of financial planners? The answer, with a couple of important reservations, is a resounding NO! The right planner, used in the right way, can add a lot of value to a person's life, just like the right doctor, dentist, lawyer and accountant can (not to mention the nannies, car mechanics, and everyone else who makes modern life possible).

So who is the right planner? In our experience, the right planner to use is someone you like, someone you trust (listen to those instincts!), and as important as the first two, someone who charges you an explicit fee for his or her services. Too many people who call themselves planners are actually compensated via commissions paid to them by the companies whose products they sell. As much as they protest that it isn't the case,

common sense tells you that this must inevitably create conflicts of interest between you and your supposed “advisor.” Would you go to a doctor who prescribed a drug for your condition based on the commission paid to him by the company that produced it? Or decided which hospital to send you to on this basis? You get our point. If the planner in question isn’t a “fee only” planner, we’d recommend you go elsewhere.

But finding the right planner is only half the battle. Going to him or her for the right reasons is also critical. By now you should be able to guess that we don’t believe that regular readers of The Index Investor should be asking a planner to decide on their portfolio’s asset allocation and pick stocks for them to implement it (remember our friend “Cousin Charlie”?). On the other hand, good financial planning is about a lot more than asset allocation and its implementation. People also need to budget their spending, manage their taxes, hedge their risks (which includes, but isn’t limited to buying insurance to cover them), borrow wisely, and plan for the eventual distribution of their estate. Helping you manage these tasks, and integrate them into an effective plan, is the real value added you get from a fee only financial planner.

## **Are Hedge Funds For You?**

He’s back...! Cousin Charlie, your favorite self-proclaimed investment genius (assuming we forget about his enthusiasm for technology stocks a few years back) has just regaled your family about his newest “can’t miss” investment opportunity: hedge funds. And, unfortunately, he’s coming to your son’s graduation party next week. Following your slightly embarrassed silence after his last speech, you’d like to be better prepared this time, when he inevitably starts to lecture your guests. Well, you’re in luck. We have what you need.

To start with, why should we be interested in hedge funds? And why now? The simple answer to the first question is that we should be interested in hedge funds because over the past few years many of them appear to have generated relatively high returns with

low levels of risk and low correlations with the returns on other asset classes. For this reason, they have the potential to improve the risk/return trade-offs in your portfolio.

Why now? Because both Standard and Poor's and Morgan Stanley Capital International are expected to introduce new hedge fund indexes in the very near future. Assuming that this will result in the creation of new funds (be they mutual or exchange traded) based on these indexes, then for the first time, smaller investors will have the opportunity to invest in hedge funds (note: in a similar move, Hong Kong authorities just changed their regulations to let local investors invest in "funds of hedge funds" for a minimum of ten thousand dollars). For this reason, readers of The Index Investor could soon find themselves confronted with the question of whether or not to invest a part of their portfolios in a hedge fund index. Hopefully, this article will help you to make your decision.

So what is a hedge fund? The definition used by the Presidential Working Group on Financial Markets is "any pooled investment vehicle that is privately organized, administered by professional investment managers, and not widely available to the public." In this sense, the name "hedge fund" is a bit misleading, in that, as we describe below, not all so-called hedge funds actually hedge their risk exposures.

Most hedge funds are organized as either limited partnerships or limited liability companies. In order to invest in a single hedge fund (as opposed to an index), you have to be an "accredited investor" as defined in Rule 501 of Regulation D of the Securities Act of 1933. Among others, the rule defines an accredited investor as any of the following: (a) an employee benefit plan with total assets in excess of \$5 million; (b) a person who has individual net worth, or joint net worth with the person's spouse, that exceeds \$1 million; or (c) a person with income exceeding \$200,000 in each of the two most recent years, or joint income with a spouse exceeding \$300,000 for those years, and a reasonable expectation of the same income level in the current year.

Unlike mutual funds, hedge funds cannot advertise to the public. An even more important difference is the way a hedge fund compensates its investment manager. Typically, the investment manager (who serves as general partner of the limited liability partnership, and who also has a significant amount of personal capital invested in it) receives an annual management fee equal to 1% to 2% of the funds assets, and an incentive fee equal to 15% to 20% of the fund's profits above a certain level. Most hedge funds also include what is called a "high water mark" provision, which requires that past year's losses be made up before the incentive fee takes effect. This is a far richer compensation package than most mutual fund managers receive. For this reason, it should come as no surprise that many of the best mutual fund managers have left their old jobs and gone to manage hedge funds (the fact that hedge funds face no legal requirements to disclose their investments probably provides another incentive to successful managers, who at a hedge fund can keep their strategies more private than they could at a mutual fund).

How big is the hedge fund market? Because hedge funds are under no legal requirement to report their assets to any regulator, nobody knows the answer to this question for sure. However, it has recently been estimated that there are at least 6,000 hedge funds in existence, with about \$500 billion in equity (in practice, though, because of their use of leverage they may control two to three times more in investments, not counting the face value of the derivatives they own). Around 80% of these funds have equity of less than \$100 million, and 50% are estimated to have less than \$25 million in assets. Approximately 80% of all hedge funds are based in the U.S., although they often run "mirror funds" in offshore locations to facilitate investment by non-U.S. investors.

A more interesting question is how hedge fund managers make money for their investors. As we have discussed in the past, there are two fundamental sources of superior active investment management performance: a manager can have better information than other investors, and/or he can have a better model for making sense of information that is available to all investors. This holds for both active mutual fund and hedge fund

managers. The difference between them, however, lies in how they make use of whatever advantage they have.

In principle, an advantage can affect either where you invest, and/or how you invest. By where you invest, we mean the allocation of your investments between different asset classes, and, within those classes, between different regions (or countries), styles (e.g., momentum vs. value), sectors, and individual securities. By how you invest, we mean the extent to which you take directional bets on whatever you are investing in (that is, the extent to which you take long or short positions), and the extent to which you try to magnify your gains by using leverage to increase the size of your investment positions. This leverage can come either from the use of debt (e.g., margin borrowing), or derivatives (options, futures, etc.) which you can purchase for less than their full face value.

Mutual fund managers are far more limited in how they invest than are hedge fund managers. First, many mutual fund managers are expected to stay within a certain “style” category (e.g., large cap growth). As a result, their performance is usually measured relative to the relevant “style benchmark” (e.g., the S&P 500 growth index). In contrast, hedge fund managers are generally allowed to invest in a wider range of asset classes, and, as important, their performance is usually measured relative to an absolute return target (e.g., at least 12% per year), rather than any index (although that is changing).

Second, mutual fund managers are generally prohibited from taking short positions in the stocks in which they invest. In contrast, hedge fund managers are allowed to take short positions. Practically, this “long only” constraint means that mutual fund managers can only make money from investing in assets that they believe to be undervalued, while hedge fund managers can make money from both undervalued and overvalued situations.

Third, mutual fund managers are generally limited in the amount of leverage (be it in the form of debt or derivatives) they can use to magnify their returns. From a regulatory

point of view, there is a good reason for this: using leverage is a risky strategy, that magnifies not only gains, but losses as well (remember Long Term Capital Management?). Presumably, sophisticated “accredited investors” understand this risk, and are willing to take it when they invest in hedge funds, which can and do use leverage.

Now that we know, in general terms, how hedge funds make money, let’s look in more detail at the different strategies they employ. To do this, we will use the indexes published by CSFB/Tremont, which measure the performance of different hedge fund strategies.

“Convertible Arbitrage” funds try to make money by taking advantage of pricing differences between a company’s convertible bonds (that is, bonds that have the option of being converted into equity shares at a later date) and its outstanding shares. For example, a hedge fund might buy a company’s convertibles while selling short its stock, assuming the latter was perceived to be overvalued. The profit on the strategy would come from both the interest earned on the bond, plus the profit earned on the short sale of the stock (when you sell a stock short, you receive a price for the shares today, but promise to deliver them at a later date. If the shares have declined in price by that date, you can buy the shares you need to deliver for a price that is lower than what you have received for them). However, because the profit margins on these convertible arbitrage trades are usually small, hedge funds in this category generally use substantial amounts of leverage to magnify their returns. At the end of 2001, approximately 8% of the total amount invested in hedge funds tracked by the CSFB/Tremont indexes was invested in funds in this category.

“Fixed Income Arbitrage” funds try to profit by taking advantage of pricing differences between similar fixed income securities (buying the undervalued one, and shorting the overvalued one). Again, because the profit margins on individual transactions are small, these funds typically use large amounts of leverage. These funds accounted for 5% of the total amount invested in the hedge funds tracked by CSFB/Tremont.

“Equity Market Neutral” funds are also designed to take advantage of pricing differences between similar securities, but in this case in the equity market. These funds will typically have long and short positions that are equal in size. Equity Market Neutral funds accounted for 7% of the total capital of the hedge funds tracked by CSFB/Tremont.

The three types of hedge fund we have just discussed fundamentally make their money through some type of arbitrage, taking offsetting positions to try to capture temporary price differences between similar assets, and magnifying their gains through the use of leverage. The next six types of hedge funds try to make money not through arbitrage, but rather by taking large directional bets, in the expectation that overvalued assets they are short will fall in price, and undervalued assets they are long will rise in price. Because directional trading typically generates higher profit margins per transaction, these funds generally use less leverage than the arbitrage funds.

“Long/Short Equity” funds are different from market neutral funds in that the long and short positions they take may be of different sizes. Long/Short funds may either invest in a broad range of asset classes, or be more narrowly focused (e.g., a biotechnology hedge fund). At the end of 2001, this was by far the most popular of the different types of hedge funds tracked by CSFB/Tremont, accounting for 44% of the total funds under management.

“Emerging Markets” funds are quite similar to mutual funds, in that they invest in emerging markets where it is often difficult to take short positions. As a result, this type of fund basically tries to make money through superior market timing and security selection. Possibly because of their similarity to much more cheaply priced actively managed and index mutual funds, emerging markets hedge funds accounted for only 3% of the total hedge fund assets tracked by CSFB/Tremont at the end of 2001.

In contrast, “Global Macro” funds take long and short positions across a very broad range of asset classes and markets around the world. These funds may also use substantial amounts of leverage on a tactical basis to increase the potential payoffs from some of

their directional bets. Famous hedge funds, such as George Soros' Quantum Fund or Julian Robertson's Tiger Fund are in this class. However, their relative popularity has recently declined, and they only accounted for 9% of the funds under management at the end of 2001.

"Dedicated Short Bias" funds have greater than fifty percent of their assets invested in short equity market positions. Because of the difficulty of making money over the long term taking this approach (given that the economy grows, and markets rise, in far more years than they fall), dedicated short funds accounted for less than one percent of total hedge fund assets at the end of 2001.

"Managed Futures" funds invest in listed financial and currency futures, and their managers are usually called commodity trading advisors, or CTAs. These funds accounted for only 3% of the hedge fund assets tracked by CSFB/Tremont at the end of 2001.

Finally, "Event Driven" funds try to make their money by taking long or short positions based on their forecast about the outcome of an expected event. For example, some of these funds invest in the securities of companies involved in merger and acquisition transactions, while others invest in the debt and equity of firms facing serious financial problems. At the end of 2001, these were the second most popular type of hedge fund, accounting for approximately 20% of total assets invested in hedge funds.

Now that we have a better idea of the different types of hedge funds, let's take a closer look at how they have performed in recent years.

The first problem one confronts when trying to examine this issue is the uneven quantity and quality of the available hedge fund performance data. There are at least seven different hedge fund performance indexes compiled by different data vendors. Academics who have examined these indexes found a surprisingly small degree of overlap between the hedge funds included in the most widely used indexes. In some

ways, this isn't surprising, given that reporting is voluntary, and few hedge funds would probably want to take on the additional administrative burden of reporting to more than one or two index compilers. All of the indexes, however, have been found to suffer from some important data quality problems.

The first of these is what is known as "survivorship bias", which refers to the tendency to remove failed funds from the index. As a result, it has been estimated by some academics that hedge fund indexes may overstate "true" average hedge fund returns by anywhere from 1.5% to 3.0%. Closely related to this is "selection bias", which refers to the fact that, because performance reporting is voluntary, the better performing hedge funds are probably more likely to report their results than are those with poor track records.

The third, and perhaps most important problem, is created by hedge funds' sometimes extensive investments in illiquid securities (like privately placed debt and equity, or complex derivatives). Because these securities are only infrequently traded, their value must be estimated by the hedge fund manager each month for reporting purposes. To put it mildly, these estimated values have been found to be "optimistic" at times, particularly in down markets. Statistically, this practice has three important impacts. First, it causes month to month returns to be more highly correlated with each other than is the case with public market indexes such as the S&P 500. Second, it causes the volatility (e.g., the standard deviation) of hedge fund returns to be underestimated. And finally, it leads to the underestimation of the correlation of hedge fund returns with those on other asset classes. In short, the "managed pricing" of illiquid securities can make hedge funds appear to be less risky (in comparison with other asset classes) than they really are.

It was with these caveats in mind that we examined the different hedge fund indexes, to decide which one to use in our analysis. We settled on the CSFB/Tremont index for the following reasons. First, it is the only index that uses asset value weights. The others equally weighted all returns, regardless of the size of the fund. Given that all of the other indexes we use at The Index Investor are asset value (i.e., market capitalization) weighed,

logic dictated that we use CSFB/Tremont. We also found that quite a rigorous methodology is used to construct this index. The process starts out by tracking over 2,600 hedge funds from both the U.S. and other countries. To be eligible for inclusion in the index, a hedge fund must have over \$10 million in equity, and a current audited financial statement. Only 662 funds out of the 2600 tracked passed these tests. From this group, 377 funds were selected for inclusion in the index, which represent 85% of the assets under management at the 662 qualifying hedge funds. These funds report their performance net of fees, so that the index actually tracks the returns to hedge fund investors rather than the overall returns to the funds themselves. To limit survivorship bias, the index includes the historical track records of funds that are no longer in business. To limit selection bias, the index only includes the performance of included funds after the date they were added to the index. All in all, CSFB/Tremont appeared to be the best hedge fund index to use in our analysis, even though it has existed only since the start of 1994.

We'll start our quantitative analysis with a look at hedge fund's performance over the 1994-2000 period. The average returns, standard deviations, and return/risk ratios for the different indexes are as follows, in U.S. Dollar terms:

<b>Index</b>	<b>Average Return</b>	<b>Standard Deviation (Risk)</b>	<b>Return/Risk</b>
CSFB/Tremont Aggregate Index	12.6%	11.1%	1.14
Convertible Arbitrage	10.5%	5.6%	1.88
Fixed Income Arbitrage	6.8%	4.6%	1.48
Equity Market Neutral	11.8%	3.8%	3.11
Long/Short	15.8%	14.7%	1.07
Emerging Market	5.8%	21.9%	.26
Global Macro	14.3%	16.2%	.88
Short Bias	2.8%	20.5%	.14

<b>Index</b>	<b>Average Return</b>	<b>Standard Deviation (Risk)</b>	<b>Return/Risk</b>
Managed Futures	5.9%	12.0%	.49
Event Driven	12.0%	7.4%	1.60
Russell 3000 Equity Index	18.5%	16.9%	1.15
Lehman Brothers Aggregate Bond Market Index	6.8%	4.1%	1.66

As you can see from the above table, over the 1994-2000 period, hedge funds in aggregate turned in a respectable performance in aggregate, though the individual subcategories showed a much more mixed performance.

The table also illustrates another important point. As is true throughout the investing world, diversification pays off in the case of hedge funds, with the aggregate return/risk ratio superior to five out of the nine subcategories. The underlying reason for this is the relatively low level of correlation between different subcategory returns. Only two of these correlations were greater than .60: Convertible Arbitrage and Fixed Income Arbitrage at .64, and Long/Short and Event Driven at .68. We should also note that academic studies have also found this to be true within each subcategory – that is, the subcategory indexes generally have more attractive return/risk ratios than many of the funds they contain, because those funds themselves have very low correlations with each other (reflecting the diversity of strategies used even within a subcategory of hedge funds).

So, should you invest in hedge funds, and if so, how should you do it?

Let's start with the first question, and begin by looking at the correlations of returns over the 1994-2000 period between the CSFB/Tremont Aggregate Index, and key indexes for other asset classes we have used in our current model portfolios:

<b>Asset Class Index</b>	<b>Correlation with CSFB/Tremont Aggregate Index</b>
Russell 3000 (U.S. Equity)	.57
Lehman Brother Aggregate Bond (Investment Grade U.S. Bonds)	.24
Lehman Brothers High Yield (High Yield Bonds)	.53
National Association of Real Estate Investment Trusts (Commercial U. S. Real Estate)	.18
Goldman Sachs Commodity Index	.19
Salomon Brothers Non-U.S. Dollar 1+ Year Maturity Government Bonds	(.30)
Salomon Brothers U.S. Treasury Inflation Protected Bonds	(.22)
MSCI Emerging Markets Free	.55
MSCI Europe	.47
MSCI Pacific	.23

In light of the reasonable return/risk performance of the CSFB/Tremont aggregate hedge fund index, and its low correlation with the returns on other asset class indexes, we conclude that it probably makes sense to include hedge funds as a separate asset class in next year's model portfolios. But how should we go about doing this?

If you are an accredited investor, the first option you would have to consider is simply going out and investing your money in a single hedge fund. However, there are two reasons we wouldn't recommend taking this route. The first is that by investing in a single fund instead of some combination of hedge funds, you would forgo what appear to be significant diversification benefits. In other words, by investing in a combination of funds you would probably be able to achieve more expected return per unit of risk taken on. Closely related to this is a less well understood benefit of diversifying across a number of hedge fund sub-styles. For the statistically inclined, the argument can be stated simply: while the distributions of returns for many hedge fund sub-styles are not normally distributed, the distribution for the aggregate hedge fund index is very close to

normal (with skewness essentially equal to zero, and kurtosis of only .56). For the non-statistically inclined, the argument can be stated differently: in the case of some of the hedge fund sub-style indexes, you are more likely to be surprised by lower than expected returns than would be the case if those returns were "normally" distributed in the shape of the familiar bell curve. However, when the sub-styles are combined into the aggregate index, these effects tend to offset each other, and the shape of the distribution of expected returns is close to the familiar bell curve that characterizes the distribution of many other asset class returns.

The second reason is that, as is true in the case of mutual funds, there is a lot of academic evidence that says good hedge fund manager performance does not persist from year to year; in other words, a good track record is no guarantee of good future performance. As one study ("Offshore Hedge Funds, Survival and Performance, 1989-1995", by Brown, Goetzmann, and Ibbotson) put it, "We found no evidence of performance persistence, in either the raw or the risk adjusted returns." This was a somewhat surprising result, because "the hedge fund arena seems to be the ideal place to look for evidence of manager skill. Unlike mutual funds and other investment trusts, hedge fund managers do not seek to track a benchmark, but rather to exploit mispricing [wherever they find it]. Thus it is striking to find absolutely no evidence of differential skill among offshore hedge fund managers."

In light of these findings, you might think about investing in what is known as a "Fund of Funds", which is essentially a hedge fund that invests in other hedge funds. As you would expect, the fees involved are quite high. On average, Fund of Funds managers charge a management fee equal to 1.4% of the amount you invest, and as well as an incentive fee of 10%. And these charges are on top of those levied by the hedge funds in which the Fund of Funds invests. So, the obvious question is whether or not Fund of Funds managers add enough additional value to justify these fees. As you would probably guess, most academic studies of this issue have not been good news for the Funds of Funds. As one of them ("Hedge Fund Performance, 1990-2000", by Amin and Kat) put it, "Fund of Funds performance appears to suffer badly from their double fee

structure.” In short, going the fund of funds route is not an efficient way to achieve the diversification benefits most investors seek.

Which, once again, brings us to the virtues of taking a passive investing approach. Assuming Standard and Poor’s and/or Morgan Stanley Capital International introduces an investable hedge fund index (or CSFB/Tremont modifies its current index in this direction, which also appears likely), and further assuming that mutual and/or exchange traded funds linked to hedge fund indexes are introduced, we believe that this is by far the preferable route to take for most investors who wish to allocate some of their portfolio to this asset class. If, as we expect, these developments occur this year, we will include hedge funds in the universe of asset classes we use at The Index Investor, and update our model portfolios to take them into account.