



EUROPEAN CENTRAL BANK

EUROSYSTEM

Gabriel Quirós
Head of Division
Macroeconomic Statistics
European Central Bank

Agricultural prices and inflation measurement

Monitoring agriculture and rural
planning with advanced methods

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Overview

- I. Central banks and inflation measurement
- II. The Harmonised Index of Consumer Prices (HICP)
- III. Agricultural prices in the HICP: the food component
- IV. Agricultural prices in inflation forecasting: commodity price index
- V. Concluding comments

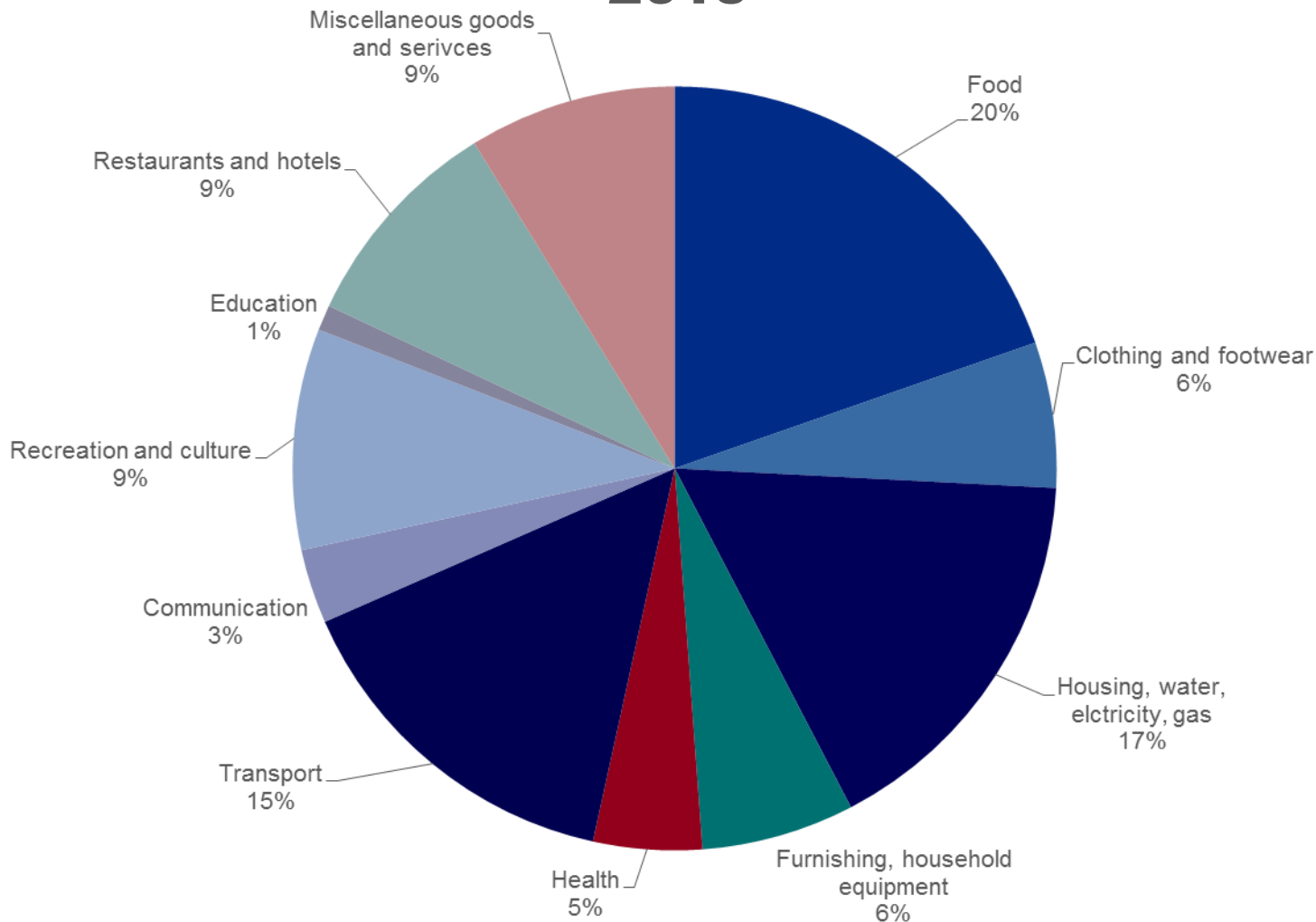
Price stability – objective and definition

- Article 127 of the Treaty on the Functioning of the European Union:
“The primary objective of the ESCB shall be to maintain price stability”
- ECB’s Governing Council gives a definition of price stability:
“Price stability is defined as a year-on-year increase in the Harmonised Index of Consumer Prices (HICP) for the euro area of below 2%.”
- The Governing Council aims **to maintain inflation rates at levels below, but close to, 2% over the medium term.**

The concept of HICP

- HICP measures changes in prices over time for fixed “**consumption segments**” = set of consumer expenditure on products which serve a common purpose
- **Weights** reflect expenditure shares, up-dated each year
- HICP covers **household final monetary consumption expenditure**
- Prices collected are **actual consumer prices, including taxes** on products, taking account of **sales prices**, representing the **whole period**
- Non-food products not easily identifiable in the consumption basket: underestimation of agricultural price effects on HICP

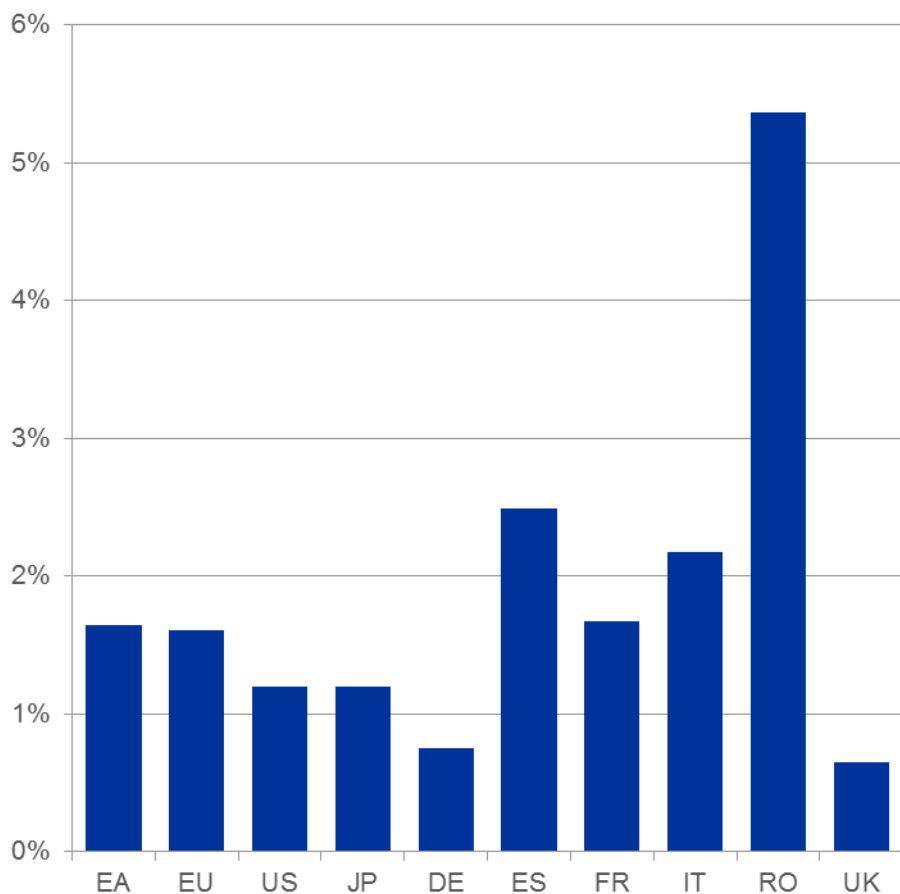
Main components of the consumption basket (COICOP*) 2015



*Classification Of Individual Consumption by Purpose

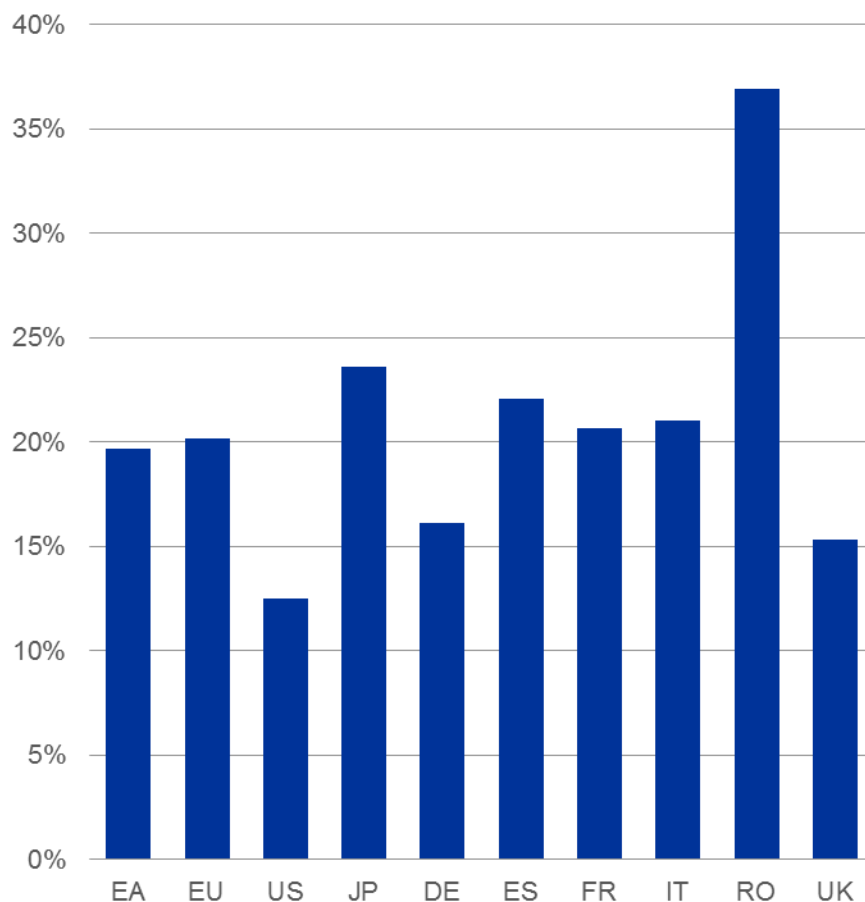
Importance of agriculture and food sector

Value added of agriculture*
(percentage of total value added, 2014)



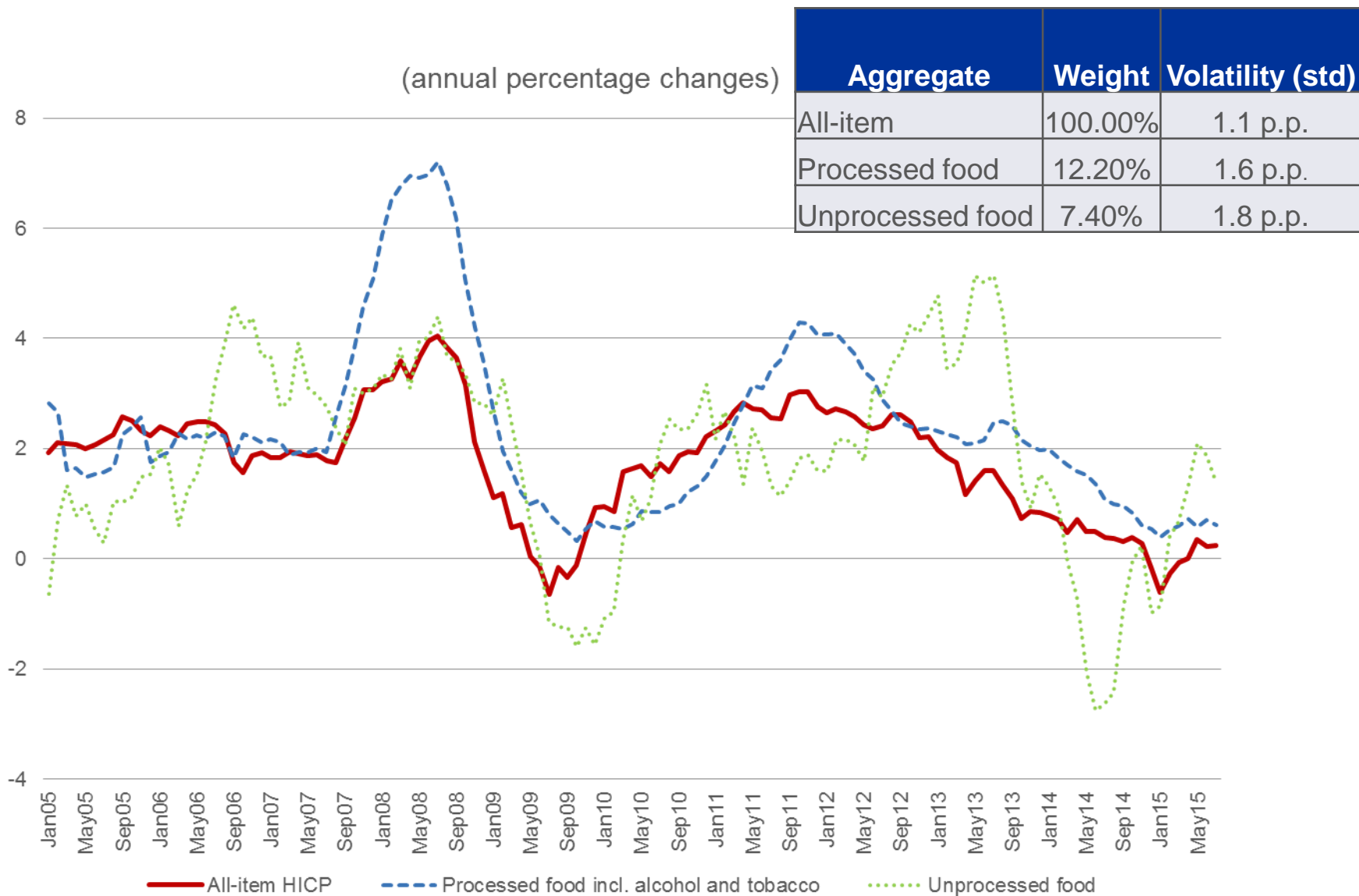
* "Agriculture, fishing and forestry" according to NACE Rev.2

Weight of food
(percentage of total CPI*, 2015)



* Weights in the CPIs of JP and US are relative to the total CPI excluding owner-occupied housing

Source: Eurostat, Bureau of Labor Statistics, Statistics Bureau of Japan, ECB calculations.

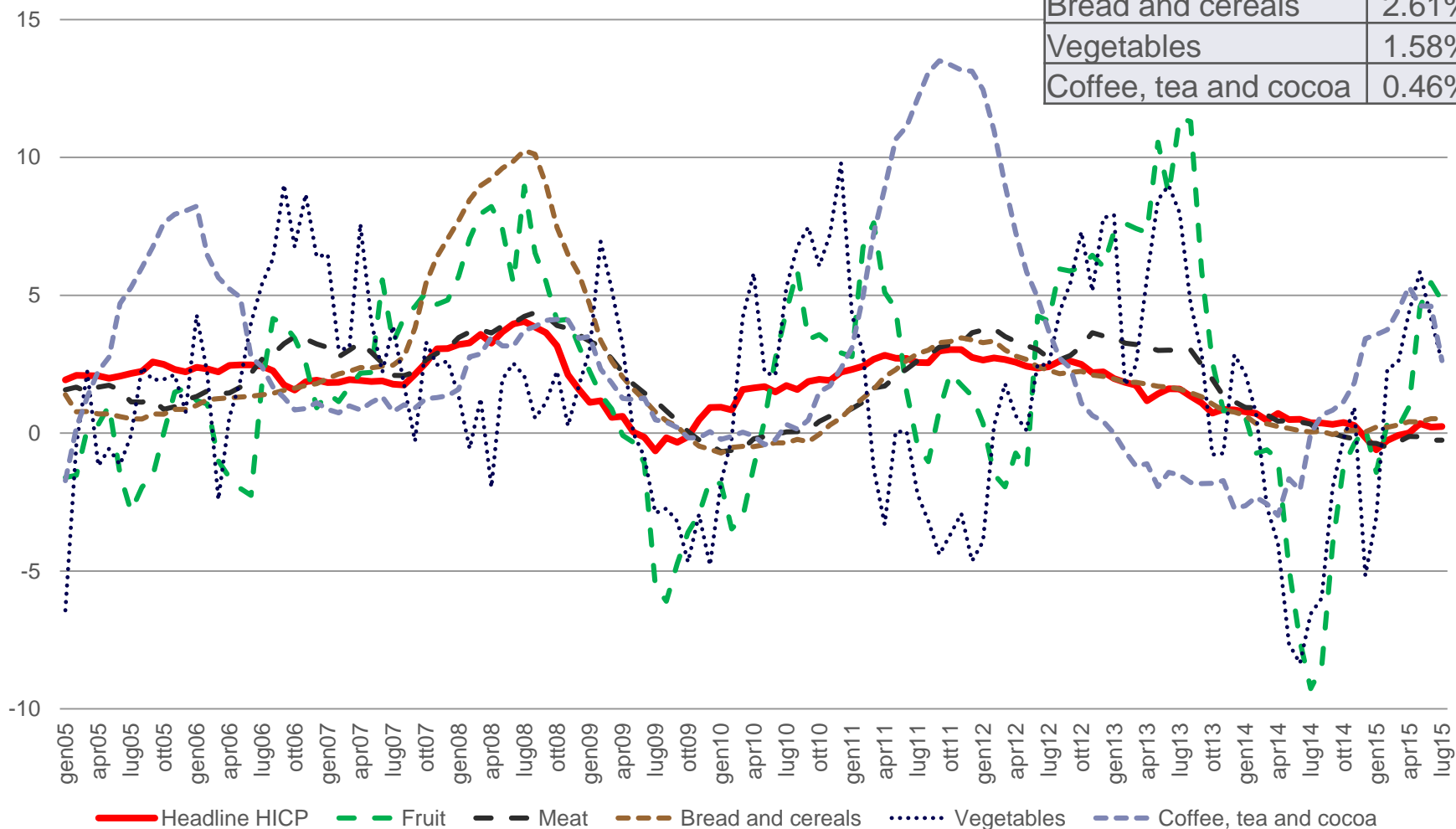


Source: Eurostat, ECB calculations.

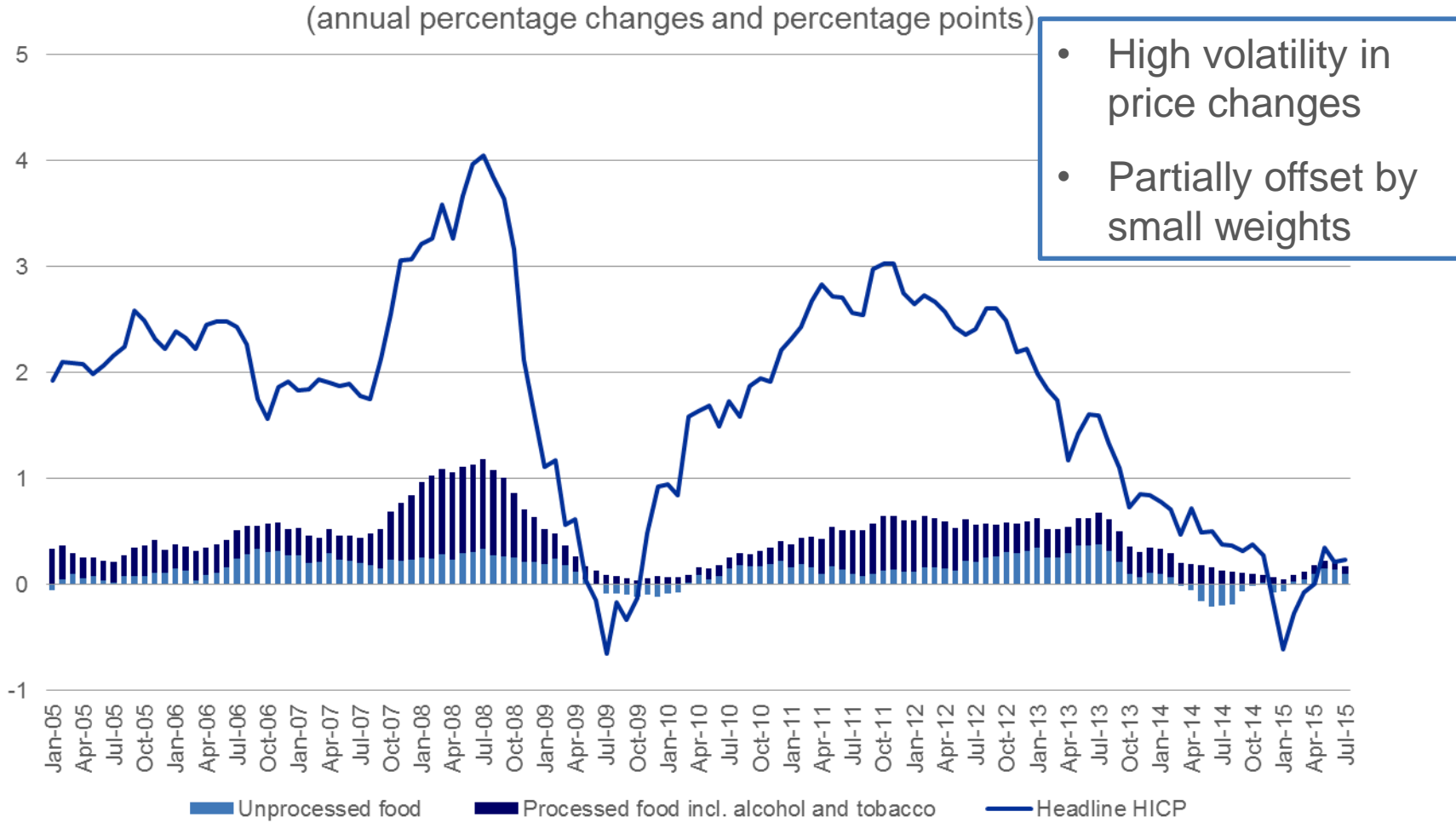
High volatility of agricultural prices

(annual percentage changes)

Sub-index	Weight
Fruit	1.19%
Meat	3.61%
Bread and cereals	2.61%
Vegetables	1.58%
Coffee, tea and cocoa	0.46%

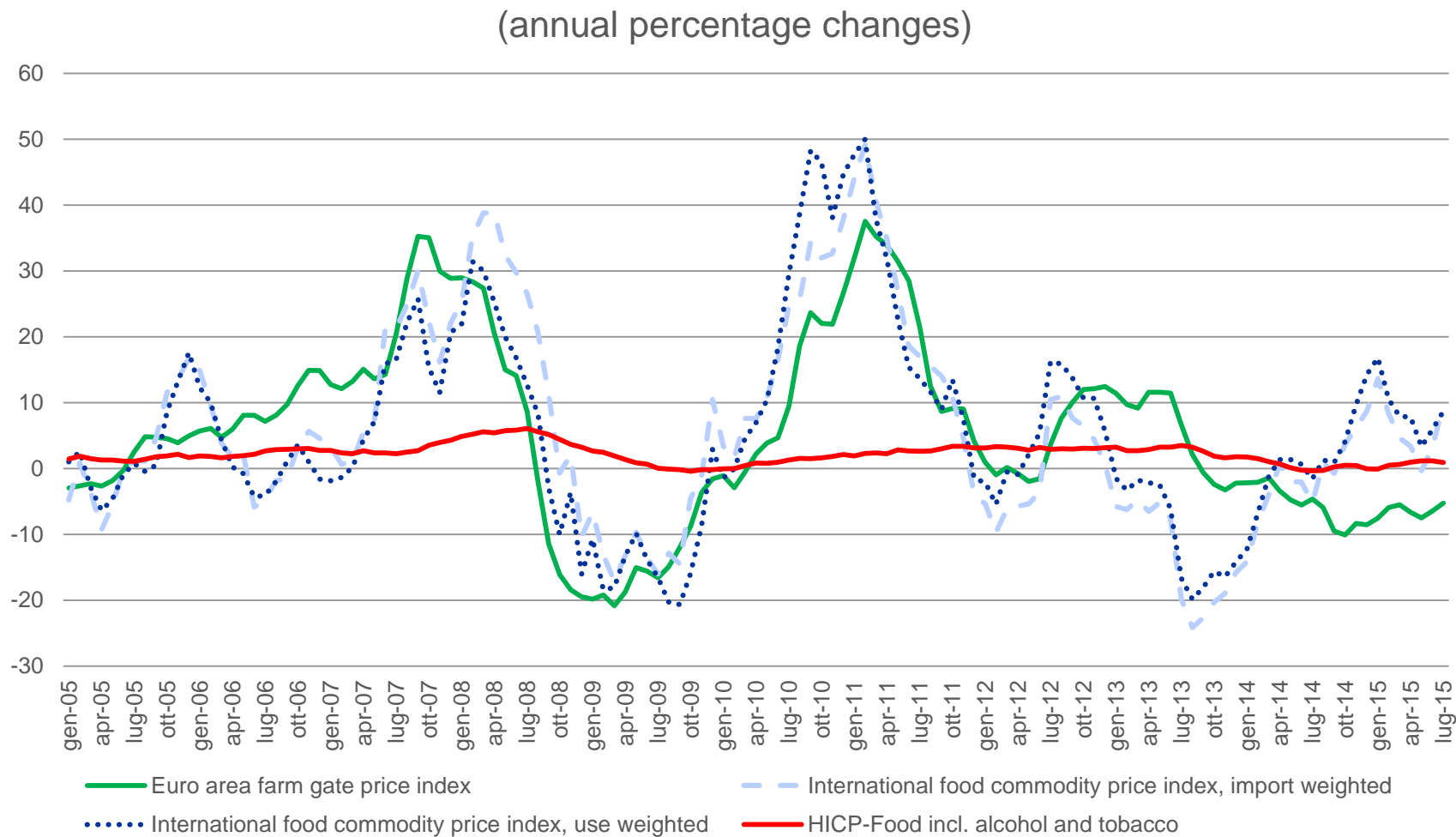


Contributions of price changes of food components to annual growth rate of EA HICP



Source: Eurostat, ECB calculations.

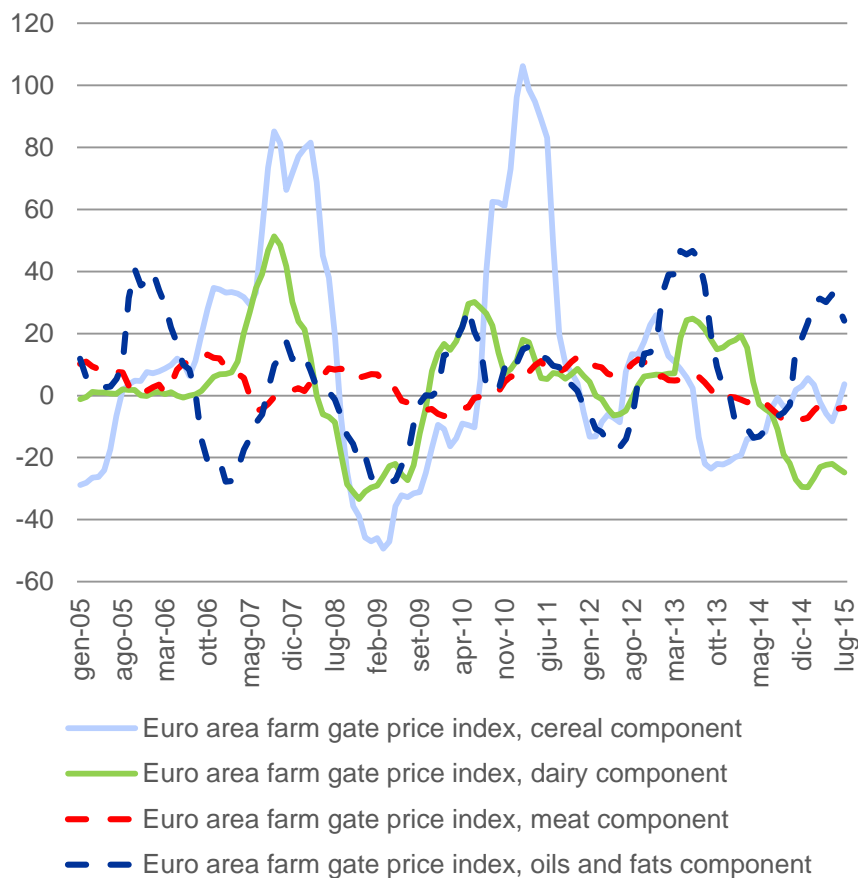
Resort to more detail, closer monitoring: commodity indices



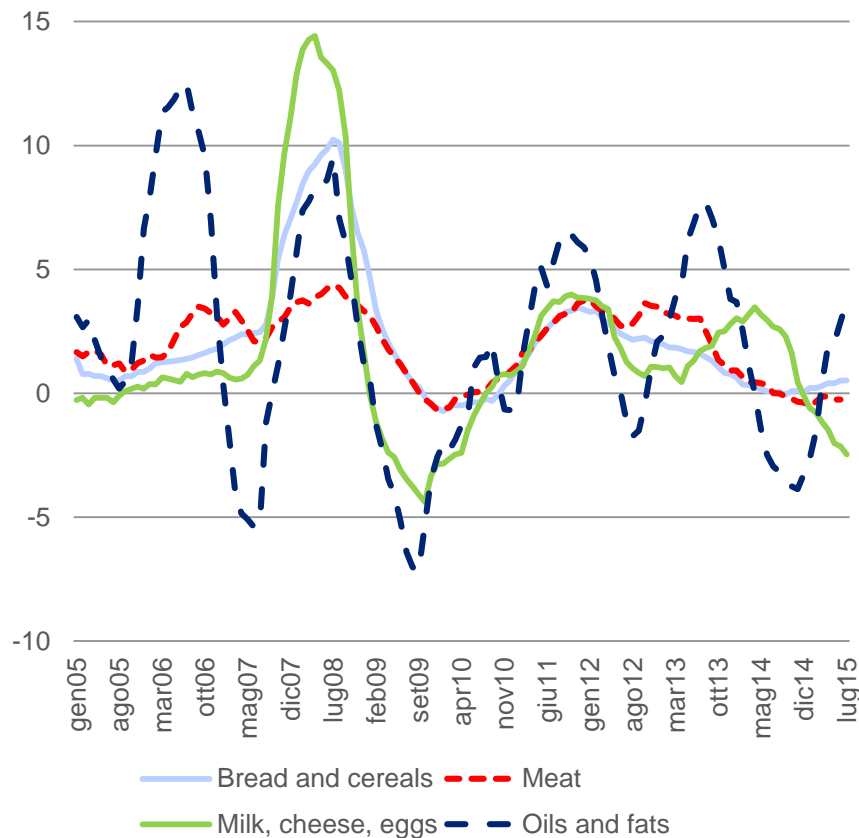
Source: Eurostat, ECB calculations.

Commodity prices and HICP components: inflation perceptions

Euro area farm gate price index components
(annual percentage changes)



HICP components
(annual percentage changes)



Source: Eurostat, ECB calculations.

- Agricultural output contribution to GDP relatively low
 - ...but agricultural prices highly relevant for price developments
- However, available economic classification of agricultural consumption not sufficiently detailed to measure its influence on consumer prices
 - ...need to resort to commodity price indices, both euro area and international indices
- High volatility of agricultural prices, partly offset, filtered out by weight
- Need to work-out short-term price developments versus medium-term inflation:
 - ...short-term developments affect consumers inflation perceptions, not necessarily medium/long-term inflation outlook
 - ...challenge for inflation forecasting, and its communication.