INVESTMENT & PENSIONS EUROPE

Real Assets: Let's roll

October 2014 (Magazine) **By** **Martin Steward (URL=/martin-steward/2492.bio)**

Backwardation is back in commodity futures curves. Martin Steward asks, can investors at last expect to be paid for taking risk in the asset class, or is it a flash in the pan?

There wasn't much of a fanfare, but something remarkable happened in commodity futures markets as 2013 gave way to 2014. For the first time in nearly a decade, investors buying the front-month futures contract on the Bloomberg Commodity index (the old Dow Jones UBS (URL=/searchResults.aspx?searchCode=1329) Commodities index) were able, when it was time to renew their position, to buy the next contract for a cheaper price.

Until about mid-July in 2014 (when we switched back to a slight 'contango' again) those investors have enjoyed some income from 'backwardation'. You can see the change in figure 1, which shows the extent to which holding the one-month contract underperformed holding the three-month, each year since the turn of the century. Figure 2 shows the roll cost incurred each month by a holder of the Bloomberg index.

1. Outperformance of 3-month index over front-month has been fading

	DJUBS F0 - F3 spread yearly performance
2000	7.9%
2001	-7.2%
2002	-0.7%
2003	-3.0%
2004	-15.9%
2005	-14.1%
2006	-12.2%
2007	-7.9%
2008	-5.2%
2009	-3.6%
2010	-1.8%
2011	-3.9%
2012	0.2%
2013	-1.0%
2014 YTD	0.5%

Note: The table shows the calendar year performance from buying the Dow Jones UBS Commodity index and short-selling the Dow Jones UBS Commodity 3-Month Forward index
Source: Threadneedle Investments; Bloomberg

Theory tells us that commodity futures markets should tend towards backwardation because the scarcity and illiquidity of raw materials argues in favour of owning the physical commodity rather than a promise to deliver it at some point in the future – despite the costs of storage. Markets refer to this as the 'convenience yield'. When inventories are especially low, curves become more backwardated, and when they are well-stocked, curves enter contango to bring buyers of the physical commodity to market (they can then sell it forward at a profit that exceeds the costs of storage).

At a glance

• After years of contango, commodity futures markets became backwardated in 2014, promising passive investors a positive roll yield.
• Some argue that the shift comes as a result of investment bank regulation, others that it reflects long-term inflation expectations – both suggest a 'secular' trend for backwardation.
• But sceptics point to different curves doing different things to rule out the influence of market structure, and emphasise short-term supply-and-demand dynamics over long-term macroeconomic factors.
• While there is some evidence of long-dated futures exposure being unwound, the case for changing enhanced or active strategies back to passive appears weak.

The financial crisis was a double-whammy, as figure 2 suggests. Storing a commodity requires financing, and financing dried up: the vast majority had to dump inventory, at collapsing prices, into the hands of the minority of physical traders with credit lines. In addition, the sudden stop in global economic activity led to big commodity surpluses. But this marked the peak of contango. Since 2009 it has been on a smooth downward trend until breaking into backwardation this year.

This is potentially important for two reasons. Backwardation sometimes forecasts higher commodity prices – after all, storage theory tells us that it signals tight supply and demand. And for institutional investors it offers the promise of being paid – rather than having to pay – for taking risks in commodity markets. As the costs illustrated in figure 2 show, this stuff really matters.

2. Monthly annualised contract-roll impact for the Dow Jones UBS Commodity index

Source: Threadneedle Investments; Blooomberg

Withdrawal

Take Patrick Uelfeti's word for it. He is deputy CIO at Switzerland's Publica Pensionskasse, which started allocating to commodities in 2009, just as the costs of contango were peaking.

"The hypothesis when we started investing was not about spot returns but rather generating income from roll returns," he says. "The assumption was that we should get a premium as a provider of capital and liquidity, as well as protection against geopolitical risks."

Mandating two managers, Publica holds precious metals mostly as a tail-risk hedge, and therefore puts up with the contango that is usual on those curves; it excludes agricultural commodities for reasons of reputational risk; and holds base metals and energy for the roll yield – excluding natural gas, for example, because of the negative yield associated with that curve.

"In industrial metals we think we should earn a positive roll return but our belief is that we should get the most pronounced roll return from energy – and indeed I think it has been in energy that we have seen the best results and the return to backwardation just recently," says Uelfeti.

But for much of the five years it has held these positions, the roll yield has been negative – an experience painful enough for the fund to commission Morgan Stanley to look into the history of contango in commodity futures markets.

"From 2003 to 2013 only unleaded gasoline was in backwardation at least 50% of the time," Uelfeti recalls. "It's not clear whether what we see now is a longer-term shift against that."

There are some in the commodities asset management arena prepared to say that this year's shift into backwardation is indeed the beginning of a long-term trend.

Nicolas Robin, a commodities fund manager at Threadneedle Investments, puts the switch down to the US Dodd-Frank Act and Basel III. Shutting down trading desks and cutting back on leverage has led to a withdrawal of investment banks from the back end of commodity futures curves. Prices now get pushed down further when producers come in to hedge themselves by selling contracts.

"Because this change is coming about because of regulation, we think it is permanent," Robin says. "It is more difficult for banks to warehouse risk for their clients, and some desks have closed completely because the business had simply become unprofitable."

David Hemming, a portfolio manager in the commodities team at Hermes Investment Management, agrees that banking regulation is an "important structural shift". "Producers now have to go to the screen more, and that will weigh on prices – we have seen that in the back end of the WTI, Brent and natural gas curves," he says.

Both Robin and Hemmings suggest that hedging activity may have changed, too. Robin says that some of the 'supercontango' of the mid-2000s was down to producers selling less of their output forward, allowing rising spot prices to feed through into bigger profits for shareholders. With less talk of a China-driven 'supercycle' and range-bound prices, producers are starting to hedge again – but with fewer speculative traders to sell to. Hemmings also points to the proliferation of 'mom-and-pop' drillers in the US energy industry: far more reliant on debt financing, these players need stable revenues and often face covenants that explicitly require a certain level of hedging.

These messages resonate with Uelfeti at Publica. "We do think the presence of speculators affects the supply-and-demand dynamics on the futures curves and that the entrance of index investors eroded some of the premium that one would expect to receive from providing liquidity," he says. "So it is an interesting idea that we might be seeing fewer financial speculators on the curves and therefore more backwardation."

Unfortunately, these views are not universally held. The theory of storage that explains the shape of curves would suggest that net-long hedging should result from a contango, not a backwardation. In any case, Robert Greer, product manager for real returns at PIMCO (URL=/searchResults.aspx?searchCode=1900) , overseeing the firm's $25bn global commodities business, warns against thinking of producers as an undifferentiated group.

"There has been more hedging activity in oil and gas, where the industry has been affected by the development of shale in the US," he concedes, "but not so much for farmers, who remain mostly affected by the weather, overall crop price levels and crop-support programmes, as they always were."

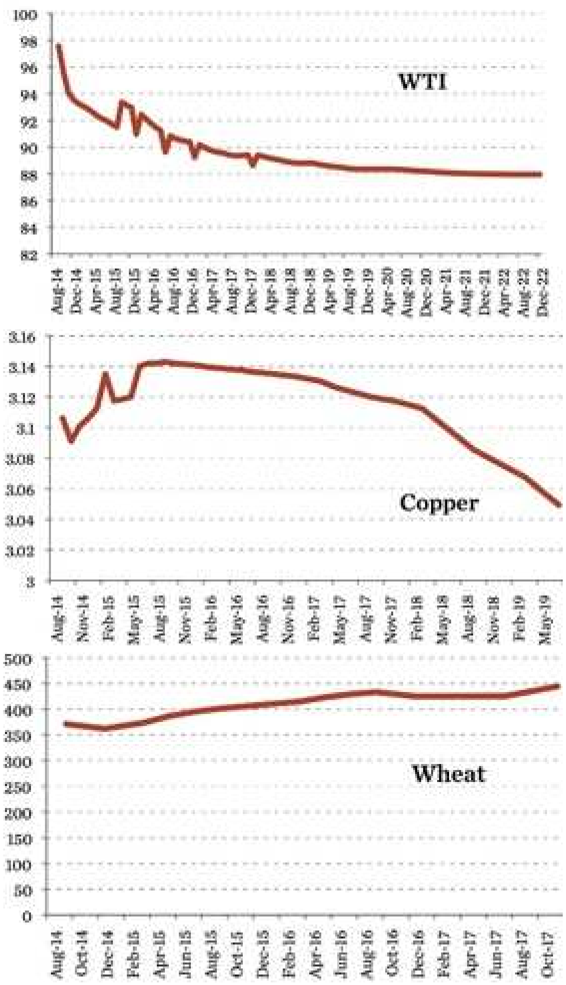
And on the subject of the withdrawal of speculative flows from the back end of curves, the direction of causality is very complex. Which came first, banks withdrawing from the back end of curves and subduing activity, or subdued activity reducing the business case for banks?

“It’s very hard to quantify the impact of the changes in bank regulation on commodities curves,” says Robert Balan, a senior market strategist at Diapason Commodities Management (URL=/searchResults.aspx?searchCode=1699) . “I don’t think it is of great significance.”

George Cheveley, a commodities portfolio manager at Investec Asset Management (URL=/searchResults.aspx?searchCode=1786) , adds that the futures-curve dynamics that would result from less speculation would differ depending on the commodity in question. For copper, few consumers take a long enough view for producers to find natural physical buyers of their hedges, and that has always pushed them into the arms of banks and hedge funds. But oil and aluminium are two-way markets. “Car companies and other consumers have always been prepared to buy forward,” he says.

This raises another objection to the idea that index-level backwardation is the result of some big, long -term market-structure story: not all curves are in backwardation – check out WTI, copper and wheat in figure 3.

3. Futures curves for WTI crude oil, copper and wheat in August 2014



The latter, following the collapse in grain prices since the summer, is now completely in contango. Agricultural commodities naturally tend towards contango because of high storage costs and perishability – but crop failures meant they were, in fact, the source of much of the roll yield available since 2009. This shows how big the dispersion can be between the shape of different curves at any one time, as well as the dominance of short-term supply-and-demand factors. The flat curve in copper, even after it moved from contango as LME stocks were drawn down over recent months, is very different from the backwardated curves in zinc and nickel. Zinc seems most sensitive to the idiosyncrasies of Indonesia's export ban. Even WTI and Brent look quite different, with Brent being swung around on concerns about Iraq and Syria.

"The story of the recent positive roll yield has been a story of grains, to some extent, as well as energy – and that does not seem like a structural story," as Hemming concedes.

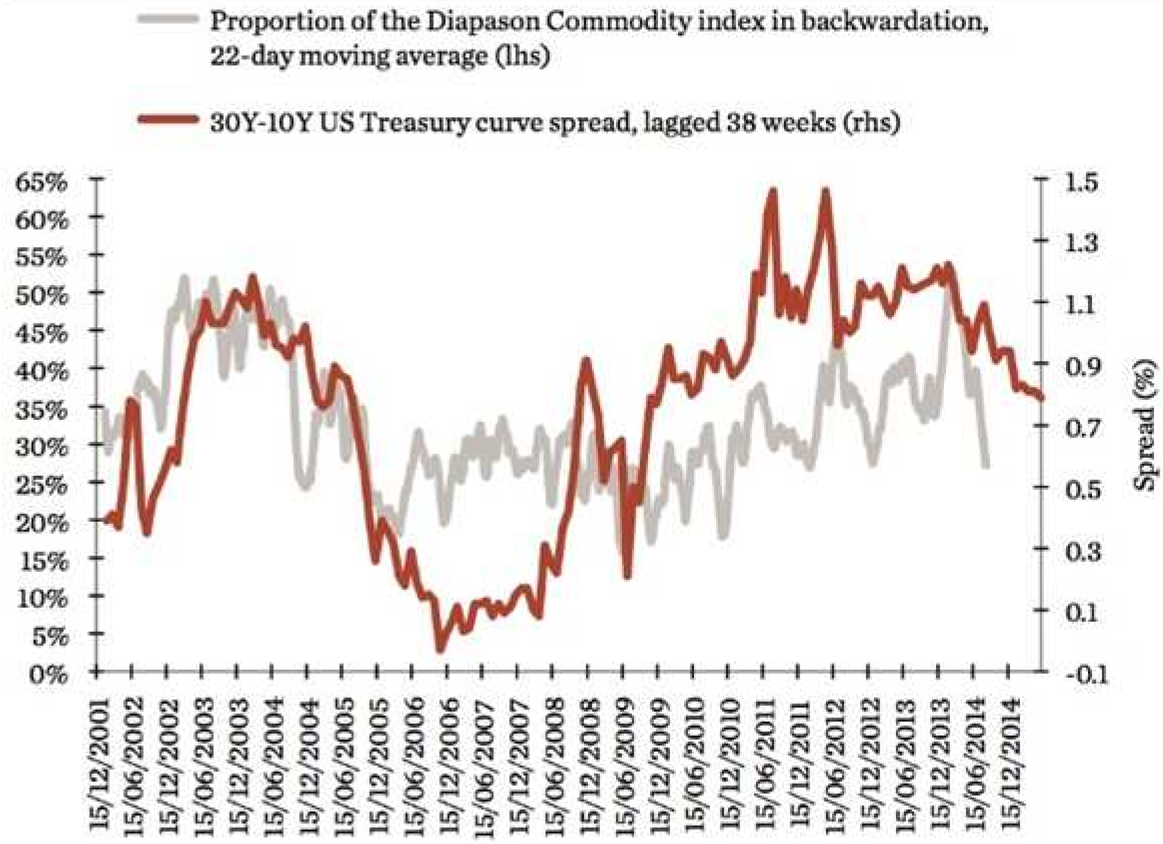
"If this were about banks and hedge funds pulling out of the long end you'd expect to see the same phenomenon across all futures curves," says Cheveley.

Greer agrees. "Backwardation and contango – they come, they go, and the factors are different in different markets," he says. "In 2008 we were seeing the opposite view in the press – 'Contango is here to stay'. People were saying that commodity indexers had pushed everything into permanent contango – and I think what we have seen since then has proved the fallacy of that statement. Six weeks ago we had backwardation, but now the curve has returned to a slight contango again."

Nonetheless, Balan at Diapason floats the idea that, ultimately, commodity futures curves are moved by common forces, and it is therefore possible to identify cycles of contango and backwardation and explain them in macro terms. He reasons that businesses buy and investors allocate to commodities based on their expectations for economic growth and inflation, pointing to work he has done uncovering correlations between the extent of backwardation in futures markets and the long end of Treasury yield curves.

The hypothesis is that, since backwardation reflects the rate of depletion of inventory, its extent should forecast industrial trends. Diapason claims that trends in backwardation lead the global PMI by two months. By the same token, actual and expected inflation should influence the formation of commodity futures curves. Diapason finds that backwardation becomes prevalent when short real rates decline persistently, and at longer horizons the spread between the 10 and 30-year US Treasury yields can forecast the extent of backwardation – the proportion of the complex that is backwardated (figure 4) and the steepness of that backwardation.

4. Do long-term inflation expectations lead commodity futures curves?



Source: Diapason Commodities Management; Thomson Reuters Datasteam

Balan thinks that these forces are probably always more important for the shape of curves than the dynamics among producers, consumers and speculators. But he also thinks that the “special case” of our post-crisis world of QE liquidity makes macroeconomic considerations more important even than convenience yield in explaining curve activity.

“If we combine the heightened inflation expectations with the natural growth that is coming from the liquidity introduced by central banks, I believe that we have a secular trend upwards in backwardation – defined as 10-20 years – just as we saw in the 1970s,” he concludes.

So here is another case for secular backwardation – but as Balan himself warns: “This is not going to be a straight line.” The convenience yield and inflation expectations create mini-cycles between contango and backwardation within the secular cycle, which is how he makes the case for long-term backwardation even as inflation expectations remain muted: he points to mid-2015 as the point at which the cycle will switch again towards higher inflation expectations, US dollar weakness, higher commodity prices – and broader, steeper backwardation.

Many accept that there is a clear link between commodity curves and short-term real rates – energy and food account for a lot of the volatility of consumer price indices. But demonstrating a correlation with long-term inflation expectations, and describing that as a complex-wide effect, is a step further.

“The only over-riding economic factor that could affect almost all commodity futures would be a significant change in global aggregate demand – something like a surprise slowdown from China or Europe, for example,” argues Greer at PIMCO. “Generally, what happens in commodity indices is much more the sum of individual markets than the result of a single driving force.”

Rationale

Ultimately, investors need to know whether the current shift into backwardation is genuinely long-term and broad-based, and whether that suggests a reversal of all the active strategies put in place to limit negative roll yield.

“Active strategies that came out because of the contango situation are now facing some headwinds,” as Uelfeti puts it. “It is possible that we would also reconsider the curves we invest in as the market trends change.”

There has certainly been a jump in open interest in some front-month contracts over the past year – but this does not necessarily mean investors are stampeding to front-month passive exposures. Take the WTI curve: it has been in backwardation through 2014, but that has been most pronounced in the first three months of the curve. Anticipated new production is already weakening the December contract and flattening the curve for about a year beyond – so there is good reason to expect the first to third-month roll yield to go negative as we move into 2015, and therefore to move exposure back out to the 12th contract. That’s before we consider the outright contango in many other curves.

“The extra cost of doing something that takes roll yield into account has come down a lot and they are pretty effective,” says Hemming. “The best time to be purely passive was the first seven months of this year, until soybeans came off in July. Now there’s a rationale to do both, but I see the situation moving from passive and enhanced-passive being the best thing to do now, to a situation where curve or momentum-based strategies make more sense as some of the current backwardation continues to come out of the markets.”

Anyone who went passive in June expecting a smooth glide into ‘secular backwardation’ will be asking serious questions by now. And even if index-level roll yield continues to trend positively over the coming years, there will always be some curves sucking a negative yield out of you. The switch to index-level backwardation will certainly make life easier for all commodities investors, but anyone with a focus on generating return – rather than simply diversification or tail-risk protection – should probably stay active.