Food Speculation

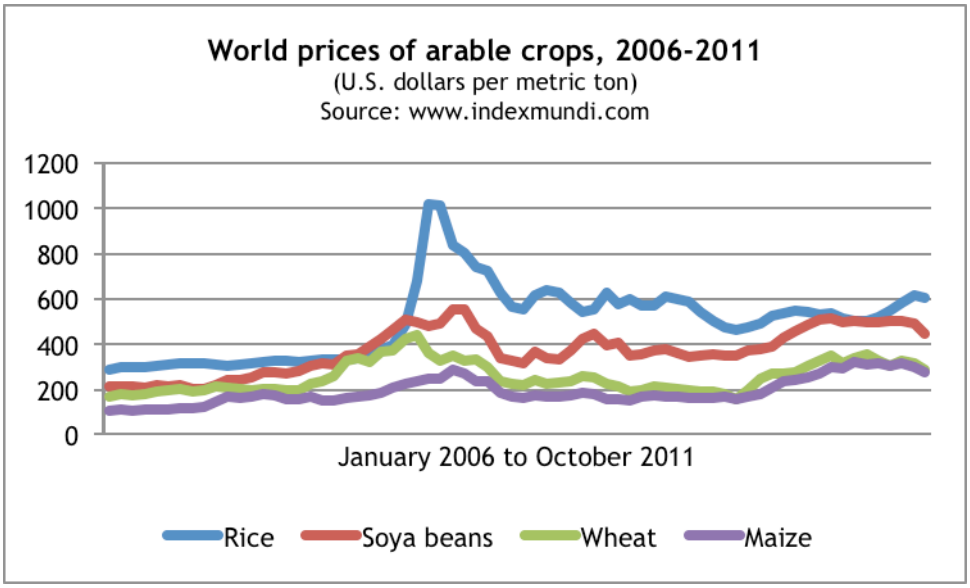
by Thomas Lines

The increased agricultural prices of the last five years are widely considered to be due to a secular shortage of basic foods, which will only become more serious in coming decades. But a close look at the details reveals other causes. Much of the increase – and growing volatility – of prices is caused by the trend to invest in agricultural commodities as *financial* assets.

However, cereal prices over the last generation have barely kept pace with the rising prices of manufactured goods, which does not suggest there was any long-term scarcity. Both are left behind by the real increases in price of key inputs like oil and fertilisers. That change in relative prices has dramatic implications for modern agricultural systems as well as food supplies in poor countries.

In the last five years the economics of agriculture have been turned inside-out. Crop prices have risen sharply and become more volatile, and yet many farmers still struggle to make a profit as their inputs are more costly too. The link between prices and the agricultural economy is less clear than it was.

These are elements of a wider agricultural crisis. In country after country – Kenya, Nigeria, China, France, Britain – one hears of an ageing agricultural population as young rural people leave the family farm to earn more than if they stayed.



What explains these ups and downs and how are they related to crop production in the fields?

Among the main cereal crops there were two big price surges, in 2007-08 and from July 2010 until the first half of 2011.

The steepness of the second 'spike' would make one think the underlying situation was worse than in the first – but the agricultural statistics do not back that up.

Those price changes occurred at a record pace. In July 2010 Chicago wheat futures prices increased by 42 per cent, the biggest monthly percentage gain in records that go back to 1959. Maize prices during that rally rose above their 2008 peaks.

Then in September 2011 prices in Chicago fell by 23 per cent for both wheat and maize – the largest monthly fall in wheat since 1974 and in maize since 1959.

However, world wheat supply had recorded a 27.5 million ton surplus in 2009-10, according to the U.N. Food & Agriculture Organisation. Start-of-year wheat stocks in the crop years from 2008 to 2011 were the three highest of the last ten years. In 2006-07 and 2007-08 they were the two lowest.

Rice prices were barely affected on this occasion. Why then did so many other arable crop prices rise and fall so suddenly for the second time?

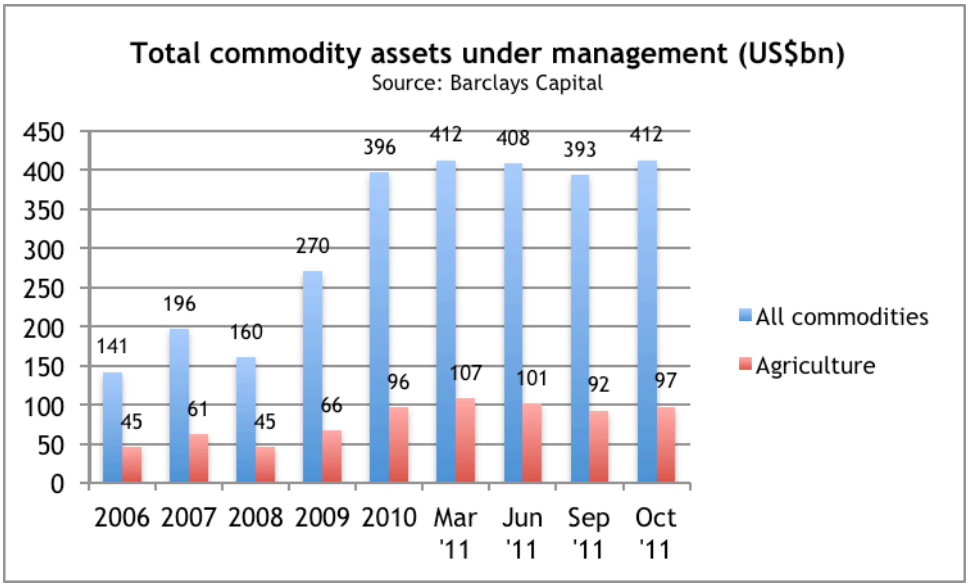
The fact is that the price spike of 2010-11 was prompted more by financial trends, matching the recent experience in commodity markets generally. Financial investment in rice is less easy because there is not a major futures contract in rice.

The exact causes of the first round of price increases are still disputed, but they followed many years of underinvestment in cereals and a fall in stocks to historically low levels. Then a severe drought in Australia in 2007 precipitated a physical shortage on the world wheat market.

However, even then the price surges were to a large degree driven by financial investment, just like many metal prices and most of all, oil.

Several years ago some astute bankers noticed that a big rally in commodity prices was overdue. The last price boom had occurred in the 1970s - and the last before that another 30 years previously. On the other hand, the basic investment strategy of putting money in the stock market had stopped working when share prices failed to recover strongly after the 'dot.com' boom ended in 2000.

So leading investment banks including Deutsche Bank, Goldman Sachs and Barclays decided to create new instruments that would make it easier for investors to buy commodities. One of these was the index fund, the value of which tracks the prices of a group of 'assets' such as commodities. Later they came to be bought and sold on stock exchanges like company shares, under the name of exchange-traded funds.



The results can be seen in the rapidly increasing volume of financial money ('assets under management' or AUM) put into commodity markets. From US$90 billion at

the end of 2005, commodities AUM rose by 358 per cent to more than $400 billion in 2011. Much of this money was withdrawn during the financial crisis in late 2008, but it has more than doubled again since then. Since 2009 speculation and investment in commodities have received an even bigger boost from the bursts of expansionary U.S. monetary policy known as 'quantitative easing', which created enormous liquidity for the banks to dispose of.

By 2010, more was invested in agricultural commodities alone than in all commodities together at the end of 2005. In 2000, the total for all commodities was just $10 billion.

But there is a big risk that prices will crash when the financial money is taken out. That could happen very quickly as soon as confidence in rising prices is lost, since commodity investments provide no regular income. The only possible gain from them is a capital gain on their eventual sale. That indeed was the reason for the sharp price falls in September 2011, according to market reports at the time.

That also created a marketing problem initially for the sellers of these new investment products: since commodity ownership provides no regular income for purchasers, unlike shares and bonds, an investment gain can only come from price increases. In volatile, cyclical markets like those for agricultural crops, that is rarely assured.

The bankers found two arguments which proved persuasive for many investors: that commodity price cycles do not coincide with financial cycles, and so they offer a good way to diversify risk; and that, conveniently, the developing price rally would amount to a 'commodities supercycle' with prices rising for at least 10 years – much longer than they had done in the big booms of the 1940s and the 1970s.

All of this started after banks themselves became major players on U.S. futures markets, following two big changes in the law. In 1999 the repeal of the Glass-Steagall Act of 1933 removed a statutory division between commercial banks and investment banks, giving the latter access to retail customer deposits.

A year later, regulatory changes under the Commodity Futures Modernization Act permitted banks for the first time to join commodity futures exchanges without regulatory limits, as ordinary trading members. This depended on their growing activity as dealers in over-the-counter commodity swaps, a kind of financial derivative used for hedging as well as speculation.

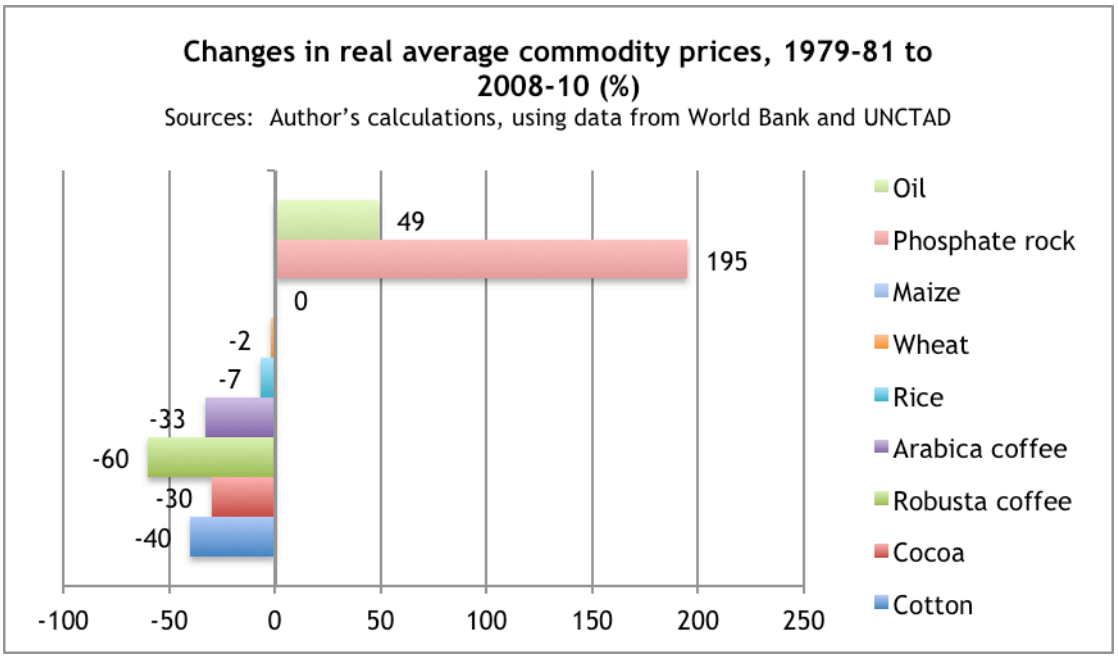
The large volumes of investment and speculation in commodities have consequences for the way the markets behave and the prices that producers and consumers encounter in their own businesses. Price formation became detached from the fundamentals of supply and demand as financial considerations took precedence.

Since commodity prices turned upwards in 2004, they have become *more* closely correlated with those on financial markets. Prices cease to respond even as imperfectly as in the past to signals from agricultural supply and demand, such as droughts, floods and good or bad harvests.

The financialisation of agricultural markets has had two further – but contradictory - effects. Banks, hedge funds and other short-term speculators make money from price movements and move into and out of particular markets quickly. This leads to even greater volatility in prices. However, most index funds and exchange-traded funds take only 'long' (purchase) positions and so add mainly to *upward* price pressure.

There is also another story, which indicates the real factors behind the long-term price changes that have occurred since the 1970s commodities boom. These strongly support a case that the world is reaching a 'peak' in the availability of oil, but they do not demonstrate a comparable peak in food supplies – contrary to much received wisdom.

Chart 3 shows my calculation of the changes in average prices of certain commodities between 1979-81 and 2008-10. This is after they were discounted against inflation in prices of manufactured goods.



It can be seen that maize, wheat and rice have barely if at all kept pace with the prices of manufactures. But oil prices have risen by one-half in comparison, and those of phosphates have nearly tripled. Prices of other fertilisers show increases of a similar magnitude.

Anywhere in the world these relative price changes make it difficult for farmers to benefit much from crop price increases, as long as they rely on the high use of oil, mineral and chemical inputs for production.

From the point of view of developing countries, they also show the danger of relying too much on export crops like coffee and cotton rather than food production, in the expectation of importing sufficient staple foods with the proceeds. World price increases for tropical export crops have fallen a long way short of those of manufactures as well as cereal crops.