Food prices are a matter of life and death to many in the developing world. Financial markets that should be helping food growers and processors to manage their risk and set prices have become a potential threat to global food security. Deregulated and secretive agricultural commodity derivatives markets have attracted huge sums of speculative money, and there is growing evidence that they deliver distorted and unpredictable food prices. Financial speculation can play an important role to help food producers and end users manage risks, but in light of the harm that excessive speculation may cause to millions, action is required now to address the problem. This briefing explains what has gone wrong with financial markets and what the United States, the European Union and other G20 members should do to fix them.

At the same time, agricultural markets have become increasingly unpredictable. High and volatile food prices have caused two global food price crises in three years. Both crises had dramatic consequences in many poor countries: increased hunger, conflict and instability. The 2008 spike in food prices pushed 100 million people into poverty, and by 2009 the number of people hungry passed one billion. The World Bank estimates that 44 million more people fell below the poverty line in the last half of 2010 as prices climbed back to levels close to the 2008 peak. At the same time, agricultural markets have become increasingly unpredictable. High and volatile food prices have caused two global food price crises in three years. Both crises had dramatic consequences in many poor countries: increased hunger, conflict and instability. The 2008 spike in food prices pushed 100 million people into poverty, and by 2009 the number of people hungry passed one billion. The World Bank estimates that 44 million more people fell below the poverty line in the last half of 2010 as prices climbed back to levels close to the 2008 peak.

"The modern trader is playing the most sophisticated, dynamic, immersive game in the world. … The difference here being, of course, that it’s all real. Those flickering prices the trader attends to are not just big, but bloody, too."

Financialization of agricultural derivatives means that they are no longer working, as initially intended, to help food producers, processors and end users deal with the vagaries of physical markets. Even worse, there is an emerging case for the existence of a link between increased speculation and higher volatility and, in some cases, higher prices in physical markets in food. The precise impact of speculation on food prices today remains disputed and cannot currently be proven, not least because of the lack of transparency of financial markets. However, this should not preclude action on the basis of legitimate and well-founded concerns. The response to food price volatility will need to be comprehensive, and must include actions ranging from tackling climate change and extreme weather events, to removing government policies diverting food into (bio)fuel, to regulating the ability of large food producing companies to slap on export bans when prices go up. And because food price volatility can be a matter of life and death, a precautionary approach must be taken to speculating on agricultural commodities. Governments must act, domestically and together through multilateral mechanisms, to prevent harm by curbing excessive speculation through greater transparency and regulation.

New rules required: will the US, EU and G20 deliver?

New rules are needed to deal with the new reality of financialized markets in agricultural derivatives to allow them to work for their most important stakeholders: food producers and consumers. The battle between those in favour of effective regulation and those with a vested interest in the status quo – including the powerful exchanges, investment banks and food trading companies – is raging in the United States and the European Union. Meanwhile, France is attempting to forge a consensus on the need to regulate at G20 level.

When President Obama signed the Dodd–Frank Wall Street Reform and Consumer Protection Act into law in 2010, the United States took the lead in turning back deregulation and reforming financial markets. The Dodd–Frank Act directs the regulatory agency in charge of commodity derivatives markets, the Commodity Futures Trade Commission (CFTC), to issue regulations that cap the size of bets that can be made in the “futures” market and the number of futures contracts a market player may hold (“position limits”) in order to diminish, eliminate or prevent excessive speculation “as appropriate.” Disputes over the interpretation of this mandate – with strong opposition from banks, hedge funds and traders – is creating uncertainty about its full implementation. The CFTC is tasked with resolving these disputes; their ruling will determine to what extent the Act will help to effectively regulate excessive speculation.

The EU has lagged behind in its efforts to regulate commodity derivatives markets. The fate of the European Markets Infrastructure Regulation (EMIR), which aims to increase transparency by moving over-the-counter (OTC) derivatives onto exchanges, remains to be decided by the European Parliament and the Council. A reform of the legislation regulating exchange-traded derivatives, the Markets in Financial Instruments Directive (MiFID), has been announced by the European Commission and is likely to include position limits. However, European governments are divided over the merits of such measures and could block them.

French president Sarkozy has made regulation of commodity speculation one of the top priorities of the 2011 French presidency of the G20. Agriculture ministers have called for more transparency and better regulation, but it remains to be seen if a consensus will emerge at the level of finance ministers and heads of state. Failure to agree on the need for new rules would put into question the central role the G20 claims to play in international economic cooperation.

WHAT FINANCIAL MARKETS SHOULD DELIVER TO FOOD MARKETS

Markets in agricultural derivatives were designed to make food markets work better. When they do, people all along the food chain, from farmers to food processors to consumers, should benefit.

Hedging risk: making prices predictable and income reliable

Agricultural markets are inherently risky because they depend on factors as capricious as sunshine and rainfall. They are very inflexible or inelastic: price spikes are not effectively transmitted into less demand or higher production. Even if prices increase suddenly, people often continue to eat the same foods: appropriate substitutes are not readily available. And producers need at least a season to plant and harvest more food. This can expose producers and buyers to significant price risk. One way for them to offset or “hedge” this risk is to enter into a market where others will guarantee their prices at a defined point in the future. These others are speculators who take a gamble that prices on the market will be higher than the price they have guaranteed – they may win or they may lose but they are willing and able to take that risk in order to make a profit. Buyers and sellers are willing to pay a premium to hedge their risk, making their costs or their income more predictable. Medium- and large-scale players on the food markets, including developing
country governments and humanitarian agencies, sometimes use hedging instruments because reliable prices are crucial to their ability to plan and to invest.\textsuperscript{13} Hedging also helps to prevent the cost of risk-taking from filtering down to the price consumers pay for the food they eat. Hedging instruments, if properly designed and adapted, may work for some small- and medium-scale producers. However, the most vulnerable producers will not be able to use financial markets to hedge production risk – they will need other, better adapted risk-management tools.

**Price discovery: setting the right price**

Those buying and selling agricultural commodities often refer to prices on derivatives markets. For example, the grain futures prices quoted by the Chicago Mercantile Exchange, the world’s largest exchange of agricultural commodity derivatives, tend to be incorporated directly into grain trade contracts all over the world. The reason for this is that food market players often lack information on production, stocks, demand and other fundamentals. Well-functioning financial markets help to overcome this. In theory, each specifier comes to market with a little bit of information and acts on it by buying and selling. These multiple transactions bring the price close to the intersection of supply and demand. In this way, financial markets help ‘price discovery’ in agricultural markets. In other words they play a role in setting the right price for food.\textsuperscript{14}

**Liquidity: oiling the wheels of the market**

Cash flow problems are a major issue for participants in agricultural markets. Agricultural commodities are sold in bulk, rather than in small quantities. Prices can spike before the new harvest reaches the market and plummet when a bumper harvest is sold. But market participants can facilitate transactions out of season by buying or selling derivatives linked to future delivery of physical food. Speculators who monitor market dynamics and buy or sell financial instruments in between harvests bring ‘liquidity’ to financial and physical agricultural markets. This means that they make money move around and allow assets to be bought and sold throughout the year without causing too big a movement in the price and with minimum loss of value.\textsuperscript{15}

**FINANCIAL MARKETS HAVE TURNED AGAINST FOOD MARKETS**

During the 2008 food price crisis, hedging became too expensive or simply impossible for many farmers and intermediaries in the USA.\textsuperscript{17} Less research has been done in other markets, but the same dynamic applies, particularly for intermediaries in third countries using US agricultural derivatives markets to hedge risk. Meanwhile poor people in countries like Bangladesh, Indonesia, Kenya, and Zambia are hit hardest by the high and volatile food prices.\textsuperscript{18} Speculators themselves acknowledge that something is wrong with commodity derivatives markets.\textsuperscript{19} Financial markets are no longer delivering for food markets; they have turned against them. What has gone wrong?

\textit{The market is broken … It no longer serves its purpose}

Wallace Darinelle, chief executive of the Plains Cotton Cooperative Association, one of the biggest cotton producers in the USA, quoted in the New York Times, 5 May 2011\textsuperscript{16}

**Deregulated and secretive financial markets**

In the USA, pressure from the finance lobby, led by powerful organizations like the International Swaps and Derivatives Association (ISDA), led to the Commodity Futures Modernization Act of 2000. This law took away essential safeguards that had protected agricultural derivatives from misuse. New market players with no commercial interest in food markets were allowed in. The powers of regulating authorities were curtailed, and the trade in derivatives through private contracts made outside of organized exchanges (the over-the-counter – OTC – market) was allowed to boom without oversight. In the EU, derivatives markets had been growing since deregulation in the 1980s, but were much smaller in size and played a much less important role. Scant reporting and the expansion of the secretive OTC derivatives market means that commodity derivatives markets are often operating in the dark. Lack of information makes them inefficient and increases the chances of herding and panic behaviour from investors. When combined with a huge increase in the size and speed of trades, enabled by deregulation and technological and financial innovation, this has meant that, while there has undoubtedly been an explosion in speculative activity, regulators have neither the information to measure its real impact nor the tools to control it.

**WINNERS**

\textbf{Large banks and funds cash in on a new ‘asset class’}

Banks and hedge funds profit from passive speculation\textsuperscript{20} without having to share in the price risk, notably taking advantage of opportunities for arbitrage profits during the ‘roll-over’ period (when one contract is replaced by another).\textsuperscript{21} This represents easy pickings for commodities traders employed by the banks to make their living off the ‘dumb money’ – the passive investors.\textsuperscript{22} Barclays Capital, the investment banking division of Barclays Bank and Europe’s most important player in the agricultural commodity derivatives market, could have earned as much as €406m in 2010 from financial speculation on food.\textsuperscript{23}

\textbf{A new breed of speculators floods commodity markets}

Deregulation and the collapse of confidence in other financial markets have attracted a new breed of speculators to agricultural commodity derivatives. Institutional investors like pension funds have entered the market with huge amounts of capital, fueling new growth in speculation alongside institutions like hedge funds and investment banks that had historically been speculators in commodity derivatives markets. The market share of speculators in the Chicago Board of Trade wheat market was 12 per cent on 25 June 1996, but had risen to 65 per cent on 24 June 2008.\textsuperscript{24} The 2000 US legislation contained a loophole allowing swap dealers\textsuperscript{25} to take long-term positions in commodity indexes. This opened the way for the emergence of so-called commodity index funds.\textsuperscript{26} Commodity index funds sold by banks like Goldman Sachs and by the
financial arms of grain traders such as Cargill allow institutional investors to invest huge assets ‘passively’ in commodities – taking a one-way bet on prices going up (so-called ‘long’ positions). Passive investment in commodities grew more than tenfold from $20bn in 2002 to over $250bn at the end of 2008. Overall, financial investment in commodities – including food, metals and energy – has increased from less than $100bn in 2005 to over $400bn in 2011. It has been reported that between them, Goldman Sachs, Morgan Stanley, J.P. Morgan and Barclays Bank, the four largest commodity swaps dealers, control 70 per cent of commodity swaps positions.

Global commodity traders go financial

Four multinationals dominate global trade in agricultural commodities: the US-based Archer Daniels Midland (ADM), Bunge and Cargill, and the French Louis Dreyfus. Traditionally, these companies have used agricultural derivatives to hedge their risk and as such have an important and legitimate role in derivatives markets. However, current regulations provide exemptions that mean they are also able to engage in speculative activity on their own account or for third parties. This means they can use their position as ‘commercial players’, exempt from position limits on financial markets because of their involvement in the physical markets, to engage in or facilitate financial speculation, and may have the benefit of information about the underlying physical market that other market players may not have.

For example, in the last 20 years, Cargill, the largest of the four, has opened at least five financial subsidiaries, some of which are involved in speculative activities on commodities markets. All four traders use their knowledge of commodity markets to develop new business lines managing third party money or selling financial products. Their profits soared just as agricultural commodity and food prices began to rise after 2006. Although there are numerous factors that determine the profits and losses of these complex entities, many have begun to question whether these firms are genuinely hedging their risks or whether they are also speculating in order to turn a profit from the volatility of commodity prices.

Food prices and commodity traders’ profits

There has recently been a rapid expansion in the use for commodities investment of products known as Exchange Traded Funds, which are increasing the options for investors to speculate. These products are also associated with new, more active ways of investing in commodities, such as high frequency trading, where speculators use cutting edge computers to execute thousands of trades in a matter of seconds, making already erratic markets even more dysfunctional.

Markets in agricultural derivatives are not like other financial markets. Capital markets like stocks and shares are all about money: long-term investors play a useful role allocating capital to businesses in the productive economy. Stock and share values are intimately linked to the performance of companies, and long-term investors with a direct interest in companies can help them create sustainable profits. In contrast, markets in agricultural derivatives are all about food: they were designed for short-term trades to resolve the fundamental problems of risk, inflexibility and imperfect information inherent in agricultural markets. They are tightly linked to the dynamics of supply and demand; past performance is irrelevant, and increasing the volume of long-term investment only increases the number of players who are not engaging with the dynamics of the market. In past years however, food and other commodities have come to be seen as a new asset class like stocks and bonds, allowing investors to diversify their portfolio and hedge against risks in other markets or against inflation. But this benefit to financial investors comes at a high cost. Commodities derivatives markets no longer perform their intended function, and ultimately consumers pay the price.

In March 2011 cocoa ‘futures’ crashed down 12 per cent in under a minute during a ‘flash crash’ associated with automated high frequency trading, which now accounts for between 10 and 20 per cent of futures trading in some agricultural commodities.

Source: Oxfam research, forthcoming, Autumn 2011

In March 2011 cocoa ‘futures’ crashed down 12 per cent in under a minute during a ‘flash crash’ associated with automated high frequency trading, which now accounts for between 10 and 20 per cent of futures trading in some agricultural commodities.

New York Times, 5 May 2011
Financial markets deliver distorted and unpredictable food prices

The huge inflows of money coming from these new and powerful players have distorted agricultural commodity markets. Too many of the new speculators are only taking long positions through passive investments, which means they are often buying regardless of price. These large one-way bets unbalance the market. The United Nations Conference on Trade and Development (UNCTAD) and other international organizations argue that investment in index funds could lead to herding behaviour, causing price bubbles. By determining investment decisions on the basis of fixed weights or on past performance measures, investment in index funds shifts prices away from supply and demand in the short term. Commodity index fund speculation actually takes away liquidity, because the funds compete for a big share of available short positions and hold on to them in the long term. This form of passive speculation has also been linked to increased co-movement of different commodities included in such commodity index funds. For instance, as a result of the design of these funds, the price of food is more closely linked to the price of oil than ever before. This type of speculation distorts the price discovery function of financial markets: those relying on financial markets to give them the right price for commodities in the short-term may as well be plucking prices out of the air.

And as prices of agricultural derivatives become increasingly unpredictable, it becomes more and more expensive to hedge risk. Those who rely on financial markets to guarantee prices for their physical crops must pay ever higher premiums or margins. This means that only large businesses can afford to hedge, and that smaller producers and traders, who are already more exposed to risk than big agribusiness, are left without protection. This has the potential to drive the creation of monopolies or cartels in a market which is already heavily dominated by a handful of very powerful traders. Moreover, increased costs associated with hedging risk are passed on down the value chain to consumers.

LOSERS

Food producers in developing countries cannot afford to hedge their risk

Take the case of a medium-scale farmer in South Africa who plants a crop of corn in late 2011. This farmer doesn’t know what will happen to prices between late 2011 and early 2012, when the corn will be ready to harvest. If prices remain stable, she will be able to make a small profit, but if they go down, she will lose the money she has invested in seeds, fertiliser, irrigation, storage, etc. To protect herself, she goes to her financial broker to buy a ‘put option’ which gives her the option, but not the obligation, to sell at 2011 prices in 2012, in return for a fixed premium. However, if prices are too unstable and the premium is too high, she may not have the cash up front, or it may be too expensive for it to be worthwhile to protect herself against the risk of falling prices.

The G20 is backing moves to provide market-based risk management tools to help producers, consumers and governments deal with risk in agricultural markets. But if action is not taken to tackle the causes of risk, the proposed risk management toolbox will be ineffective and poor value for the money. If properly designed and adapted, hedging instruments can work for large-scale producers, traders, governments and even some small- and medium-scale producers. However, to be most effective, hedging must go hand-in-hand with other risk management strategies including disaster risk reduction, resilient sustainable agriculture practices and measures to empower small producers, especially women.
RECOMMENDATIONS: REGULATING FINANCIAL MARKETS TO GROW A BETTER FUTURE

The US, EU and G20 must make agricultural derivatives markets work effectively for their most important stakeholders: food producers and consumers. New rules must be adopted to restore the useful functions of these markets and to prevent excessive speculation from fueling food price volatility. EU and US reforms must be harmonized to avoid regulatory arbitrage between different jurisdictions, but this should not prevent one player from making the first move. Oxfam calls on the US, the EU and the G20 to increase transparency and adopt adequate regulation.

Increased transparency

- **All transactions should be reported to national authorities as soon as they happen**: real-time (or as close as possible) transaction reporting should be put in place for all commodity derivatives, including OTC contracts, in all major exchanges.

- **As many deals as possible should be done on transparent platforms**: all sufficiently liquid derivatives in all commodity markets should be exchange-traded and centrally cleared, and all remaining OTC contracts should be registered.

- **Different types of participants should be subject to appropriate disclosure requirements**: market participants and positions should be categorized by type of entity (e.g. bank or physical trader) and activity (e.g. speculative or hedging) and be subject to appropriate disclosure requirements and regulatory constraints accordingly.

Adequate regulation

- **Limits should be introduced on how much prices can move up or down within a day and on how much of the market can be cornered by a single player**: time-bound intra-day price limits and ex-ante position limits aggregated across financial markets should be put in place; initially set at cautious but appropriate levels, which could be gradually tightened after monitoring for any adverse consequences such as poor liquidity.

- **Aggregated position limits should be introduced for all types of derivative contracts and should be applied to all participants**: any exemptions to position limits should be restricted to businesses dealing directly in physical commodities and using commodity markets to hedge risks core to their commercial business. Loopholes should be closed so that physical commodity traders cannot invoke their commercial interest in order to speculate while avoiding position limits, and so that banks cannot avoid limits by taking control of physical commodities.

- **Limits should be introduced on speculation that is divorced from supply and demand**: restrictions should be put in place to limit the use of passive speculation, exchange traded funds and high frequency trading in agriculture derivatives markets.

A step by step approach, including periodic evaluation of the impact of regulatory instruments, is needed in order to ensure they do not undermine the risk management function of futures markets.
NOTES

1 A ‘derivative’ is a financial asset whose value is derived from the value of one or more underlying assets, such as commodities.


5 ‘Speculation’ (as opposed to hedging) refers to transactions by financial participants (like investment banks and hedge funds) who do not have a commercial interest in trading the underlying commodity but, rather, are taking on risk in order to make a return on price changes. This can be contrasted with commercial participants (like food producers, processors or end users) who do have a real interest in trading the underlying commodity and can be described as ‘bona fide’ hedgers.


8 Banks have held scores of meetings with the CFTC in the USA to discuss Dodd–Frank rule making since mid-2010, with research reported on FT Alphaville showing that Goldman Sachs topped the list at 52 meetings and that position limits were among the most-discussed issues: http://ftalphaville.ft.com/blog/2011/07/01/613966/goldmans-on-top-of-the-dodd-frank-talks/

9 For details of the Dodd–Frank Act, see Pub.L. 111-203, H.R. 4173

10 A ‘future’ is a contract obliging the buyer to buy (or seller to sell) an asset such as a physical commodity at a predetermined future date and price. Futures contracts are standardized and traded on exchanges. In real life a very low number of futures result in physical delivery, as they are bought by hedgers or speculators who do not hold on to the contract until the specified delivery time.

11 Position limits determine the maximum position (number/size of contracts) in a commodity derivative, or in all derivatives of one commodity combined, that may be held or controlled by one market participant. Position limits can be used to prevent excessive speculation and to combat market manipulation.


14 Futures prices influence expectations in physical markets, and in many cases prices in physical contracts are directly referenced to a nearby futures price. See UNCTAD, June 2011, op. cit.; ‘Better Markets, Letter to CFTC on Position Limits for Derivatives’, March 2011.

15 G. Meijerink, S. van Berkum, K. Shutes and G. Solano (2011) Price and Prejudice: Why are food prices so hight, LEI, The Hague, June 2011. In the futures market, the most useful indicators of liquidity are volume (the number of contracts traded in a given period) and open interest (the number of outstanding contracts).


20 ‘Passive speculation’ refers to financial players – often large institutional investors – taking long-term ‘long’ positions in commodity markets: treating commodities as an asset class like equities or bonds, and taking a one-way bet on prices going up while remaining insensitive to short term price changes or fundamental factors relating to the supply and demand of the underling commodities.


25 A commodity swap involves an exchange of cash flows with the return dependent on the price of an underlying commodity. The use of commodity swaps is strongly linked to investment in products like commodity index funds.


28 UNCTAD, June 2011 (op cit).


30 E.g. financial services divisions of Cargill include Cargill Risk Management, Black River Asset Management, LaCrosse Global Fund Services, Cargill Trade and Structured Finance and Cargill Energy and Risk Management Solutions.


