Dividend-Focused ETF's vs. Alternative Portfolios

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In a recent article, I looked at the possibility of building a high dividend portfolio from a combination of bonds and stocks with high dividend yields. In this article, I am pursuing the topic further. A number of comments on my sample portfolio of high-yield stocks suggested that these were companies in distress and were more risky than the basket of stocks aggregated in ETF's such as DVY, PEY, and FVD. DVY and PEY both have criteria for selection that will rule out inclusion of many types of high-yielding stocks, and the rationale is typically made that the screening criteria for inclusion are intended to limit risk, other wise known as portfolio volatility. This idea makes some sense because many 'income investors' are fairly risk averse. In standard financial practice, risk is measured by two variables: Beta and Standard Deviation (SD) of returns. If we were to compare dividend-focused ETF's to a portfolio of high-dividend stocks, we might want to adjust the stock portfolio to that it's Beta and SD over an extended period of time was very close to the values for the dividend-focused ETF's. In this way, we would have compensated for risk differences between the basket of stocks and the ETF's. If the alternative stock portfolio shows better returns with risk less than or equal to the ETF's, it would be hard to argue that the stock portfolio as a whole is in any way more risky than the ETF's. In the previous paper, I looked at comparing portfolios with equivalent risk levels but the comparisons were limited by the very short available histories for the ETF's. In this analysis, I have found an effective way to overcome this issue.

One of the challenges in evaluating the dividend-focused ETF's is that many have very short histories, although it is possible to extrapolate what their behavior might have been by recreating the underlying strategies using the indices that these ETF's are designed to track. A 2005 paper from Altavista Independent Research (AIR) did just that to create proxy historical performance data for DVY and PEY going back to 1995 (see link at the end of this paper). We are going to use these results to inform our analysis. DVY and PEY are both based on indices that are supposed to be a proxy for high-dividend stocks which have a stable history of dividends and increasing dividends over time. DVY is supposed to track the Dow Jones Select Dividend Index and PEY is supposed to track the Mergent Dividend Achievers 50 Index. By using these indices, and ignoring fees, it is

possible to create a proxy historical performance record that will show risk and return for these ETF's---and this is exactly what the paper by AIR did.

Risk and Return from Dividend-Focused Investing

The main theme of the paper by AIR is to suggest that investing in ETF's like DVY and PEY will provide the potential to generate higher total returns than the S&P500, with less total risk. These finding are consistent with numerous other studies that show that investing in high-dividend yield stocks has provided market-beating results over substantial historical periods. The main result of the AIR analysis is to show that in the ten-year period, from May 31,1995 to May 31, 2005, the proxy performance of investing in the indices underlying DVY and PEY would have beaten the S&P500 by about 5.5% per year with Beta of around 0.5 (averaged between the two) and with a slightly lower standard deviation in annual return (by 1-2% per year). For $10,000 invested at the start of the period, you would have ended up with $43,000 at the end of the period—substantially more than if you had simply invested in the S&P500 (a mere $26,000).

We have performed an equivalent analysis for a selection of the high dividend stocks that we analyzed in a recent paper: ALD, DLX, CEI, and GNI. For a portfolio that is made of 20% each of these and 20% in SPY, the Beta for the same ten year period is 0.52, the annual standard deviation is about the same as the ETF proxies (between 13% and 14%), but $10,000 in this portfolio grows into $59,000 over the same ten year period.

Our simple portfolio of four high-yield stocks plus SPY beat the indices that DVY and PEY are supposed to track over a ten-year period. The compounded annual total return (assuming reinvestment of dividends) for the simple high-yield stock portfolio generated about 2.5% more in return per year over this ten year period (compounded), with almost identical Beta and Standard Deviation as the indices for DVY and PEY. A key point for those investors looking for dividends as a source of income is that the average dividend yield from this high-yield stock portfolio was 7.9% per year. The dividend yield is quite volatile, but the **minimum** 12-month rolling dividend yield over this period was 4.7%,

substantially higher than the dividend yield for the indices for DVY and PEY for this period—around 4%.

Looking Ahead

Sadly, these fantastic results over a ten-year period do not mean that we can simply invest in a small number of high-yield stocks in order to build a solid high-yield portfolio. It would not be judicious to simply look at historical performance in making an investment decision—either for the ETF's or for a portfolio constructed out of individual stocks. There are enormous perils in betting that a strategy that has worked well for ten years will necessarily continue to work well for the next ten years. If you want to plan for the future, you must use forward-looking analysis and this is where Monte Carlo analysis comes into play. A combination of historical analysis (to tell you what has gone before) and plausible Monte Carlo simulations (to look at where you might be going) can provide valuable guidance. In order to design a dividend-focused portfolio, I have used the Quantext Portfolio Planner, a Monte Carlo planning tool. Many papers on this tool and a thorough description of how it works are available at www.quantext.com, so I will not delve into these details here.

I believe that it makes more sense to choose a series of stocks with high dividend yield histories and construct a solid overall portfolio than to utilize the dividend focused ETF's. The reasons for this will become clear. A reasonable sample portfolio might be the one shown below. This is a portfolio that is 24% high-yield stocks, 36% bonds, 10% international, 10% mid-cap value, 9% small-cap value, 6% in a utilities focused ETF, and 4% SPY. This portfolio has a 3.84% dividend yield and is projected to return 11.92% per year, with a standard deviation of 14.1% (see ***Portfolio Stats*** below). The projections are the result of Monte Carlo simulation, and often differ substantially from the historical results. The table below shows historical values and Monte Carlo projections (using our Quantext Portfolio Planner) for this portfolio using historical data from 1/1/2004 through 3/31/2006 (DVY first traded in November 2003, so we started the analysis at the start of 2004). Over this period, our model portfolio generated an annual average return of

10.07% vs. 6.5% for the S&P500, and the model portfolio had substantially lower volatility. The Beta for this portfolio is 63%.

Fund Name	Percentage of Funds	Average Annual Return
IJJ	10.0%	11.68%
IWN	9.0%	13.54%
EFA	10.0%	8.70%
IYH	0.0%	5.89%
IDU	7.0%	10.67%
VBIIX	18.0%	5.94%
VBLTX	18.0%	9.34%
ALD	0.0%	25.85%
DLX	8.0%	19.70%
CEI	8.0%	12.02%
GNI	8.0%	29.20%
SPY	4.0%	8.59%
DVY	0.0%	6.92%
FVD	0.0%	8.99%
-	0.0%	-
-	0.0%	-
-	0.0%	-
-	0.0%	-
-	0.0%	-
-	0.0%	-

Portfolio Stats	
Average Annual Return	Standard Deviation(Annual)
11.92%	14.10%
Historical Data	
Start: 1/1/2004	End: 3/31/2006
Average Annual Return	Standard Deviation (Annual)
10.07%	6.42%
Historical Beta: **62.98%**	
Historical Yield: **3.84%**	
Performance of S&P500 over historical period	
Average Annual Return on S&P500	
6.51%	
Annual Standard Deviation on S&P500	
7.22%	

Model portfolio of ETF's and high yield stocks

In order to compare this portfolio to a portfolio in which the stock dividends are driven by the new dividend-focused ETF's, we have constructed the portfolio shown below. We constructed this portfolio to contain roughly equivalent mixes of components, with the target being to match the projected risk, as measured by Standard Deviation in annual return and total yield. In this portfolio, we have allocated 40% of the portfolio to two dividend-focused ETF's, DVY and FVD. We used FVD rather than PEY simply because FVD has a longer history.

Fund Name	Percentage of Funds	Average Annual Return
IJJ	11.0%	11.68%
IWN	13.0%	13.54%
EFA	14.0%	8.70%
IYH	0.0%	5.89%
IDU	0.0%	10.67%
VBIIX	11.0%	5.94%
VBLTX	11.0%	9.34%
ALD	0.0%	25.85%
DLX	0.0%	19.70%
CEI	0.0%	12.02%
GNI	0.0%	29.20%
SPY	0.0%	8.59%
DVY	20.0%	6.92%
FVD	20.0%	8.99%
-	0.0%	-
-	0.0%	-
-	0.0%	-
-	0.0%	-
-	0.0%	-
-	0.0%	-

Portfolio Stats	
Average Annual Return	Standard Deviation(Annual)
9.10%	14.07%
Historical Data	
Start: 1/1/2004	End: 3/31/2006
Average Annual Return	Standard Deviation (Annual)
10.85%	7.30%
Historical Beta: **88.68%**	
Historical Yield: **3.85%**	
Performance of S&P500 over historical period	
Average Annual Return on S&P500	
6.51%	
Annual Standard Deviation on S&P500	
7.22%	

High yield portfolio using dividend focused ETF's DVY and FVD

In this portfolio, in which the dividend yield is provided by dividend-focused ETF's, the historical yield is 3.85% (identical to that from the previous portfolio) and the projected future total portfolio standard deviation is the same—at about 14.1% per year. Beta for the portfolio including the ETF's is higher (at 88.68%) than for the previous portfolio. While this portfolio has generated an average return over the 2.25 years that the ETF's have existed that is 0.78% per year better than the previous portfolio, the historical volatility (measured by Standard Deviation, above) in this portfolio has been markedly higher than that of the S&P500 over this period, as compared to the previous portfolio which has shown lower risk than the market as a whole. When we adjust the portfolio of which uses the high-yield stocks so that the two portfolios have exactly the same historical standard deviation (from 1/1/2004-3/3/1/2006), the historical return of the high

yield stock portfolio is slightly higher than that for the portfolio including the dividend focused ETF's.

These two portfolios, with the same dividend yield and projected total standard deviation in return, have markedly different projected average annual returns. The portfolio with the high-yield stock mix generates a projected 11.92% per year as compared to the 9.1% per year that is projected for the portfolio that uses the yield-focused ETF's. This difference in average return with the same total risk (i.e. standard deviation) reinforces the earlier result in that a diverse portfolio with judiciously selected high-yield stocks will outperform a portfolio that generates the same yield with the dividend-focused ETF's. The portfolio using high-yield stocks as the source of dividend income beats the portfolio which uses yield-focused ETF's by 2.8% per year, close to the same advantage that we observed for the historical analysis using the AIR study.

The Perils of Over-Diversification

There is actually a fairly simple reason why our portfolios using high-yield stocks to drive the dividend yield look more attractive overall than the portfolios that include the high-yield ETF's (as represented by the indices they track for the longer history). The issue is one of 'over-diversification.' The indices that the ETF's track are so broad that they will ultimately converge towards the index weightings of the underlying stocks — and the dividend focused ETF's such as DVY and PEY are heavily focused towards larger capitalization firms. Even if high-yield stocks do tend to out-perform in the long term, the broad baskets of stocks that these ETF's include mean that you can only improve on the underlying indices by a fairly limited amount. The additional limitation for these funds is that the stocks that they include tend to be quite well correlated with one another due to the selection criterion to be included in the indices. Because the stocks in the ETF's are correlated with one another, you cannot possibly achieve the optimal return on the total portfolio risk. In the financial jargon, the stocks in these ETF's cannot reach the efficient frontier that represents the best return on risk because the components of the ETF's tend to be too well correlated to yield optimal

diversification effects. What this all means is that these ETF's will tend to provide less-than-optimal total return relative to the risk that they add to a portfolio. The flip side of over-diversification is that an investor in a smaller number of companies, as in our examples here, exposes the investor to more company-specific risk. If you invest in five companies, and one goes bankrupt, you will tend to lose more money than if you invest in one hundred companies and one goes bankrupt. That said, historical volatility on a stock tends to reflect the company specific risk fairly well. Indeed, trailing volatility in a stock is used in models that the credit rating agencies use to assess default risk. The market is not perfect, however, and even though I believe that these ETF's represent a tradeoff that is too extreme, it is true that they do protect their investors from company-specific default quite well.

Note: there is a broad literature on over-diversification. This is an interesting topic.

My Verdict on Dividend-Focused ETF's

This paper is not intended to bash dividend-focused ETF's. They have their place for some investors in some situations. The results of our ongoing analyses of these ETF's simply suggest that it is possible to do considerably better in generating meaningful dividend yields and solid total returns if you build a strategically-allocated portfolio that includes high-yield stocks. It will take more work for an investor to build a strategically allocated portfolio, as opposed to simply allocating funds into a series of tracking funds, and this is precisely why it is possible for investors to outperform the indices on an absolute and risk-adjusted basis. The vast majority of investors do not analyze their portfolios as a whole and do not really have a solid basis for seeing how their portfolio components work together in determining the aggregate portfolio performance. The fact that most investors look at their investments on a standalone basis—as opposed to looking at their portfolios in the holistic manner advocated by portfolio theory—means that investors who do apply the principles of strategic asset allocation have a real advantage. Monte Carlo analysis can provide the tools that allow investors to see their portfolios in aggregate and establish the optimal risk-return balance.

Altavista Independent Research (AIR) white paper on the proxy historical performance of investing in dividend-focused ETFs:
http://www.mergent.com/publish/DivETF%20White%20Paper-Final-F.pdf

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