

Alternative paths to commodity investing

Pension trustees are often told that the best way into commodity investing is via collateralised long-only futures. But a recent paper, "The Tactical and Strategic Value of Commodity Futures"* by Claude B. Erb and Campbell R. Harvey, challenges this idea and suggests that the case for long-only commodity futures investment is nuanced. Instead they argue that a combined long/short tactical approach will gain the best results. This month's commodity article is presented as an interview with one of the paper's authors, Campbell Harvey of Duke University.

KATHARINE PULVERMACHER: Previous research on commodity futures has argued the importance of roll yields in overall returns. How important do you believe this is when thinking about making an allocation to commodities?

CAMPBELL HARVEY: There are three sources of return from commodity futures investment: roll return and spot return, which together make up the excess return, and the rebalancing, or diversification, return which is relevant for portfolios.

Historically, the average excess return of the average commodity futures has been zero. Some commodity futures have had positive roll returns and others have had negative roll returns. There is really no reason to assume, for instance, that crude oil will have a positive roll return in the future, simply because it has done historically. Overall, it is probably wise to bet that the long-run expected compound excess return for an individual commodity future will be zero.

that expectations can't be observed or measured directly, it means that one of the traditional arguments for long-only commodity futures allocation is not supported by the data.

Also, normal backwardation sees a world where many producers try to entice a few "speculators" with a roll return. However, with the new institutional interest in commodity futures, there may be many more "speculators", suggesting there might not be a compelling roll return in the future. No one knows how much capital the futures markets can absorb and still have a positive roll return, which is why one conservative view is to assume a zero roll return going forward.

KATHARINE PULVERMACHER: Your paper argues that much of the return commonly attributed to roll return may actually be down to "diversification return". Can you explain this concept?

CAMPBELL HARVEY: The diversification, or

poses of illustration, say that both commodities have compound returns of zero. If the portfolio positions are rebalanced, with exposures maintained at 50 per cent for each commodity future, then the return of this rebalanced portfolio will be 2-3 per cent. The ability of a portfolio to have a positive return when the portfolio's constituent returns are zero, is an example of a diversification return.

This is related to the difference between 'simple' and 'compound' returns. One way of explaining it would be to say you have an asset which goes from \$100 to \$200 one day and then the next falls back to \$100. It's ended up at the same spot, so if it's a buy and hold investment that's really a zero return. But on the first day the arithmetic return was +100 per cent, and on the next it was -50 per cent, making the average return +25 per cent. If the position is being rebalanced, the return should be positive, a little mathematical trick.

KATHARINE PULVERMACHER: You argue that "long-only commodity futures can be useful portfolio diversifiers as long as they provide a positive source of uncorrelated return." What are the implications of this for gold?

CAMPBELL HARVEY: Just as there is a diversification return for mixing and matching various commodities in a portfolio, so there is a diversification return for mixing commodities with the rest of an investor's portfolio. Relative to stocks, gold has a rebalancing return of about 1 per cent.

KATHARINE PULVERMACHER: If investors are interested in gold, which is typically in contango, wouldn't they be better off investing directly in gold, either through traditional gold accounts or using instruments like the relatively new gold ETFs?

CAMPBELL HARVEY: To oversimplify, if the price of gold is constant, and there is a positive rate of interest, then an investor will be



better off with a physical gold position rather than a gold futures contract. The reason is that gold futures will be in contango, generating a negative roll return, while the physical gold position will just generate a return of zero.

KATHARINE PULVERMACHER: The focus of your paper is commodity futures. Don't spot price trends matter?

CAMPBELL HARVEY: Spot returns matter, but we believe they are largely unforecastable. Longer term, say over five to ten years, it may be possible to extract some low level predictability of prices from economic analysis and supply and demand forecasts, but at a daily, or weekly level they are very difficult to predict.

Supply and demand are critically important because they will shape the term structure of commodity futures, in other words, whether a commodity tends to be in backwardation or contango.

KATHARINE PULVERMACHER: How would you sum up your key findings?

CAMPBELL HARVEY: Commodity futures are a promising investment, but they are being promoted as an attractive long-only product. Our research suggests that the case for long-only commodity futures investment is weak, but points out that certain portfolio strategies offer potentially attractive return to risk profiles. We argue that commodity futures are best considered as tactical portfolio overlay strategies. Our investment analysis suggests that using the information in the term structure of commodity prices results in strategies that appear to outperform long-only passive investment.

For previous commodity articles in this series, explaining concepts like backwardation and contango, go to www.gold.org/value

*The paper can be downloaded from <http://ssrn.com/abstract=693083>

'If the price of gold is constant, and there is a positive rate of interest, then an investor will be better off with a physical gold position rather than a gold futures contract'

KATHARINE PULVERMACHER: Roll yields are earned from commodities in backwardation, and the definition of normal backwardation is where today's futures price is below the future expected spot price. How normal is "normal backwardation"?

CAMPBELL HARVEY: Academic attempts to find evidence of normal backwardation typically show that a few commodity futures have positive excess returns, a few have negative returns and most have returns that are hard to distinguish from zero. Overall the evidence seems to be that normal backwardation is elusive. Although this is not surprising, given

rebalancing, return is a characteristic of a portfolio, not of individual commodity futures. Some people have called diversification the one free lunch available in finance. The usual focus of this free lunch is to say that diversification allows investors to reduce risk without reducing return, because when assets are combined in a portfolio its volatility is often lower than the volatility of the individual assets.

However in some cases this risk reduction can also have a noticeable impact on the compound portfolio return. Say a portfolio is created with a 50 per cent position in heating oil and a 50 per cent position in copper. For pur-



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