

The Index Investor

Why Pay More for Less?

Model Portfolios Performance Update

All of our risk based portfolios continue to deliver higher returns than their benchmarks. Our high risk portfolio (which is intended to have no greater volatility than a mix of 80% S&P 500 and 20% Vanguard Total Bond Market) is up 4.0% year-to-date, versus (.6%) for its benchmark. Most of this outperformance is due to our weightings on small cap value, mid-caps, and real assets. Our medium risk portfolio is up 2.1% year-to-date, versus its benchmark of 60% S&P 500 and 40% Vanguard Total Bond Market. In this case, small cap value, long bonds and real assets account for the performance advantage. Finally, our low risk portfolio (whose benchmark is a mix of 20% S&P 500 and 80% Vanguard Total Bond Market) is up 3.9% versus 3.5% for its benchmark. Here again, our edge is due to the weightings we gave to small cap value stocks and real assets.

Whereas our risk based portfolios are designed to deliver maximum returns for a given level of risk, our target return portfolios are intended to have the highest probability of delivering specific target returns (calculated on a compound basis over a ten year holding period) while taking on as little risk as possible. The logic behind this approach is straightforward: (a) most people's (often unspoken) investment goal is to fund their liabilities (e.g., for retirement or college education) while taking on as little risk as possible, and (b) over time, the relative riskiness of different asset classes is much more stable than their relative returns (that is, the correlations between the former are much more stable over time than they are between the latter).

On a relative basis, our target return portfolios are performing as we expected, even though their absolute performance has been disappointing (due, as we have noted before, to our decision not to include real assets in their universe of allowable investments). Our 12% target return portfolio (which takes on more risk than any of the others in order to

achieve the highest return) is down 2.5% year-to-date, with the strong performance of REITs offset by weak returns in European and especially emerging market stocks.

Our 10% target return portfolio is down 1.9% year-to-date, and our 8% target return portfolio is down 1.2% year-to-date, again due to the disappointing performance of European stocks. Finally, our 6% target return portfolio is down .1% year-to-date, due to both European stocks and a (5.2%) year-to-date performance by international bonds.

Size Based Indexes Compared

As we mentioned last month, the introduction of Barclay's "iShare" exchange traded index funds has made it possible to invest in a much wider range of indexes. This naturally raises the question of whether or not it makes any difference which index you invest in. This month, we'll look at large, mid, and small cap indexes, and try to answer the question we've posed.

Let's start with the big guys, the large cap indexes. Up to now, this category has been dominated by the S&P 500, the "no-brainer" of the indexing world. Companies are added or dropped from the index at the discretion of Standard and Poors, using a set of criteria that is published on their website. At the end of May, 2000, the stocks included in the S&P 500 accounted for 82 percent of the total capitalization of the U.S. equity market.

Today, however, you can also get large cap exposure by investing in the Russell 1000, which is comprised of the top 1000 stocks in the U.S. market in terms of their market capitalization. These stocks account for approximately 90 percent of total U.S. equity market capitalization.

Between March, 1984 and May, 2000 (the longest period for which common data is available for all the indexes discussed this month), the S&P 500 had an average annual

return of 19.21%, with a standard deviation of 17.74%. During the same period, the Russell 1000 had an average return of 19.03 and a standard deviation of 17.66. Basically a toss up. As we did last month, we will move on to more sophisticated risk measures to see if we can break this tie. The distribution of the S&P 500's monthly returns over this period was slightly less skewed than the Russell 1000's, at (.93) versus (.99). Similarly, the S&P 500's distribution of returns was slightly less peaked than was the Russell 1000's, with a kurtosis of 4.15 versus 4.39 (remember, a lower Kurtosis means smaller tails in the distribution, which reduces the likelihood of big surprises). On balance, we'd say that the S&P 500 wins this one by a nose.

Now let's move on to the mid-cap indexes. Here our two candidates are the S&P 400, and the Wilshire 4500 (known to Vanguard fans as the Extended Market Index). The former contains 400 mid-cap stocks selected by a committee at Standard and Poors; the latter contains all the stocks in the Wilshire 5000 (which actually contains around 7,000 stocks) that are not included in the S&P 500. In terms of market capitalization, the stocks included in the S&P 400 comprise 6 percent of total U.S. equity market capitalization, while the WLSH 4500 comprises 18%. Obviously, some people will point out that the 4500 actually contains a mix of mid, small, and micro ("smaller than small") cap stocks, and ask whether or not it is fair to compare it to the S&P 400. We take the point; however, the reason we are including it here is that most analytical services categorize funds based on the WLSH 4500 as mid-cap funds, because of the average market capitalization of the index (in other words, the mid sized companies included in the index are significantly bigger in their aggregate market value than are the smaller companies).

With that caveat in mind, let's turn to relative performance. During the March, 1984 through May, 2000 period, the S&P 400 generated average annual returns of 19.63 percent, versus just 16.14% for the WLSH 4500. The standard deviations, however, were pretty much the same, at, respectively, 19.74 and 19.77. On this basis alone, it appears that the S&P 400 is the preferable index.

Now on to the small cap indexes. Here our two contenders are the S&P 600 and the Russell 2000. As is the case with its peers, the former is based on a group of stocks selected by Standard and Poors. These stocks represent approximately two percent of the total capitalization of the U.S. equity market.

The Russell 2000 represents the bottom 2,000 stocks that are included in the Russell 3000, which, as you recall from last month, contains the top 3,000 stocks by market capitalization in the U.S. market. The stocks included in the Russell 2000 account for approximately 8 percent of total U.S. equity market capitalization.

In terms of performance, between March, 1984 and May, 2000, the S&P 600 delivered average annual returns of 13.01 percent, while the R2000 delivered 13.84%. Advantage Russell. However, the standard deviation of returns was lower for the S&P 600 (20.74%) than it was for the R2000 (21.34%). Advantage S&P. However, when the two measures are combined (by dividing return by risk, to measure how much return you received per unit of risk you took on), the R2000 comes out slightly ahead, at .65% versus .63%. Still, this is too close to call. So let's move on to the advanced risk measures, to see if they can break the tie.

In terms of skewness, the R2000 at (1.23) is slightly less negatively skewed than the S&P 600, at (1.26). On the other hand, the S&P's distribution is less peaked, with a kurtosis of 5.91 than is the R2000's at 6.19. On balance, we give this race to the R2000, in a photo finish.

Psychology and Investing: New Research Findings

As Alan Greenspan has rather memorably put it, “there is one important caveat to the notion that we live in a new economy, and that is human psychology.”

We have noted before that psychological researchers have found that human beings tend to behave in ways that are predictably irrational. In other words, most people’s thinking is reliably biased in a consistent manner.

Why is this important to an index investor? Because, despite their understanding of the twin dangers of high expenses and high turnover (both of which generate costs, and make it impossible to ‘beat the market’), we too are human and therefore occasionally tempted to trade more actively than is good for our financial health. As is the case with our physical health, we can benefit from the occasional “booster shot” that strengthens our resistance to these dangers.

With that in mind, we’d like to briefly review the results of two important academic research studies.

In one that has now become something of a classic, Terrance Odean (then at Berkeley, now at the University of California at Davis) analyzed a data set consisting of the trading records of 60,000 households that maintained an account at a large discount brokerage firm between February, 1991 and December, 1996. In his article titled “Are Investors Reluctant to Realize Their Losses?” (Journal of Finance, 1998), Odean found that over this period, the average investor in his study earned a compound annual return on his or her account of 15.3%. However, the 20% of households that traded most frequently realized a compound annual return of only 10.0%. Most importantly, Odean found that it was the cost of frequent trading (commissions, bid/ask spreads, and taxes), and not differences in investment selection that accounted for the difference in return between the high traders and the rest of the group.

More recently, Odean and a colleague, Brad Barber have authored a new working paper, entitled The Courage of Misguided Convictions. In this case, they analyzed the performance of 10,000 investor accounts between January, 1987 and December, 1993. Their study focused on the question of why investors tend to sell their winners too early, and hold their losers too long. There are two logical explanations for why people might do this.

On the one hand, they might believe that over time, the performance of most shares “reverts to the mean.” This means that a company with poor recent performance is more likely to improve than to get worse, while a company with above average recent performance is more likely to decline than to get better. Arguably, “mean revision” is the single most important belief held by true value investors (and its opposite, “mean aversion” is the single most important belief held by momentum investors).

On the other hand, investors might sell their gains faster than they realize their losses because the latter causes them twice as much pain as the former causes them pleasure. Or, as the country song says, “losing hurts twice as much as winning feels good.” More formally, this is known as either “prospect” or “loss aversion” theory.

In the study they conducted, Odean and Barber started out with the reasonable hypothesis that if investors were motivated by mean revision, then the losing stocks they held on to would tend to outperform the winning stocks they sold in the months following their sale. Unfortunately, the data they studied did not support this. Over the year following their sale, investors’ winning stocks outperformed their losers by 3.4% per year (relative to a market index). In other words, “investors who sell winners and hold onto losers because they think the latter will outperform the former are, on average, mistaken.”

Moreover, if investors’ decisions were actually motivated by a belief in mean revision, when adding to their portfolios they would tend to buy stocks that had previously performed poorly. Unfortunately, Odean and Barber found that this wasn’t true for the

investors they studied, who bought stocks that, on average, had outperformed the market index by 25 percent over the previous two years.

In summary, these studies provide us with three important insights:

- We seem to have a natural tendency to overtrade.
- When we buy, we often do so on the basis of momentum rather than value.
- We tend to sell our winners too soon and hold our losers too long.

Next month, we will further explore these findings.