COMMODITIES

Best put to use in a long-term plan

BNP Paribas explains how commodities and structured products can improve a portfolio's risk/return ratio and thereby satisfy the need for diversification

The dramatic gains in commodity prices over the past few years have demonstrated the potential benefits of commodity exposure in a long-term asset allocation plan. A typical global commodity index has indeed returned a healthy 13 per cent annualised total return over the last five years and close to 7.5 per cent over the last 10 years.

Today, as investors are becoming increasingly familiar with the features of commodities as an asset class, this type of investment is gaining widespread acceptance. Over the past 18 months, there has been a significant growth in demand for commodity-linked investments from private banks, pension funds, asset management companies and retail networks.

Commodity investors may be either 'view-driven' or 'effect-driven'. View-driven investors would take views on future price movements in the underlying commodity in an attempt to take pure commodity exposure, whereas effect-driven investors would seek diversification in the commodity asset class as part of a diversified portfolio comprising a mix of asset classes.

Let's look at these two types of investment strategies and analyse how, from a strategic perspective, commodities can enhance the risk/return profile of an investment portfolio.

VIEW-DRIVEN INVESTORS

Commodities as a strong-performing asset class

Investments in commodities have yielded exceptionally high returns in the past three years, mostly due to the over-performance of energy and metal commodities. Years of under-investment in infrastructure along with a material increase in production costs have resulted in severe capacity constraints across commodity sectors and have consequently driven commodity future prices up.

Although the commodity cycle has recently shown signs of weakening demand, many analysts believe this is still a good time to take commodity exposure given that fundamentals continue to reflect strong performance and rising trends.

EFFECT-DRIVEN INVESTORS

Commodities as a diversifying asset class

To understand this diversifying issue, let's go back to classic portfolio theory as expressed by H.Markowitz back in 1952.

The efficient frontier is the collection of optimal, or efficient, portfolios, mapped according to their expected return and volatility. Until recently, only classical assets such as bonds, equities or the risk-free asset were used to perform efficient frontier analysis, a.k.a. selecting the best risk/return portfolios.

Commodities are nowadays more and more used to optimise a portfolio, i.e. to lower its risk or enhance its return. This optimisation is achieved through diversification, by investing in assets poorly correlated to each other. They thus do not "move the same way", meaning that the portfolio will be less risky.

Commodities are in fact a good source of diversification since they are traditionally negatively correlated with financial assets (bonds and equities).

Contrary to equity returns, which are driven by the expected ability of companies to generate profits in the future, the return on commodity futures is driven by the demand and supply of commodities in the next few months. As a result, commodities are firmly tied to the business cycle. In a peaking business cycle, higher demand for commodities might increase the returns on this asset class, while equities

Performances of commodities vs DJ Eurostoxx 50

Source: ?????

might under-perform in expectation of lower profits in the future. In addition, commodity futures perform better during periods of inflation, especially unexpected inflation when stock and bond returns generally disappoint, and they provide a good hedge against geopolitical instability and the dollar risk during periods of dollar weakness.

The historical risk premium on a diversified portfolio of commodity futures is comparable to the risk premium on stocks and greater than that on bonds. However, commodity futures are less risky than stocks, both in terms of volatility and downside risk.

Therefore, portfolios comprising commodities may successfully generate above-benchmark performances and provide more stable long-term returns.

HOW TO INVEST

Investors can obtain commodity exposure in different ways.

The first is to buy and store physical commodities, which can be cumbersome and offers little pricing transparency.

One can also invest in commodity equities, but this is a poor substitute for direct investment. Commodity futures offer the best liquidity and may be considered reference investment products, along with commodity indices, which track the performance of a basket of rolling commodity futures. Reference indices are both liquid and transparent.

For a long-term investment in a particular commodity future, there are two methods:

- buy the nearest expiring future (the "front month" future) and switch to the next one on approach of the expiry date – this is called "rolling futures"– commodity indices are calculated this way
- buy a long-term future directly (or for that matter a long term structured product linked to the commodity).

These two methods however do not have the same price. Similar to the forward yield curve for interest rates, there is a forward curve for commodities. Usually, long-term futures are cheaper than front month futures (this is known as backwardation), which allows attractive structured product pricing. Backwardation hence means that the spot price is above the forward price, which is the case when there is a shortage of inventories compared to demand.

Thanks to this backwardation, returns on commodity futures can be achieved in any market.

Commodities or structured products on commodities?

The return on the rolling future investment can indeed be analysed as the combination of three return streams.

The first one is the "spot effect" whereby the future tracks the commodity spot price.

There is then the return on the cash put up as collateral for the investment; investments in futures are usually fully collaterised, i.e. an amount equivalent to the notional investment has been set aside as collateral

Finally there is the "roll effect", which is the amount you will earn (or lose) each time you switch to the next future expiry, due to the difference in prices of different expiry futures. A backwardated forward curve will result in a positive roll yield, i.e. you will be making money each time you switch to the next expiry.

The return of an investment in commodity futures is difficult to assess. What has been done so far was merely based on historical returns, which is a poor method to consistently assess different types of commodity-linked investments.

On the other hand, structured products on commodities have a return that will simply be the greater of zero and of the spot return until maturity, multiplied by the gearing.

We developed an innovative method to assess the return of a direct investment in commodity futures, in order to compare it with the return of an investment in structured products on commodities.

We model jointly each component of the return of the investment in commodities, i.e. the spot, the cash return and the cumulated effect of the rolls with realistic parameters. We also add an element of randomness to the process, allowing not only the spot but also the interest rate and the roll to move in a constrained random fashion over time.

The expected spot returns are in the region of 2.5-5 per cent (which is not far from general inflation), but when added to cash return and roll effect, we end up with a realistic expected return for the GSCI Total Return index in the region of 8.5 per cent per year.

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