ANNEX: Additional Price Analysis
March 2012

Ethiopia

This annex offers an analysis of price dynamics in the Ethiopian wholesale maize market as well as a benchmark (expected) price against which the significance of actual price changes are judged.

Major findings

- **Domestic prices rose sharply in February after falling for four months**
- **Domestic maize prices show very high volatility relative to previous years**
- **Benchmark prices are expected to be 5059, 5259 and 5600 birr/ton in March, April and May respectively**

Five Year Overview of Price of Maize in Ethiopia (March 2007- February 2012)

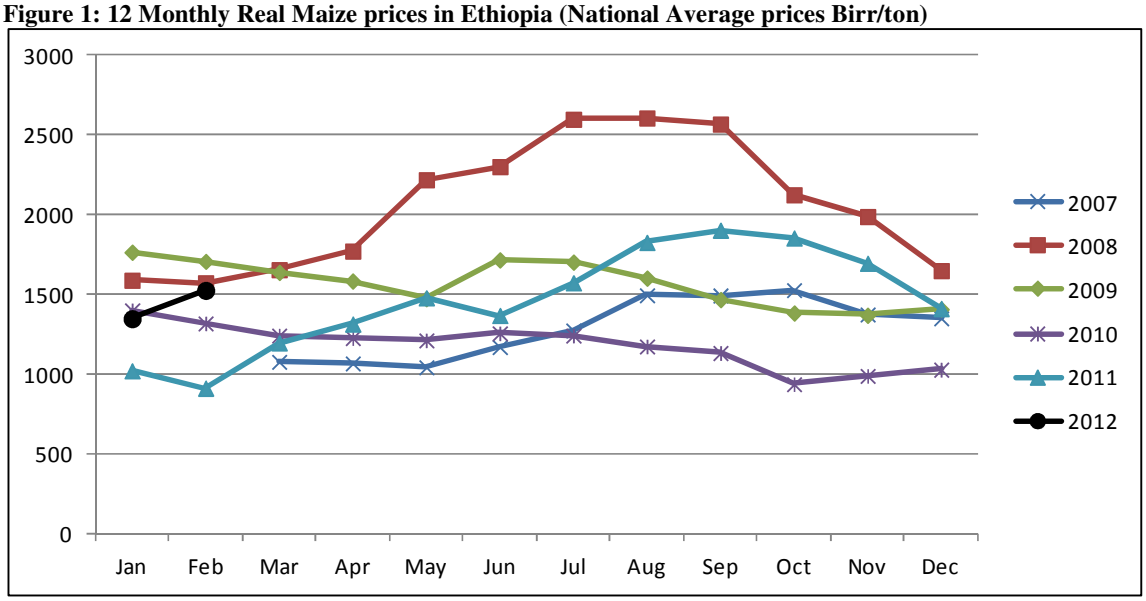
Real prices of maize were almost stable for much of 2007, with a slight increase in the second part of the year. However, prices surged in 2008 and peaked in August when prices were 67% higher than those of August 2007. Prices of maize began a decline after September 2008 and continued their decline through 2009 (albeit a brief surge in the middle of the year) and 2010.

The price of maize in December 2010 was the lowest amongst the December prices of the previous four years. In December 2010, prices were 37% and 24% lower than prices in December 2008 and 2009 respectively.

Despite a consistent decline in real prices since August 2008, prices began to increase in January 2011. Prices rose by more than 46% in the first quarter of 2011. This upward trend has continued throughout 2011 and in September prices were 86% higher than those of September 2010. However, in the latter months of 2011 real prices substantially declined, in December prices were 26% lower than in September. In February 2012 prices increased by 13%.

Volatility measured by coefficient of variation (CV) was 15% in the period from March 2011 to February 2012, and this is slightly higher than the volatility for the preceding 12 months (12%).

Figure 1: 12 Monthly Real Maize prices in Ethiopia (National Average prices Birr/ton)



Comparison of Actual Prices with Benchmark (Expected) Prices

Commodity future markets can be helpful predictors of what grain prices will be in the next few months (short-term). Unfortunately, there are no future markets for staple grains in the majority of developing countries. The ESA Price Monitoring Model is a simple tool designed to assist policy makers, farmers and traders in assessing whether recent price trends are in line with those typically observed in the past.

ESA Price Monitoring Model: The purpose of the model is to determine whether short term price movements of a commodity exceed a benchmark which takes into consideration seasonality, inflation and historic variability. The model uses only data on past prices and the consumer price index (CPI) to capture these characteristics. It establishes an expected level of price for the following month along with a range of uncertainty generated by past deviations from that expected price level. Price movements can be interpreted as "excessive" if they fall above or below the uncertainty band (for details on the model see http://www.foodsec.org/web/publications/briefs)

Results: In February 2012, maize prices in Ethiopia were about 4835 birr/ ton, 10% higher than their average of the past four years (adjusting for inflation and seasonality).

The actual prices missed the benchmark in December, January and February, reflecting the volatility experienced in the Ethiopian maize market. December and January extreme deviations were negative, whereas those observed in February were positive. These changes should draw attention to the maize market in Ethiopia as they are outside (above) the uncertainty band (inside which 70% of previous deviations had fallen) and are marked in red by the model.

The benchmark price in March is expected to be near the 5060 birr/ton level with about a 70% chance that the deviation will be less than or equal to ± 6.7%. Prices are expected to increase in April and May if normal seasonal patterns hold. There should be concerns, if prices are above 5401/ton in March.

Figure 2: Price Monitoring Model (prices birr/ton)