

If you read my articles, you will have noted that I am not a fan of simply buying index funds. I am aware, of course, that buying the S&P500 would produce better results than most retail investors will get, but this does not mean that index funds are the only solution. Let's start from the premise that you understand that most investors will underperform the S&P500 in their investing because they (1) pay too much in fees, (2) chase hot funds and asset classes, and (3) do not carefully manage their tax exposure. Given this, John Bogle advocates that index funds are the best solution. Fair enough. For the average retail investor, buying some index funds will probably produce better results than he/she is currently getting. That said, I believe that this still leaves us a long way from the idea that simply buying the S&P500 to gain our equity exposure is the best approach. I feel that there is a great deal of value in meaningful allocations to individual stocks. To motivate this, consider the following Q&A between Charlie Munger (Warren Buffett's #2 at Berkshire Hathaway) and *Kiplinger's*, in an interview in 2005:

Kiplinger's: What would a good investor's portfolio look like? Would it look like the average mutual fund with 2% positions?

Munger: Not if they were doing it Munger style. The Berkshire-style investors tend to be less diversified than other people. The academics have done a terrible disservice to intelligent investors by glorifying the idea of diversification. Because I just think the whole concept is literally almost insane. It emphasizes feeling good about not having your investment results depart very much from average investment results. But why would you get on the bandwagon like that if somebody didn't make you with a whip and a gun?

<https://www.kiplinger.com/personalfinance/features/archives/2005/11/munger2.html>

More than a year ago, in July 2006, I published an article explaining why I thought that an all-fund portfolio was not optimal:

<http://seekingalpha.com/article/13877-all-etf-portfolios-vs-strategic-mix-of-stocks>

This theme has remained ‘top of mind’ for me and is also covered in some detail in a forthcoming book by Ben Stein and Phil DeMuth. Because I have gotten so many questions on this theme, I have decided to write an update to that article.

The portfolio that I presented in the earlier article on this topic was made up of a series of ETF’s and it used three years of trailing data as the historical basis for generating its forward view. This portfolio (shown below) was not in any way supposed to be optimal—just an example. The logic behind this portfolio was simply that it has substantially out-performed the S&P500 on an absolute and risk-adjusted basis and had some broad exposure to the major asset classes that are most often suggested for investors. It did not contain any real exposure to commodities—which was pointed out. The portfolio did contain considerable exposure to utilities and basic materials, both of which provide exposure to ‘hard assets,’ which is to day real things that are hedges on inflation.

Fund	Ticker	Percentage of Funds
U.S. Total Market Index Fund	IYY	30%
U.S. Utilities Index Fund	IDU	10%
U.S. Basic Materials Index Fund	IYM	10%
REIT Index Fund	ICF	10%
Intermediate Term Bond Index	VBIX	10%
Total Bond Market Index	VBMFX	10%
Emerging Markets Index	ADRE	10%
Europe 100 Index	ADRU	10%

Sample All-ETF Portfolio

The punchline of the original article was that I found that I could substantially improve the portfolio by adding allocations to three individual stocks (C, EXC, and BA). The improvements to the portfolio were shown on an historical basis, but also with a forward-looking model, *Quantext Portfolio Planner (QPP)*. More than a year later, this portfolio has continued to beat the S&P500 on an absolute and risk-adjusted basis. Granted, this

has a lot to do with the fact that EXC, and BA have performed well—though C is down about 10%.

The wide and varied responses that I got to this article suggested that many people really do not understand the meaning and nature of diversification. It is well-known that certain asset classes such as precious metals, energy, and agricultural commodities have low correlation to equities. One comment that I got when I first wrote this article was that I should have added a commodities index fund (DJP was proposed) to the mix and that this would have been better than adding individual stocks. This was an interesting hypothesis—one that we will look at in depth. DJP tracks the Dow Jones – AIG commodity index. Because DJP has not been around very long (about a year), I have used the index itself as a proxy (ticker: ^DJC). This will make the commodity index look a bit better than it really is because there are no fees in the index.

As I played with this problem, it struck me that a great way to demonstrate the real point here would be to look at the relative portfolio impacts of adding commodities vs. adding strategically chosen individual stocks to a portfolio of ETF's. The common wisdom is that adding individual stocks to a heavily equity-focused portfolio will not do much good—whereas adding commodities will help a lot, because commodities exhibit low correlation to equities. My point in the earlier article was that a well-chosen cadre of stocks could have a substantial benefit. So, an interesting challenge presents itself.

The original ETF portfolio (shown above) already had some exposure to commodities via the utility index and the basic materials index. Utilities are not, strictly speaking, commodity plays because the utilities buy the fuel and sell the power they generate—but they do have some of the same nice portfolio effects. To make my analysis 'fair,' I have taken these two components out of the mix--I want to give commodities their best shot at really improving the 'baseline' portfolio. Let's start with arbitrarily putting 80% of our portfolio into the following ETF's:

Fund	Fund Name	Percentage of Funds
U.S. Total Market Index Fund	IYY	30%
REIT Index Fund	ICF	10%
Intermediate Term Bond Index	VBIIX	10%
Total Bond Market Index	VBMFX	10%
Emerging Markets Index	ADRE	10%
Europe 100 Index	ADRU	10%
	Total	80%

Base allocation of 80% of the portfolio

We have the U.S. market index fund, a REIT fund, 20% allocated to bonds, and 20% allocated overseas. Now, our goal is to look at the relative impacts of populating the remaining 20% of this portfolio with various allocations to individual stocks and/or to the commodity index.

To test the impacts of adding commodities vs. adding mixes of my three individual stocks from the last study (C, EXC, and BA), I have constructed three new portfolios:

Portfolio 1: Base 80% + 20% in Commodity Index

Portfolio 2: Base 80% + 6.66% each in C, EXC, and BA

Portfolio 3: Base 80% + 5% each in Commodity Index, C, EXC, and BA

For reference purposes, I have also calculated results for the original all-ETF portfolio and for a simple portfolio made up of 85% IYY and 15% in the bond funds—this being the mix of stock index and bonds that has about the same historical risk as the other portfolios.

Along with historical performance, I have also generated projected future performance using the *Quantext Portfolio Planner* (QPP). QPP generates forward-looking statistical projections for portfolios, stocks, funds, and even for individual indices. QPP's projections have been extensively benchmarked in out-of-sample testing. For more details, see this article:

<http://seekingalpha.com/article/38568-projecting-portfolio-risk-and-return>

The projected future performance of asset classes and entire portfolios tends to look ‘mean reverting.’ Asset classes that have massively out-performed look a lot less rosy in the projections. Also, because the markets have exhibited very low volatility over the past several years, QPP projections almost invariably show higher future volatility, as measured by standard deviation in return.

The historical and projected future performances of the portfolios are shown in the table below. Several points are apparent, before we even get down to the core issue. First, we see that the original all-ETF portfolio that I used as my baseline in last year’s article has fared very well. It has beaten the all-market index (IYY) by 3.3% per year, with less risk, over the last three years. When I reported the trailing three-year returns for this portfolio in the original article, the average annual return was 15.3% per year for the three years through May 2006. The projected average annual return generated by QPP for this all-ETF portfolio was 10.94% per year when I first analyzed it in June 2007.

	Historical		Projected	
	Average Annual Return	Standard Deviation in Annual Return	Average Annual Return	Standard Deviation in Annual Return
85% Stock / 15% Bond	10.4%	6.7%	8.0%	13.4%
Original ETF Portfolio	14.9%	7.2%	8.8%	13.9%
Base 80% + 20% Commodity Index	13.5%	6.6%	9.5%	13.4%
Base 80% + 6.66% each in C, EXC, BA	15.6%	6.6%	10.0%	13.8%
Base 80% + 5% in Commodity Index +5% each C, EXC, BA	15.1%	6.5%	9.9%	13.0%

Historical and projected results for the portfolios (historical analysis uses three years through August 2007)

When we compare the 85% IYY / 15% bond portfolio to the original ETF allocation (above), we see that while the ETF portfolio has substantially out-performed the simple 85/15 portfolio over the past few years, QPP's projections suggest that this performance advantage is getting substantially smaller (see table above). Further, note that QPP now projects that this ETF portfolio will generate an average annual return of 8.8% a year going forward—lower than the projections from last year. The outlooks change from year to year, and 2007 has been an outlook-altering year on many fronts.

Now we will address the really interesting question: are commodities inherently superior to strategically chosen stocks as portfolio 'diversifiers'? The real measure of diversification is the ability to get the most return for the risk you carry (which is measured in terms of standard deviation in return). The third and fourth rows of the table above tell the basic story. Over the past three years, putting 20% into the commodities index (with the 80% base portfolio) has yielded a portfolio with the same risk as putting 6.66% each in C, EXC, and BA, along with the 80% base portfolio. ***The portfolio with 20% allocated equally between the three stocks has soundly beaten the portfolio with 20% in the Dow Jones – AIG commodity Index in terms of annual return---to the tune of 2% per year.*** But, we know that looking backwards is not a good predictor—so let's look at the projections. Now things get more interesting. While the portfolio with the individual stocks is projected to generate 0.5% per year more than the portfolio with commodities, it also has a bit more risk. In terms of the Sharpe Ratio, the portfolio with individual stocks is superior---but the two alternatives look remarkably similar in the projected outcomes. ***This result suggests that well-chosen individual stocks can have just as much positive portfolio impact in terms of increasing the risk-adjusted returns of a generic equity-focused portfolio as adding a broad-based commodity index.*** It may surprise many readers, for example, that C, EXC, and BA have about the same correlation to the returns from the original ETF portfolio as the Dow Jones – AIG commodity index---and this was also true when I wrote the original article. This is, of course, just one example. There are commodity indices that may have lower correlation to our portfolios, etc. My main point here is to emphasize that you have to look below the surface. Just because you have a stock index, this does not mean that there are not

some individual stocks that will have low correlation to that index. Note that we have not included any fees---and DJP has an annual management fee of 0.75%.

As a final thought, see the last line of the table above. In this case, I have allocated 5% to the commodity index and 5% each to C, EXC, and BA. This portfolio shows the highest projected return per risk of any of the others. There is no reason that you cannot add both a commodity index (such as DJP) and individual stocks to improve a broad portfolio of ETF's. Whether or not an investor wants to add commodities to his/her portfolio, the same types of diversification opportunities are available by looking carefully at the actual statistical characteristics of the available choices—whether they are individual stocks or other asset classes.

Disclosure: the author has a long position in EXC

Quantext Portfolio Planner is a portfolio management tool. Extensive case studies, as well as access to a free extended trial, are available at <http://www.quantext.com>

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