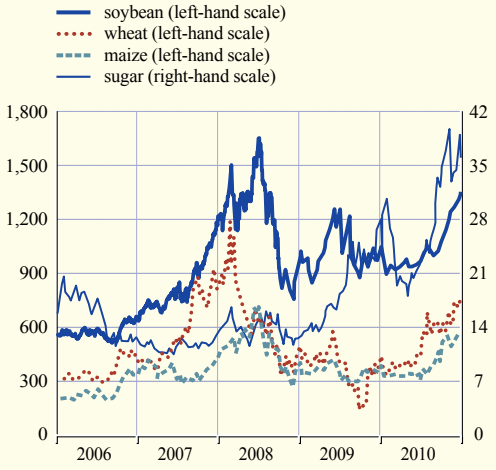
Box 1

RECENT DEVELOPMENTS IN FOOD COMMODITY PRICES

The wide fluctuations in food commodity prices have attracted much attention in recent years. In 2007 and the first half of 2008 prices surged, peaking in July 2008. They then declined before rising again. As they may have far-reaching effects on consumer price inflation, it is essential in respect of the inflation outlook to monitor their developments and drivers, as well as the proper functioning of related markets. This box focuses on the rise in food prices since 2009 and sheds some light on its main drivers.

Prices of selected agricultural commodities

(in USD cents per bushel for maize, soybeans and wheat, in USD cents per pound for sugar)



Source: Bloomberg.
Note: Latest observation refers to 31 December 2010.

Food commodity prices rose significantly in 2010. Yet, the prices of various commodities increased at different speeds and times, and were also affected by idiosyncratic factors.

- After the record harvest which followed the price spike of 2007-2008, wheat prices were initially subdued, due to high inventory levels. However, supply disruptions and adverse weather conditions, together with protectionist threats, contributed to another price rally in the second half of 2010. Prices were 91% higher at the end of 2010 than at the beginning of the year (see chart).

- Maize prices moved sideways in 2009 and the first half of 2010, dampened by expectations of a record harvest in 2010. However, recent cuts in production estimates and signs of record imports by China put upward pressure on prices, which were 57% higher at the end of 2010 than at the beginning.

- Recent soybean price dynamics have been more subdued than those of wheat and maize. The 2009-2010 harvest was a record one, and prospects for the 2010-2011 harvest are positive as well. This helped to dampen demand-side pressures coming from increasing imports by China. Still, prices were 33% higher at the end of 2010 than at the beginning.

- By contrast, sugar prices have been volatile recently. In 2009, prices almost doubled due to adverse weather conditions and remained volatile subsequently – in spite of the good crop prospects – amid tight inventory levels. Prices were 32% higher at the end of 2010 than at the beginning.

Although recent price pressures in agricultural commodity markets were driven by idiosyncratic factors, there are also some common factors affecting medium to long-run demand trends. First, demand stemming from emerging markets has steadily increased, in line with increasing income levels, and is expected to continue doing so. In addition to higher incomes in emerging economies, urbanisation and changing dietary preferences are pushing up domestic consumer demand for high-value products. The composition of food budgets is shifting to meat, dairy products and fish. Since the production of meat and dairy products requires animal fodder as input, the dietary change will mean stronger demand for crops such as soybeans, maize and grains in general, which are used to produce feed.

Another important structural factor driving demand is that food crops (in particular sugar and maize) are also being used to produce biofuels. Persistently high oil prices and substantial subsidies for biofuel production are expected to sustain demand for these commodities in the future. The two factors – dietary change and biofuels – imply a robustly growing demand for food commodities in the future.

The outlook for prices however crucially depends on the supply-side response as well. First, as regards the speed of response on the supply side, the price elasticity of individual crops is large and relatively fast, taking into account the constraints of the biological cycle. This is also confirmed by the record wheat harvest in 2008, after the price surge of 2007-2008. However, at the aggregate level, the agricultural supply response is low. One reason for the different responses at the individual crop and aggregate level is crop rotation, which largely determines the price response at the individual level, i.e. agricultural land is used for the crop that yields the highest return. When, however, agricultural price increases are broad-based, the supply response from crop rotation is less pronounced as it tends to come from either land expansion or yield growth.

As for land availability worldwide, sufficient arable land remains available. A report from the Food and Agriculture Organization (FAO) of the United Nations[1] suggests that, while the expansion of cultivable land has always helped to raise crop production, yield growth – through the application of technological improvements or the use of fertilisers and machinery – has been much more important in recent decades. It accounted for 70% of the production increase in developing countries during the past 30 years and for nearly all of the increase in advanced economies. Agricultural technologies have however remained largely unchanged over the last two decades, which implies that higher yields cannot be obtained without further improvements. Stable food prices during this period

1 OECD-FAO (2008). Agricultural Outlook 2008 - 2017.

have led to some complacency about global food concerns and to a reduction in R&D funding. A high-price environment may change this situation and stimulate both publicly and privately funded research into yield-enhancing technologies rather than cost-cutting, as was mostly the case over the past decade.[2]

Taken together, these considerations suggest that there will remain upside pressure on food prices in the long run, due to robustly growing global demand. While there is scope for supply-side effects to match the rise in demand, there remains significant uncertainty about the extent and pace of the ability of supply to meet the expected rise in demand and thereby help to limit the rise in food prices.

2 R. Trostle (2008). Global Agricultural Supply and Demand: Factors Contributing to the Recent Increase in Food Commodity Prices. USDA Economic Research Service WRS-0801.