

Analytical Report on Inflation in Consumer Price Index for Food

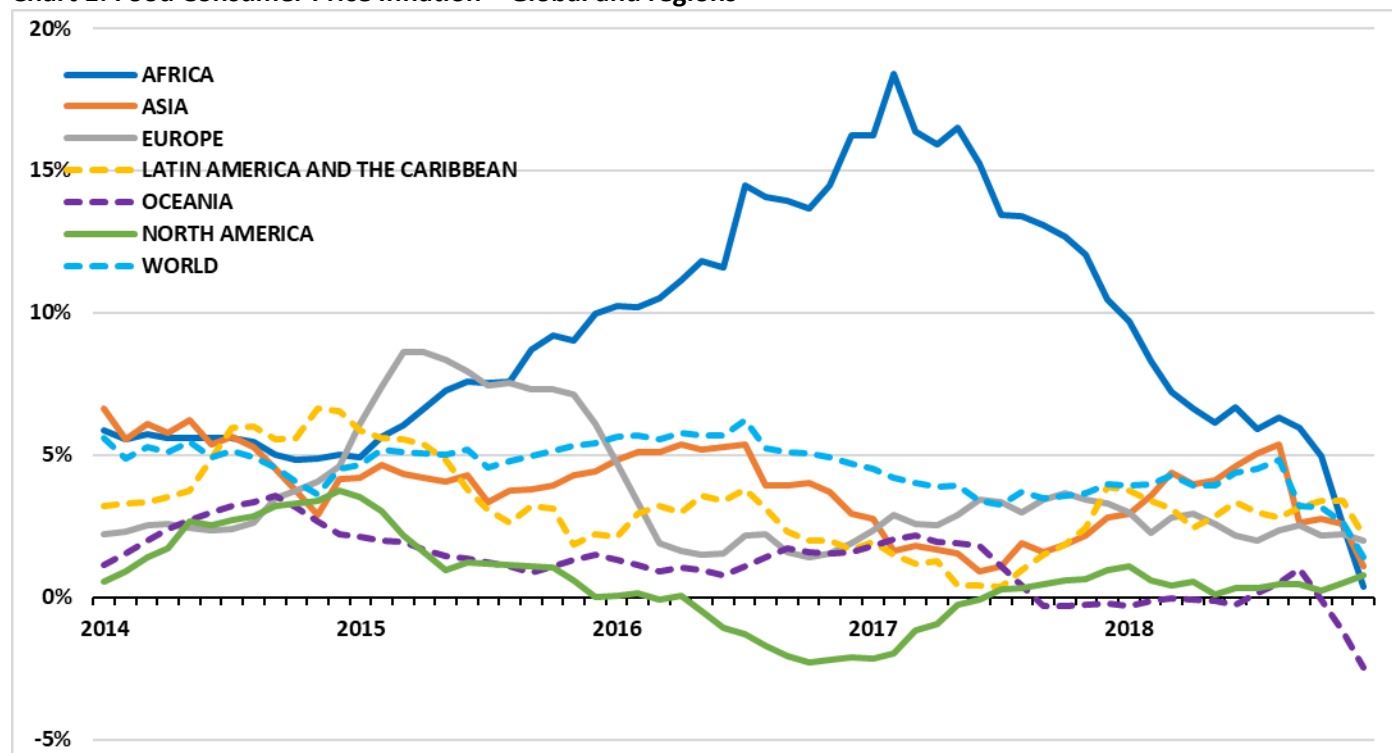
(March 2019)

Global Overview

Annual food price inflation remained globally stable, between 4 and 5 percent, during 2014-16, and decreased to 3.7% in 2018 with divergent trends at regional level.

During 2014 to 2018 most regions of the world witnessed decreasing annual food inflation, except Africa where food inflation accelerated from 6% in 2013 to 14% in 2017, before falling to 5.9% in 2018. The most remarkable decrease was recorded in Asia, where annual food inflation decreased from 5.2% in 2014 to 1.8% in 2017 before increasing to 3.6% in 2018. During the same period, Northern America and Europe experienced a low food inflation rate, whereas the inflation in Latin America and Caribbean was higher. (Chart 1).

Chart 1: Food Consumer Price Inflation – Global and regions



Source: IMF, UNSD and national statistics' websites, FAO Statistics Division for the calculation

Table 1: Annual global and regional consumer food price inflation, 2014-2018 (%)

	Food Price Inflation Rate					Coefficient of variation across countries in region (%)				
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
World	4.8%	5.0%	5.4%	3.8%	3.7%	51.23	66.18	118.18	144.09	75.72
Africa	5.4%	7.5%	12.7%	14.5%	5.9%	136.31	146.03	339.56	251.26	269.92
Southern Africa	7.7%	4.9%	11.4%	6.8%	2.9%	35.61	44.90	46.85	39.01	131.92
Western Africa	5.5%	7.1%	9.3%	12.7%	7.9%	270.86	90.59	128.63	110.96	161.10
Northern Africa	2.2%	3.9%	3.1%	3.1%	3.0%	151.91	43.44	53.10	124.26	86.34
Central Africa	2.4%	2.6%	7.4%	7.8%	3.3%	146.16	119.04	248.37	188.63	142.23
Eastern Africa	5.8%	9.7%	18.5%	18.5%	6.4%	110.93	139.22	270.80	244.84	268.38
Latin America and the Caribbean	4.9%	3.9%	2.8%	1.5%	3.1%	78.69	130.92	156.06	156.91	165.41
South America	6.3%	8.5%	9.9%	1.2%	4.4%	51.97	47.04	61.29	129.99	202.37
Central America	5.1%	4.2%	4.3%	6.1%	4.5%	60.31	144.46	194.33	246.45	120.79
Caribbean	4.3%	7.1%	6.8%	6.4%	4.5%	105.00	230.47	297.01	166.59	88.62
Northern America	2.4%	1.5%	-1.1%	-0.3%	0.5%	12.19	84.00	-61.85	0.69	33.45
Asia	5.2%	4.1%	4.6%	1.8%	3.6%	95.68	158.80	251.02	153.82	149.44
Eastern Asia	3.1%	2.5%	3.5%	-0.3%	3.6%	71.65	81.33	160.45	309.53	85.27
South-Eastern Asia	5.5%	5.0%	5.0%	1.9%	3.9%	65.55	106.20	108.28	140.76	82.50
Western Asia	5.0%	8.0%	8.1%	7.0%	7.7%	184.06	212.88	369.46	193.88	172.70
Southern Asia	7.0%	4.8%	4.9%	2.8%	3.1%	64.29	120.79	92.98	95.12	298.00
Europe	2.9%	7.5%	2.1%	3.1%	2.4%	462.29	297.45	279.38	106.82	105.46
Southern Europe	-0.4%	1.2%	0.5%	1.7%	1.3%	443.76	114.79	16.43	69.39	83.66
Eastern Europe	7.7%	19.0%	5.2%	5.0%	3.6%	145.24	163.52	168.99	64.57	81.42
Northern Europe	0.1%	-1.4%	-1.3%	2.3%	1.7%	310.70	1246.62	441.65	165.46	134.33
Western Europe	0.3%	0.6%	0.8%	2.0%	2.1%	2263.62	113.90	81.97	59.24	46.37

Note:

1. Annual inflation rates are based on a 12-month average of year-over-year monthly inflation.
2. Venezuela is excluded from calculation of regional and global averages due to its phenomenally high rate of inflation.

Table 2: Monthly global and regional consumer food price inflation

	2018											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
World	3.9%	4.0%	4.3%	4.0%	3.9%	4.4%	4.5%	4.8%	3.2%	3.2%	2.6%	1.4%
Africa	9.7%	8.3%	7.2%	6.6%	6.1%	6.7%	5.9%	6.3%	6.0%	5.0%	2.5%	0.4%
Southern Africa	3.7%	3.3%	2.8%	3.1%	2.6%	2.7%	2.8%	2.9%	3.2%	2.9%	2.8%	2.3%
Western Africa	12.1%	11.2%	10.3%	9.7%	8.9%	8.7%	7.9%	8.5%	7.8%	8.5%	0.9%	0.6%
Northern Africa	2.6%	2.2%	2.8%	3.3%	5.6%	6.1%	5.0%	3.1%	1.4%	2.0%	2.1%	0.0%
Central Africa	4.1%	3.8%	3.6%	3.5%	3.3%	3.3%	3.3%	3.1%	2.9%	2.9%	2.7%	2.7%
Eastern Africa	10.5%	11.0%	9.1%	7.3%	6.2%	5.7%	6.9%	5.9%	6.5%	5.4%	1.3%	0.9%
Latin America and the Caribbean	3.7%	3.4%	3.1%	2.4%	2.9%	3.4%	3.0%	2.8%	3.2%	3.4%	3.4%	2.2%
South America	2.2%	2.0%	1.5%	1.1%	2.0%	4.5%	5.0%	5.6%	7.0%	8.4%	6.8%	6.8%
Central America	7.8%	6.9%	5.9%	4.8%	3.8%	3.4%	2.9%	3.1%	3.5%	3.9%	4.3%	4.0%
Caribbean	7.6%	6.7%	7.0%	6.9%	7.0%	7.1%	6.9%	1.6%	1.0%	1.4%	1.0%	0.0%
Northern America	1.1%	0.6%	0.4%	0.6%	0.1%	0.3%	0.3%	0.5%	0.4%	0.2%	0.5%	0.8%
Asia	3.0%	3.6%	4.4%	4.0%	4.1%	4.6%	5.0%	5.4%	2.6%	2.8%	2.6%	1.1%
Eastern Asia	0.3%	3.4%	6.3%	5.4%	5.1%	5.5%	7.2%	8.3%	0.4%	0.4%	0.2%	0.0%
South-Eastern Asia	2.3%	2.7%	3.3%	3.9%	3.9%	4.2%	4.8%	4.9%	4.6%	4.9%	4.6%	2.9%
Western Asia	4.7%	5.0%	4.5%	3.6%	4.9%	8.2%	8.8%	8.6%	11.4%	12.3%	10.4%	10.3%
Southern Asia	5.3%	3.9%	3.1%	2.9%	3.3%	3.6%	2.9%	2.7%	2.9%	3.1%	3.1%	0.4%
Europe	3.0%	2.2%	2.8%	2.9%	2.6%	2.2%	2.0%	2.4%	2.5%	2.2%	2.2%	2.0%
Southern Europe	1.2%	0.1%	0.9%	1.1%	1.8%	2.2%	2.0%	1.9%	1.5%	1.1%	1.0%	0.9%
Eastern Europe	4.6%	4.2%	4.6%	4.5%	3.3%	2.2%	2.0%	3.1%	3.5%	3.5%	3.8%	3.3%
Northern Europe	3.1%	2.3%	2.4%	2.3%	2.0%	1.8%	1.6%	1.7%	1.5%	0.9%	0.6%	0.7%
Western Europe	2.1%	1.0%	2.0%	2.4%	2.4%	2.4%	2.1%	2.0%	2.5%	1.9%	1.7%	1.6%

Note: monthly inflation rates are year-over-year inflation rates.

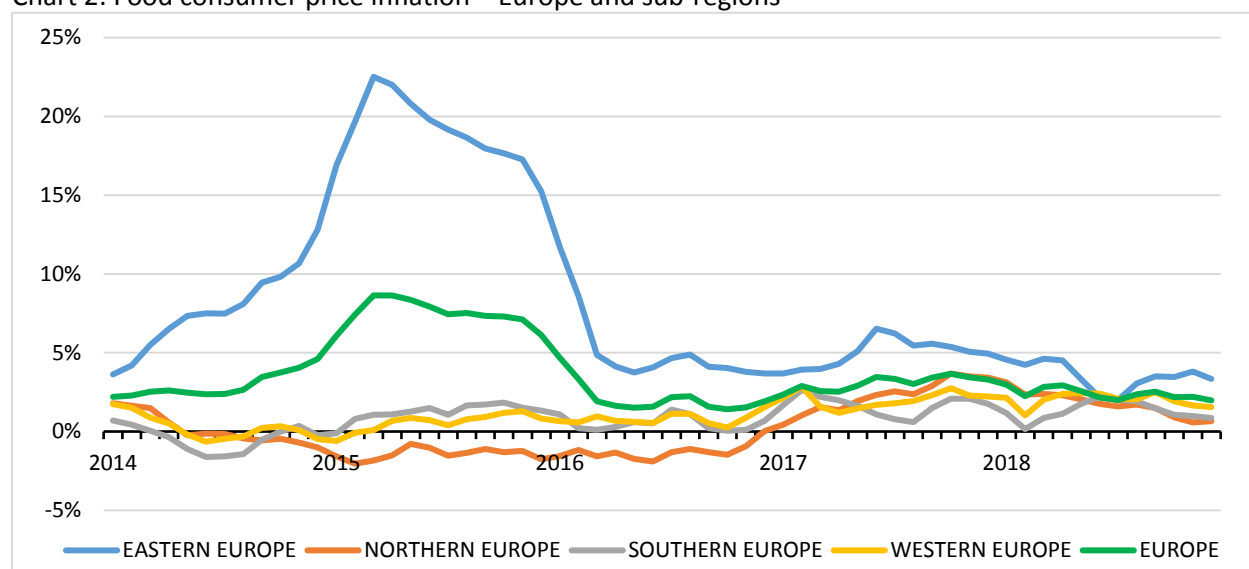
Regional focus: Europe

In Europe, the annual food inflation rate remained mostly stable, oscillating between 2% and 3%, except in 2015 when it reached 7.5%. The highest level of food inflation rate (21%) was recorded in Eastern Europe in March and April 2015.

The overall inflation in Europe was on account of price increases in Eastern Europe, in particular in the Russian Federation and Ukraine, due to conflicts, political tensions and import restrictions¹. However, consumers in other sub regions of Europe experienced steady or in some cases even declining food prices (Table 1 and Chart 2).

¹ The Guardian, <http://www.theguardian.com/business/2014/mar/03/ukraine-crisis-crimea-hits-price-wheat-corn>, Ukraine crisis sends wheat and corn prices soaring

Chart 2: Food consumer price inflation – Europe and sub-regions



Sources: IMF, UNSD and national statistics' websites, FAO Statistics Division for the calculation

Regional focus: Northern America

In Northern America, annual food inflation fell between 2014 and 2018 from 2% to 0% (Table 1). The decline can be attributed to a culmination of factors. Retail food prices, in general, are driven by the costs of several production factors, including commodity inputs, transportation, and food processing. Declining prices for retail meats, eggs, and dairy in 2016 are largely a story about rising commodity production, especially for eggs. Retail egg prices declined by 21.1% in 2016, as the industry recovered from the outbreak of Highly Pathogenic Avian Influenza (HPAI) that killed 11% of egg-laying birds in 2015².

Regional focus: Latin America and the Caribbean (excluding Venezuela)

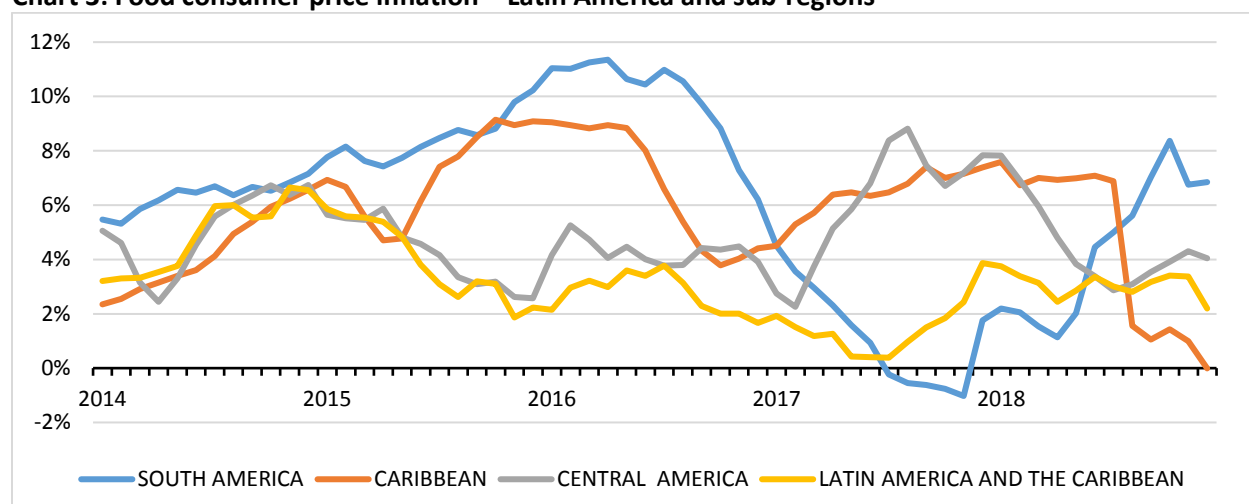
In Latin America annual food inflation decreased from 2014 to 2017 and slightly rose in 2018, from 4.9% in 2014 to 1.5% in 2017 and 3.1% in 2018. The main driver of this increase was South America, where food inflation increased in the same period (Table 1).

The drop of inflation in 2017 may be attributed to an exceptional harvest in Brazil and Mexico³.

² Economic Research Services (ERS), <https://www.ers.usda.gov/amber-waves/2017/march/consumers-paid-less-for-grocery-store-foods-in-2016-than-in-2015/>

³ IMF: World Economic Outlook, October 2018: Challenges to Steady Growth; October 8, 2018, <https://www.imf.org/en/Publications/WEO/Issues/2018/09/24/world-economic-outlook-october-2018>

Chart 3: Food consumer price inflation – Latin America and sub-regions



Sources: IMF, UNSD and national statistics' websites, FAO Statistics Division for the calculation

Regional focus: Asia

In Asia, during the last 5 years, food inflation rate fell from 5.2% in 2014 to 3.6% in 2018 (Table 1).

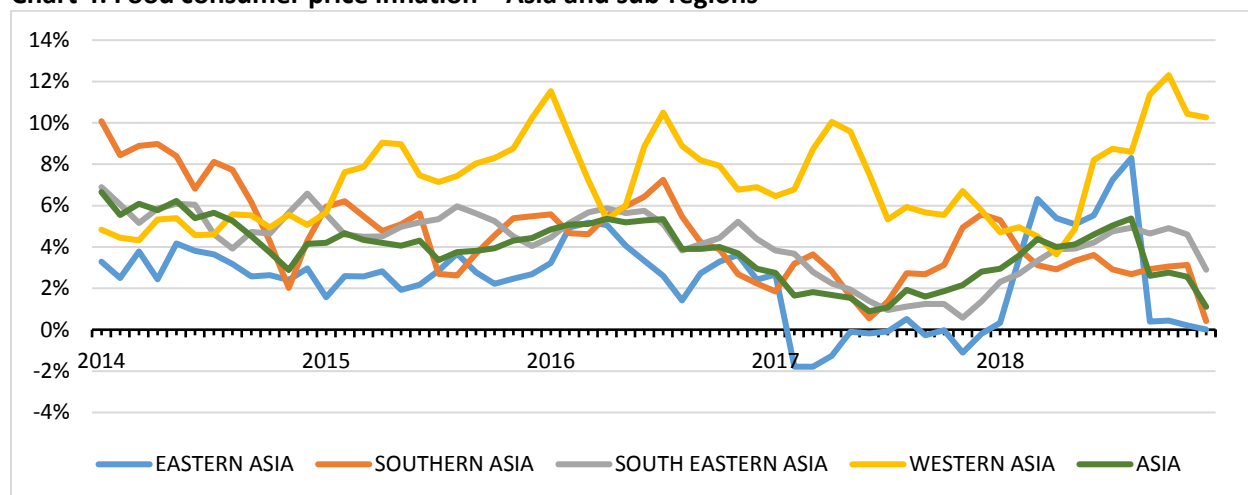
Asian consumers experienced a slowdown in food inflation almost continuously since the beginning of 2016 from a peak of 5.4% in April 2016 to a low of 0.9% in June 2017. In 2018, food inflation registered an upward trend from 3.0% in January to 5.4% in August before decreasing to 1.1% in December 2018. We observe the same trend for South and South-East Asia regions while Western Asia experienced a steady high food inflation rate of 7.6% from February 2015 to 10% in December 2017. The food inflation rate of Eastern Asia remained the lowest in Asia from January 2014 to January 2018, before rising to a peak value of 8.3% in August 2018. (Chart 4)

Part of this decline in food inflation is due to the fall in agricultural commodity prices; however, region and country-specific factors are significant in explaining food inflation trends. Slowing food prices in China and India, the main drivers in Eastern and Southern Asia, help explain the overall rate of food inflation in the region.

Turkey mainly drove the rise of food inflation rate in Western Asia due to a rise in non-proceeded food prices, mainly in fresh fruit and vegetable prices, and a lower base effect played a key role here. Significant increases were also seen in red meat and white meat, as well as in rice and legumes⁴.

⁴ <http://www.hurriyetdailynews.com/food-prices-key-in-turkeys-skyrocketing-annual-inflation-central-bankreport-111613>

Chart 4: Food consumer price inflation – Asia and sub-regions



Sources: IMF, UNSD and national statistics' websites, FAO Statistics Division for the calculation

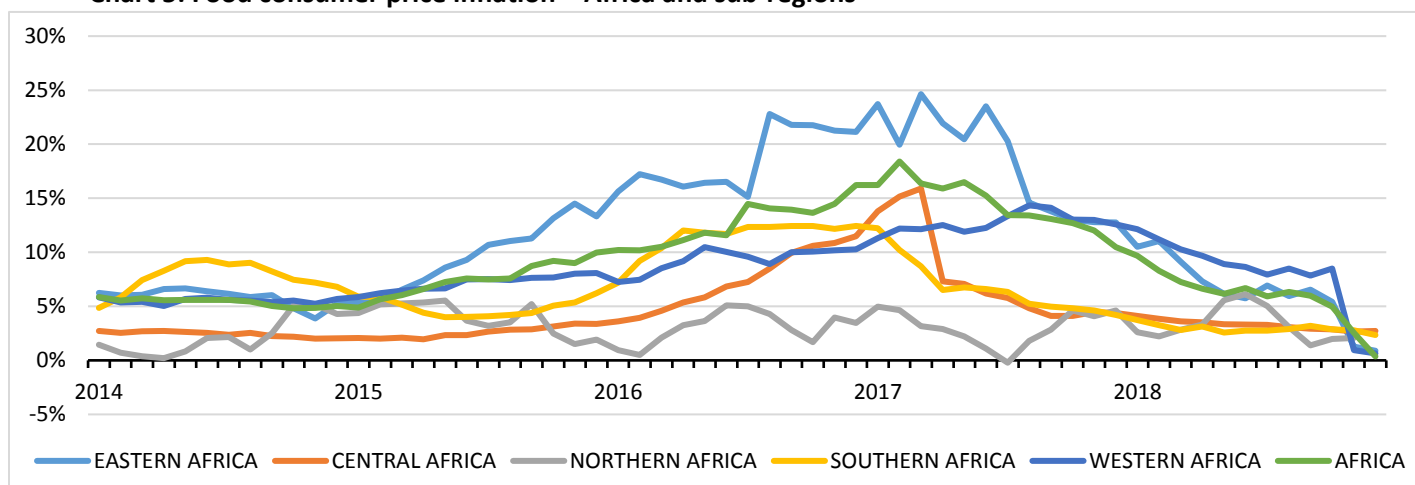
Regional focus: Africa

In Africa, annual food inflation rate more than doubled from 5.4% in 2014 to 14.5% in 2017, before decreasing to 5.9% in 2018. The most noticeable increase was recorded in Eastern Africa, the main driver of the region, where food inflation more than tripled from 5.8% in 2014 to 18.5% in 2017. Western Africa also recorded an increase of food inflation rate from 5.5% in 2014 to 12.7% in 2017 and a decrease to 7.9% in 2018. The food inflation rate in the Northern Africa remained constant at around 3% during the last four years (Table 1 and Chart 5).

The increase in Western Africa was mainly driven by Nigeria, Sierra Leone and Guinea. In each of those countries, the food inflation rate more than doubled from 2014 to 2017.

The food inflation increase in Central Africa was mainly driven by Angola. While the main drivers of food inflation increase for Eastern Africa were South Sudan, Malawi, and Zambia.

Chart 5: Food consumer price inflation – Africa and sub-regions



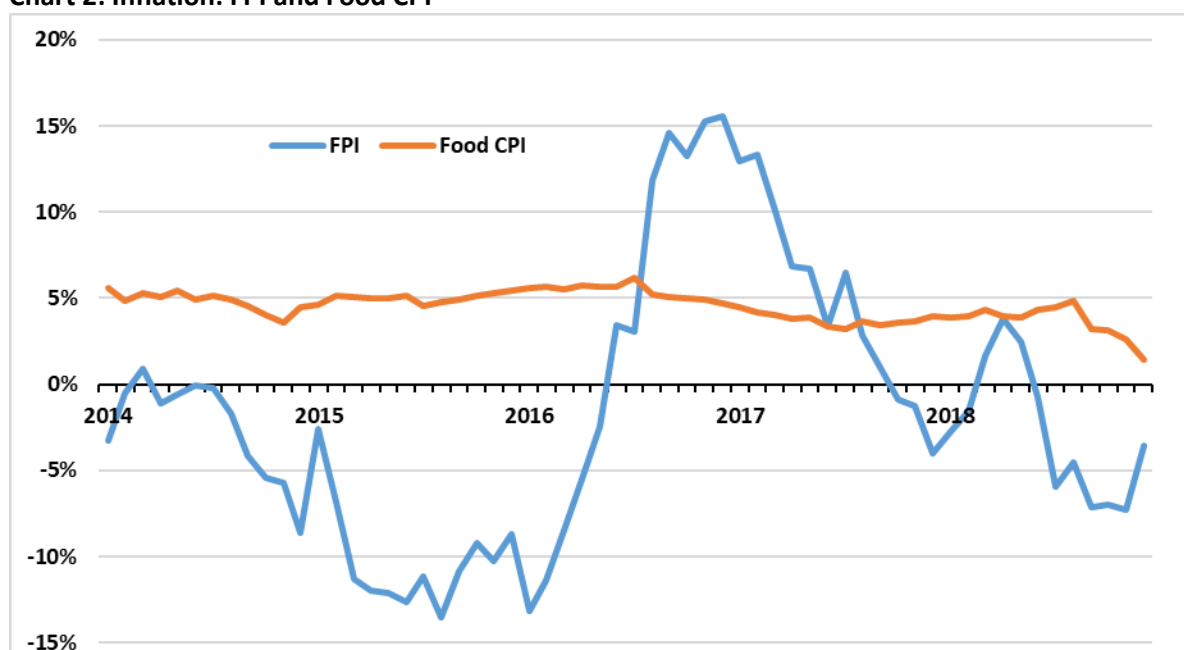
Sources: IMF, UNSD and national statistics' websites, FAO Statistics Division for the calculation

Agricultural commodity prices and consumer food price inflation

A comparison of the historical trend of the agricultural commodity prices inflation measured by the FPI⁵ against the food price inflation measured by the global food CPI confirms that the FPI could be a leading indicator of future consumer food price inflation (Chart 6). However it shows that the volatility in the FPI is not fully transmitted to the global food CPI.

Several factors may explain the limited price transmission from international markets to the domestic economy, including public policy, such as border measures or interventions on domestic markets in terms of price controls and subsidies that can insulate local prices from world markets. Other factors include: changes in exchange rates, transport costs, market imperfections other than the domestic market structure, and the length of the value-chain.

Chart 2: Inflation: FPI and Food CPI



Source: IMF, UNSD, national statistics' websites and FAO⁶, FAO Statistics Division for the calculation

[Download CPI data](#)

⁵ The FAO Food Price Index is a measure of the monthly change in international prices of a basket of food commodities. It consists of the average of five commodity group price indices, weighted with the average export shares of each of the groups for 2002-2004

⁶ <http://www.fao.org/worldfoodsituation/foodpricesindex/en/>

Note to Readers

Definitions and Acknowledgements

Global and Regional Food Consumer Price Indices (CPI) measure food inflation for a group of countries at different geographical scales: sub-regional (e.g. South America), regional (e.g. Americas) and global (all countries). The Global Food CPI covers approximately 180 countries worldwide representing more than 95% of the world population.

Venezuela is not included in regional or global analysis as the unusual inflation rates there could distort the picture.

Monthly inflation rates are annual year-over-year inflation or percentage change over corresponding month of the previous year.

Aggregation uses population weights, which may better reflect the impact of food inflation on consumers than Gross Domestic Product (GDP) weights. The use of GDP weights also gives higher importance to countries less exposed to food insecurity, as consumers in countries with higher GDP tend to be richer, spend a lower proportion of their income on food, and benefit from an economic environment characterized by lower and less volatile consumer price inflation.

The sources of official country CPIs includes the International Monetary Fund (IMF), the UN Statistics Division (UNSD), the Central Bank of Western African States (BCEAO), Eastern Caribbean Central Bank (ECCB) and national statistical office websites. We gratefully acknowledge the Statistics Division of the ILO for their methodological and technical guidance on the compilation of global and regional food inflation indices. In 2015, the IMF took over from the ILO, the responsibility for compiling an international database of official national CPIs, as per an agreement between the IMF, the ILO and FAO.

Global and regional food CPIs should be interpreted with caution due to conceptual and methodological differences across countries in the compilation of their official CPIs.

Next release

Country Consumer Food Price Indices are updated in FAOSTAT on a quarterly basis. The next release presenting global and regional trends will be on June.

Contact information

For more information, or to enquire about concepts, methods or data quality, contact the Price Statistics Team of FAO's Statistics Division (Price-Statistics@fao.org)