

Pharmaceutical Management Agency (PHARMAC), Wellington 6143, New Zealand (SM, JE, SC); Department of Medicine, University of Otago Wellington School of Medicine and Health Sciences, Wellington, New Zealand (CB); Department of Medical Oncology, Regional Cancer and Blood Service, Auckland District Health Board, Auckland, New Zealand (GL); and Section of Epidemiology and Biostatistics, School of Population Health, University of Auckland, Auckland, New Zealand (SW)

scott.metcalfe@pharmac.govt.nz

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Food commodity derivatives: a new cause of malnutrition?

Poverty causes malnutrition, but malnutrition also contributes to poverty through increased morbidity, impaired development in children, and reduced capacity for work and productivity in adults. In rich countries food is a relatively small part of household consumption (10–15%). But in poor countries many households (especially those of wage labourers and landless people) use a large share of their income (40% or more¹) to buy food, so food price rises adversely affect purchasing power by reducing real income. Staples account for most expenditure on food for the poorest people, so increases in price might

reduce the amount and quality of food consumed, thus increasing the risk of malnutrition and its consequences.

In recent months, prices of rice, wheat, corn, palm oil, and other staples have increased dramatically, leading to much debate about the end of cheap food.² Most analyses focus on changes in demand and supply to explain increased food prices. With rapid economic growth, demand for meat and grains (and grain-fed animals) has increased in China and India. Rising demand for food faces supply constraints due to bad weather (a severe drought in Australia, for

example)³ and diversion of crops for biofuel. In 2008, about 30% of US maize will go into ethanol production rather than food. The high cost of oil (at over US\$110 per barrel) is increasing investment in ethanol production, and there is now a strong link between fuel and food prices.

However, supply and demand factors by themselves cannot account for the dramatic peaks in food prices (rice has trebled in the past year). There is compelling evidence that the recently expanded market in food-commodity derivatives has led to large increases in speculative investment, pushing global food prices far higher than predicted by demand-supply effects. Derivatives are shadow financial instruments that include forwards, futures, options, and swaps which may be used as insurance (hedging) or for speculation. Speculative purchasing of derivatives can create inflationary pressure, causing particular prices to increase above their real value, by artificially increasing demand. Sometimes, price rises due to speculation cause further speculative purchasing in the hope that prices will continue to rise. A positive feedback loop is created in which prices rise far above the underlying value of the commodity, generating an economic bubble. The price of the goods then reaches absurd levels, the bubble bursts, and prices crash.

What is the evidence that food prices reflect a speculative bubble? First, investments in food derivatives have increased greatly.⁴ The website of the Chicago Board of Trade, one of the largest world-commodities markets, encourages speculators openly to “trade to hedge or speculate based on expectations of directional price or spread movement in rough rice”.⁵ Even investment bankers are suspicious. In their opinion, we are in the middle (or just at the beginning) of a speculation bubble in the commodities markets. Jim O’Neill, chief economist at Goldman Sachs, is reported as saying that the rising demand from emerging countries explained some, but not all, of the price surges: “I see so much focus on food, and it seems to be so trendy in the investment world. The markets seem to me to have a bubble-like quality.”⁶ George Soros is reported to have said that: “You have a generalized commodity bubble due to commodities having become an asset class that institutions use to an increasing extent. On top of that you have specific factors that create the relative shortage of oil and, now, also food.”⁷

What is the effect of commodities futures-markets on commodity prices? Jian and colleagues⁸ examined the lead-lag relation between futures-trading activities and cash-price volatility for major agricultural commodities. They showed that increases in futures-trading volume drove cash-price volatility up. Sahi⁹ studied the impact of futures contracts on the volatility of prices of commodities in India: unexpected increases in futures activity (in terms of volumes and open interest) caused increases in cash-price volatility in all commodities listed. Sahi and Raizada¹⁰ also found that the higher volumes in futures markets had significant causal effects on inflation. Jee-hoon¹¹ found that speculation and a weak dollar were responsible for 57% of the rise in food prices. Lower US interest rates weakened the dollar and created a decline in the real purchasing power of countries that export raw materials. Exporters therefore raised prices and, as expectations of inflation coincided with the weakening dollar, speculative money flowed from financial markets into futures markets for raw materials.

This analysis raises two issues. First, if speculation is a major cause rather than supply/demand factors,

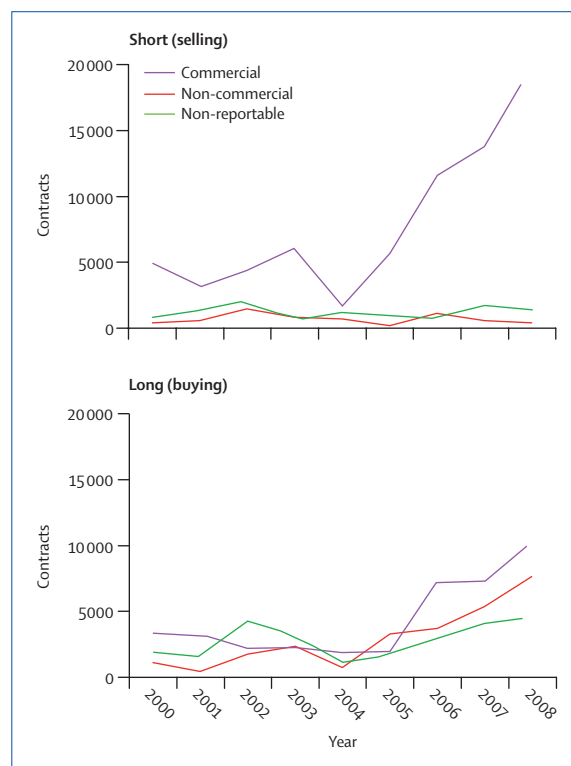


Figure: Trends in rice futures (2000-08)⁵

prices should fall significantly over the next few months. Sean Rickard, from the Cranfield School of Management, is reported as predicting a 40% drop in wheat prices in 2009.⁶ But second, the association of speculative investment with large rises in global food prices confronts policy makers with a huge new problem. High food prices increase hunger and malnutrition and severely set back efforts to achieve the Millennium Development Goals. They also indirectly lead to potentially damaging monetary policies. To reduce inflation, middle-income and low-income countries may increase interest rates, leading to an increase in inward flows of capital that might have serious consequences for economic stability and growth.

What can be done to reduce speculation in food derivatives? Generally, markets do not regulate the relative proportion of trading volumes used by commercials (producers and distributors) and non-commercials (large and small investors). Commercials tend to invest for both insurance and speculative reasons, whereas big investors invest mostly for speculation. A substantial proportion of the recent increase in the long position (buying of food derivatives) has come from non-commercial speculative investors (figure).

Two types of regulation are possible.¹² Better reporting and registration requirements will improve transparency and thus pricing efficiency in the markets, and enable governments and market-surveillance authorities to better detect and prevent fraud and manipulation. A second way is to increase the minimum level of the initial margin's mark-up (currently 135% for speculators in the Chicago market) that the holder of a position in futures contracts has to deposit to cover the credit risk of the counterparty.

Certainly, free markets often improve food production. Nonetheless, it seems to us an infringement of human rights and an offence against humanity that large investors should speculate on food price

rises knowing that families in the poorest countries will suffer hunger, malnutrition, and death. We note that, within the past few days, the Indian Government has stated its intention to ban futures trading in agricultural commodities.¹³ The G8 should also act quickly to regulate global trading in food-commodities derivatives more effectively.

Noemi Pace, Andrew Seal, Anthony Costello

UCL Centre for International Health and Development, Institute of Child Health, London WC1N 1EH, UK
n.pace@ich.ucl.ac.uk

We declare that we have no conflict of interest.

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