

## Economics

15 December 2011 | 9 pages

# Emerging Markets Macro View

## Food price deflation and why it matters

- The past few months have seen some sharp declines in global food prices. The food price index published by UN FAO has fallen for five consecutive months now, and is some 9.5% lower than the 2011 peak in February. Although food inflation remains positive in YoY terms, we think it very likely that we are about to enter a period of annual food *deflation* this month and in early 2012.
- The reasons for the decline in food prices are heavily associated with the fall in global GDP growth but there are additional factors at work: i) the 2010/11 food price shock was in many ways weather-related, and the weather has improved; ii) policies that were put into place which intensified the food price shock - export restrictions, for example - have now been reversed; and iii) the food demand coming from the biofuels industry has been much smaller than we (and others) expected.
- The significance of imminent food price deflation is the impact that it might have on inflation *surprises* in EM. CPIs in EM are food-heavy by comparison with DM and, since food inflation is currently leading core inflation in many EMs, the risk of downside inflation surprises is rather high, we think. Asian inflation surprises tend to have the highest correlation with global food prices, and conceivably it is here where the surprises might be biggest.
- Citi is, in any case, expecting inflation in EM to soften in the next few months. But the risks to our forecasts seem to be to the downside, and this could open up a debate about whether further room exists for rate cuts next year. Probably the biggest constraint here is the risk of further currency depreciation in a risk-averse world. But, other things equal, inflation dynamics in EM should smooth the way to a bias towards rate cuts.

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## Food price deflation and why it matters

**The past few months have seen some very sharp declines in global food prices.** The food price index published by UN FAO<sup>1</sup> has fallen for five consecutive months now, and is some 9.5% lower than the 2011 peak in February. Food *inflation*, by contrast, has remained positive during the course of 2011: an average YoY rate of 36% in H1, falling to 16.5% on average since July (Figure 1). The purpose of this note is to highlight the risk of imminent food price deflation, and the implications that might have for *inflation surprises* in EM. To put it crudely: inflation forecasters seem to be relatively slow in capturing how changes in food prices affect CPIs in EM. As food deflation becomes more evident in the next few months, therefore, the chances are that this will result in benign inflation surprises across EM. We take a stab at working out who might benefit the most from this.

Figure 1. The UN FAO's food price index in 2011

	FAO Price Index	% change YoY	Meat Price Index	% change YoY	Dairy Price Index	% change YoY	Cereals Price Index	% change YoY	Oils Price Index	% change YoY	Sugar Price Index	% change YoY
Jan-11	231.3	29%	166.8	19%	221.3	10%	244.8	44%	279.4	64%	420.2	12%
Feb-11	237.9	35%	170.5	20%	230.0	20%	258.6	58%	281.1	65%	418.2	16%
Mar-11	232.0	38%	174.5	20%	234.4	25%	251.2	59%	261.7	49%	372.3	41%
Apr-11	234.9	38%	180.4	20%	228.7	12%	265.4	71%	260.9	50%	345.7	48%
May-11	231.6	37%	180.0	19%	231.1	10%	261.3	68%	260.9	52%	312.2	45%
Jun-11	233.4	39%	178.1	17%	231.6	14%	259.0	71%	259.0	53%	357.7	59%
Jul-11	231.2	34%	176.5	17%	227.8	15%	247.2	51%	252.9	44%	400.4	62%
Aug-11	230.6	26%	178.6	15%	220.6	14%	252.4	36%	245.3	27%	393.7	50%
Sep-11	225.1	16%	177.3	16%	214.7	8%	244.3	17%	239.4	20%	379.0	19%
Oct-11	216.0	5%	176.5	12%	203.5	0%	231.3	5%	224.3	1%	361.2	3%
Nov-11	215.0	1%	177.2	10%	201.0	-3%	228.4	2%	235.0	-4%	340.3	-9%

Source: UN Food and Agricultural Organisation; Citi Investment Research and Analysis. The weights of each sub-index are as follows: 35% meat, 17% dairy, 27% cereals, 14% oils, 7% sugar.

**The reasons for the decline in food prices are heavily associated with the fall in global GDP growth but there are additional factors at work.** In the first place, the weather has improved. Much of the food price shock the world experienced in 2010/11 was weather-related, starting with news of Russia's drought in June 2010, followed by rain in Canada and NW Europe (September); rain in Australia (December); and dry weather again across China, East Africa and Argentina (early 2011). As a result of this improvement in the weather, the FAO's estimates of food supply have crept upwards in recent months. Figure 2 shows how the FAO's supply and demand estimates for 2011/12 have shifted in a way that helps to generate a price decline: higher supply, lower demand, and a higher end-period stock-to-use ratio.

**Another factor pushing prices up in late 2010/early 2011 was the behaviour of some governments.** Russia's ban on wheat exports (last August), Belarus' ban on rapeseed oil exports (September); and accelerated purchases of food by China, Russia, and some Middle Eastern countries (Q1 2011) all fuelled the food price shock in late 2010/early 2011. By mid-March 2011, more than 20 countries had outstanding wheat sales more than 50% above their 5-year average for mid-March<sup>2</sup>. These factors have now largely disappeared from global food markets.

Finally, downward pressure on food prices has resulted from lower-than-expected demand for crops coming from the biofuels industry. In some research we published

<sup>1</sup> This index includes 55 commodity prices in 6 groups: meat, dairy, cereals, fats, sugar, and is published close to the start of each month. The IMF and World Bank's indices are similar but not as comprehensive.

<sup>2</sup> USDA report, June 2011: 'Why have food commodity prices risen again?', [www.ers.usda.gov](http://www.ers.usda.gov)

Figure 2. The UNFAO's forecasts have improved since June 2011 (m tonnes)

	Supply	Use	Ending Stocks	Stock-to-use ratio
2007/08	2,134.0	2,142.4	416.0	19.0
2008/09	2,289.5	2,192.2	501.2	22.4
2009/10	2,264.3	2,234.6	530.5	23.4
2010/11	2,245.0	2,270.5	501.3	21.7
2011/12	2,322.7	2,310.3	511.3	21.8

Memo: FAO's forecast in June 2011

2011/12	2,314.9	2,311.3	493.9	21.0
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Source: UNFAO; Citi Investment Research and Analysis

at the start of this year<sup>3</sup> we worried that higher energy prices would 'supercharge' the rise in food prices because of an increased demand for food coming from the biofuels industry (this is what happened in 2008 when biofuels production rose by a remarkable 40%). However, it seems that maize use for ethanol, at least in the US (the largest producer), is likely to fall slightly in 2011/12 for the first time ever<sup>4</sup>.

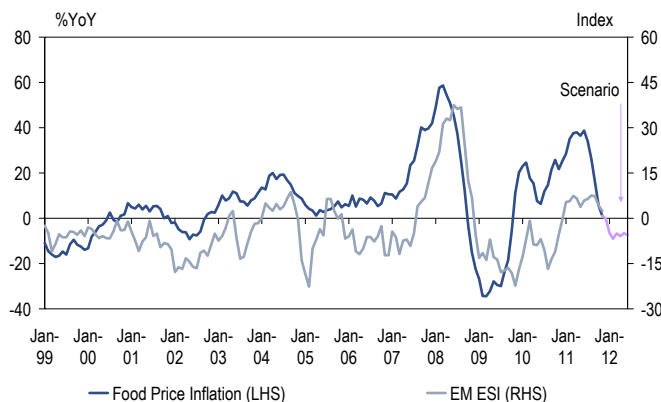
**Food inflation seems very likely to turn negative in the next few months.** It would be unwise to discard the risk of another weather-related shock to food prices but, without one, it seems sensible to assume that YoY food *deflation* will characterise the early part of 2012. In fact, it will be quite difficult to avoid YoY food price deflation in early 2012 simply because food prices were high in the first half of 2011. The arithmetic of the FAO's food price index means that:

- If food prices simply stop falling from their November level and stay unchanged during the first 6 months of 2012, the average global food inflation rate in H1 will be *negative* 7.8%. It seems very likely that December will see the first YoY deflation of food prices since 2009.

- In order to *avoid* food price deflation in H1 2012, the average food price index early next year would have to rise by 8.5% from its current level.

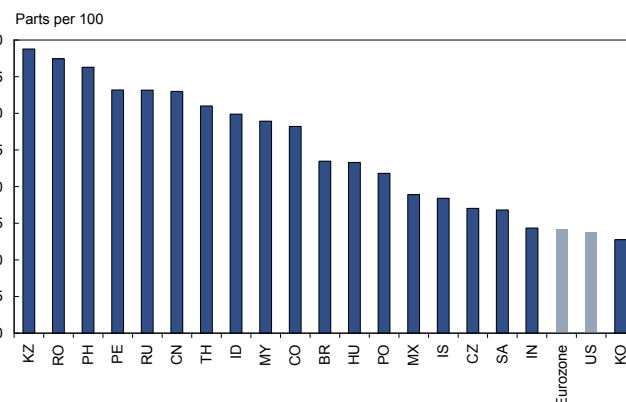
**The significance of imminent food price deflation is the impact that it might have on inflation *surprises* in EM.** We've highlighted the relationship between food prices and EM inflation surprises in a number of previous research notes, but it is worth highlighting again given the likely dynamics of food inflation in the coming months. This is illustrated in Figure 3, which shows the relationship between food inflation YoY and Citi's EM Inflation Surprise Index (which is made up of the standard deviations of the difference between actual data release and Bloomberg survey medians). Food deflation in the next few months – the 'scenario' in Figure 3, which assumes an unchanged FAO price index through June 2012 – seems likely to surprise the market with lower-than-expected inflation rates. This is largely a function of the heavy presence of food prices in EM CPIs (Figure 4).

Figure 3. If the UNFAO food price index stays unchanged through June 2012 there will be food deflation – and downward CPI surprises?



Source: UN FAO; Citi Investment Research and Analysis

Figure 4. Food weights in EM CPIs are considerably higher than is the case for DMs



Source: Citi Investment Research and Analysis

<sup>3</sup> See our Emerging Markets Macro View, 'Food Prices Revisited: Who's Vulnerable?', 19 January 2011

<sup>4</sup> UN FAO 'Food Outlook', November 2011

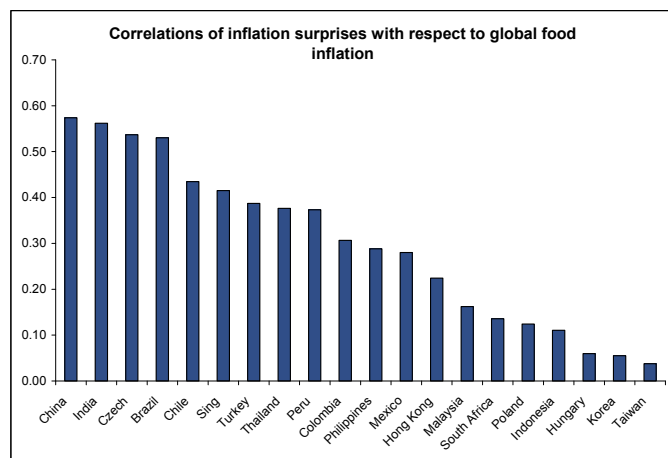
**Figure 5. Regional summary statistics showing the correlation of inflation surprises with respect to global food inflation**

CEEMEA	0.38
Latam	0.53
Asia	0.66

Source: Citi Investment Research and Analysis

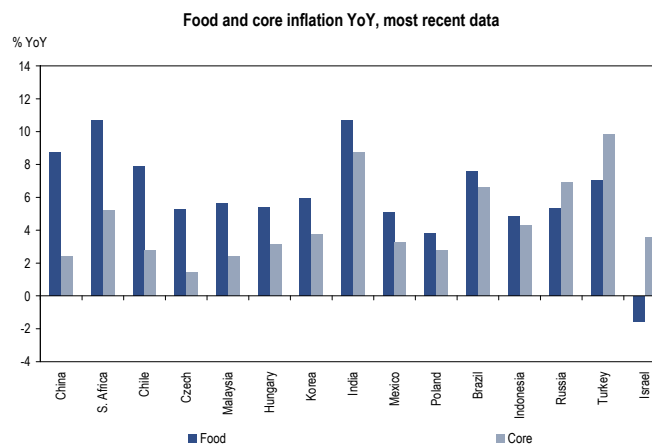
**Who might benefit the most?** Or, put another way: whose CPIs might enjoy the most pleasant surprises if food deflation materialises next year? We look simply at correlation coefficients between Citi's Inflation Surprise Indices and the (3 months' lagged) FAO food price index since January 1999. On this basic metric, it seems that Asia could see the strongest downside to inflation surprises in early 2012: Figure 5 has the summary correlation coefficients for each region. Yet, within these regional aggregates, there is plenty of variation: while China and India, for example, have inflation surprise indices that are relatively correlated with global food prices, the opposite is true of Korea and Taiwan, which have exceptionally low levels of correlation, partly thanks to the relative insignificance of food prices in their CPIs. Figure 6 shows the full set of correlations country by country. And, since food inflation still leads core inflation in a large number of countries (Figure 7), we think the first half of 2012 could see some very pleasant inflation surprises in EM. To some extent, this analysis just reinforces our existing views about inflationary dynamics in EM: we expect inflation to fall in 19 of the 24 countries shown in Figure 8. If food inflation behaves the way it seems likely to, the risks to our forecasts are likely to be to the downside.

**Figure 6. Correlations show that China and India lead EM in the sensitivity of inflation surprises to changes in food prices**



Source: Citi Investment Research and Analysis

**Figure 7. Food inflation is leading core inflation in a number of countries**



Source: Citi Investment Research and Analysis

Figure 8. CPI inflation and Citi's inflation forecasts for June 2012.

%	June 2011	Latest	June 2012 Estimate	Will inflation in June 2012 be lower than it is now?
China	6.6	4.3	3.7	Yes
Hong Kong	5.6	5.8	4.0	Yes
India	9.5	9.1	7.6	Yes
Indonesia	5.5	4.2	6.1	No
Korea	4.2	4.2	3.6	Yes
Malaysia	3.5	3.4	2.7	Yes
Philippines	5.2	4.8	3.9	Yes
Singapore	5.2	5.4	3.7	Yes
Taiwan	1.9	1.0	0.9	Yes
Thailand	4.1	4.2	3.5	Yes
Czech R.	1.8	2.5	2.3	Yes
Hungary	3.3	4.2	5.3	No
Poland	4.1	4.7	2.9	Yes
Romania	7.9	3.4	2.6	Yes
Russia	9.4	6.8	6.0	Yes
Turkey	6.2	9.5	8.5	Yes
Ukraine	11.9	5.2	7.3	No
Israel	4.2	2.8	2.2	Yes
S. Africa	5.1	6.2	5.8	Yes
Argentina	9.7	9.7	9.6	Yes
Brazil	6.7	6.6	5.5	Yes
Chile	3.4	3.9	3.0	Yes
Colombia	3.2	4.0	4.1	No
Mexico	3.3	3.5	3.7	No

Source: Citi Investment Research and Analysis

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