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Viewpoint

September 2013

Is the Commodity Supercycle Dead?

From the late 1990s until the 2008 financial crisis, most commodities experienced double-digit annual real (i.e., inflation-adjusted) price growth, a period known as the commodity "supercycle." The price of oil rose 1,062%, copper rose 487% and corn rose 240% as growing emerging market demand finally caught up with years of underinvestment in various commodity markets (source: Bloomberg, 31 December 1998 to 30 June 2008). But poor relative performance of commodities to equities year to date has led to some media reports that read like an obituary for the commodity markets. *The Economist* has even suggested that it is oil demand, rather than oil production, that has peaked and will decline, particularly now that shale has emerged as a viable source of supplies.

While we agree that commodity price appreciation won't likely mirror the supercycle, we do not believe this should necessarily imply a negative view on commodity returns going forward. Prior to the supercycle most commodities were at multi-decade lows in real price terms. Today, most markets are trading within one standard deviation of their marginal cost of production – the cost of adding one more unit of production growth – suggesting that prices are at reasonable levels from a long-term valuation perspective. In addition, the roll yield from investing in commodities is the highest it's been since 2005. Furthermore, we believe commodities continue to provide diversification versus stocks and bonds. We believe they are also one of the most potent ways to hedge against unexpected changes in inflation, and they tend to offer attractive return potential. Should there be an improvement in emerging market demand, or if investors warm back up to that market, we believe commodity returns could be quite strong.

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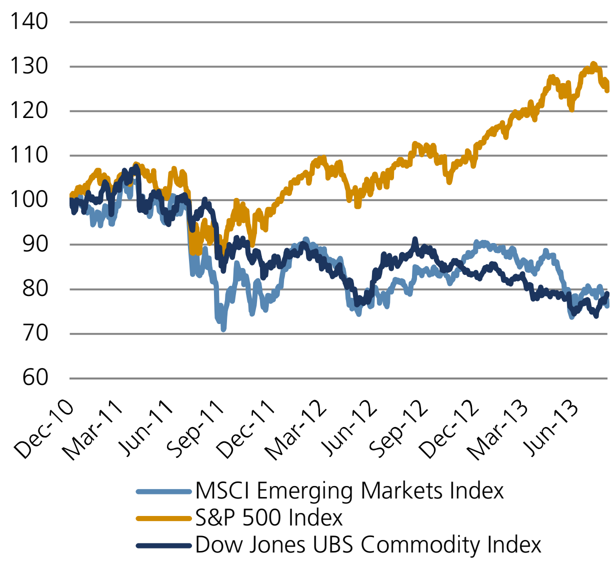
Slower emerging markets growth contributes to weak commodity performance

Commodity indexes have underperformed recently, particularly when compared with U.S. equities, since commodity prices are more dependent on emerging market growth due to its high resource intensity. The DJUBS Commodity Index (DJUBS CI), which is roughly equally weighted among metals, energy and agricultural, is down 9.25% through the end of July, significantly underperforming U.S. equities. Emerging market equities, as measured by the MSCI Emerging Markets index, are down 8.53%, very similar to the performance of the DJUBS CI (see Figure 1). Also note that China represents 40%–50% of global industrial metals demand, compared with just 12% of global oil demand, and year-to-date base metals prices are down 15% versus just 3% for oil (source: Bloomberg, 31 December 2012 to 31 July 2013).

We believe the deceleration in emerging market growth relative to the U.S. has also helped strengthen the U.S. dollar at a time when the prospect for reduced stimulus from the Federal Reserve was already a tailwind for the dollar. With commodities largely priced in dollars, a stronger dollar depresses those prices, which is particularly true for commodities with large production costs in non-dollar currencies.

If this is the end of the supercycle, investors may be asking, are commodities a sensible investment going forward? And if they are, then what weight should they have in a portfolio?

FIGURE 1: THE RETURN OF THE DJ UBS CI HAS CLOSELY TRACKED PERFORMANCE OF EMERGING MARKETS



Source: Bloomberg, PIMCO calculations. Data as of 27 August 2013.

What drives commodity returns?

Let's say a typical portfolio is dominated by equities and nominal bonds, which tend to respond poorly to unanticipated inflation. Adding commodities to such a portfolio may serve as a hedge during inflationary periods. While some recent studies have questioned the diversification that commodities can provide, we believe that these studies are overly focused on very short periods of time when inflation was stable. Amid stable inflation, commodity performance is typically driven primarily by changes in growth expectations, and in particular those of emerging markets. In such an environment, commodity performance will likely show a higher correlation with equities. The potential benefits of commodities become clearer, however, when inflation rises because the prices of commodities also tend to rise, while the impact on the present value of future corporate earnings is much less clear.

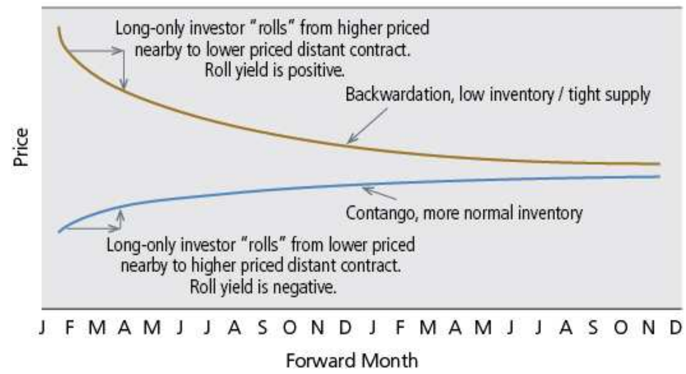
Even if commodities have diversification benefits, to understand how much to allocate to commodities in a portfolio requires some estimate of forward-looking returns. To do this, we need to understand the three components that make up commodity returns and determine some baseline for what investors could expect going forward. The return from investing in commodities via futures contracts is a function of

- The changes in price of the underlying commodity (spot return);
- The "roll yield" return from rolling from one futures contract to the next (for example, if the price of an oil futures contract is $110 for the front (prompt) month and $109 for the next (deferred) month, then the investor will realize a profit of $1 if there is no change in the spot price over the month); and
- The return of the underlying collateral that backs the futures contracts.

In the long run, commodity spot prices have historically tended to increase on average at roughly the rate of inflation, with commodities like oil and those found in the ground generally increasing at a slightly faster rate than inflation, and those that can be grown in the ground increasing at a slightly slower rate than inflation. We think it is reasonable for commodity investors to expect spot prices to continue to increase on average at roughly the rate of inflation over the secular horizon.

The second component, the roll yield return, was negative during the supercycle. Part of the reason for this was the market expected rising oil prices during this period, causing the futures curve to slope upward. Today shale output has helped improve roll yields in oil, the largest component of most commodity indexes, by anchoring future price expectations for the first time in a decade. We believe this anchoring effect has contributed to downward-sloping price curves, where the prompt prices are a premium to deferred prices to reflect near-term imbalances created by production outages (see Figure 2).

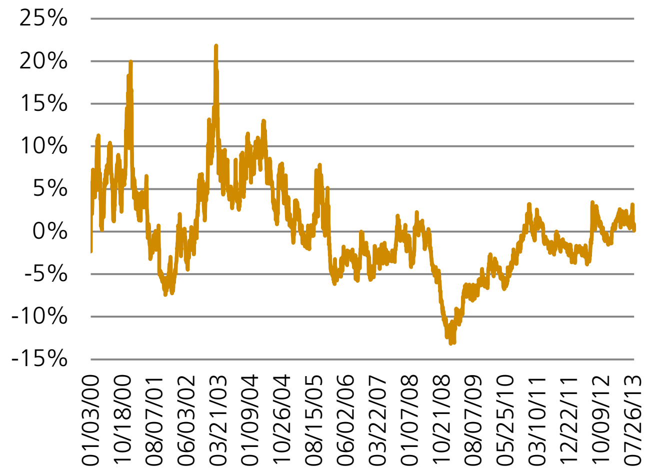
FIGURE 2: UNDERSTANDING ROLL YIELDS



For Illustrative Purposes Only
Source: PIMCO

As long as Saudi Arabia maintains the ability to manage imbalances in the market and shale extraction prospects remain good, we expect the oil market roll yield to look similar to that in the 1990s, when backwardation (when prompt futures contracts are priced higher than deferred contracts) was common as the back end of oil remained anchored. These improved roll yields in oil will likely be an important source of returns to commodity investors – and yet **the shift from negative to positive roll yield seems to have gone unnoticed** (see Figure 3). **Positive roll yields imply a commodity index investor is getting paid to purchase a diversifying asset that may also hedge against unexpected inflation.** In fact, annualizing current roll yields could lead to the best roll yield contribution to returns since 2005.

FIGURE 3: ROLL YIELDS HAVE TURNED POSITIVE



Dow Jones UBS Commodity Index

Source: Bloomberg, PIMCO calculations. Data as of 5 August 2013.

In summary, we see spot commodity prices in aggregate increasing 2%–2.5% per year, in line with the current market-expected inflation. There could be additional return potential if the roll yield remains persistently positive, which we think is reasonably likely.

Investors also need to add in the potential return from collateral – the third component – to get the total return of a commodity investment via futures. While some might use Treasury bills (T-bills) to back their commodity investments, commodities can be overlaid on top of almost any portion of an investor's fixed income portfolio, and we believe it will be important for investors to take advantage of this to help maximize future returns. Indeed, this may negate the notion of their being an "opportunity cost" to investing in commodities.

Commodities should remain attractive on a historical basis

Overall, while the supercycle may be dead, the outlook for commodity returns today seems broadly consistent with historical returns, and commodities remain an important tool for hedging inflation risk. Since 1970 – a period that includes the ending of the gold standard and severe inflationary shocks – commodities have added an average annual return of 3.59% (source: Bloomberg, PIMCO calculations) on top of the return on collateral. Investing in a commodity index, which includes the return from collateral as well, may result in returns in excess of inflation. Even with the end of the supercycle, it doesn't seem that today the future of commodity returns looks that much different than the past.

Biographies

Mr. Johnson is an executive vice president in the Newport Beach office and a portfolio manager focusing on commodities. He joined PIMCO in 2004 and previously managed the portfolio analyst group. Prior to joining PIMCO, he worked at NASA's Jet Propulsion Laboratory, developing Mars missions and new methods of autonomous navigation. In 2012 he co-authored "Intelligent Commodity Indexing," published by McGraw-Hill. He has nine years of investment experience and holds a master's degree in financial mathematics from the University of Chicago and an undergraduate degree from California Polytechnic State University.

Mr. Sharenow is an executive vice president in the Newport Beach office and a portfolio manager focusing on real assets. Prior to joining PIMCO in 2011, he was an energy trader at Hess Energy Trading, Goldman Sachs, and DE Shaw. Mr. Sharenow was previously senior energy economist at Goldman Sachs. He has 13 years of investment and financial services experience and holds bachelor's degrees in mathematical methods in the social sciences and in economics from Northwestern University.

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