



EUROPEAN CENTRAL BANK
EUROSYSTEM

#EUROat20



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The euro area economy: Economic conditions, inflation and prospects

Central Banking Seminar
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Overview

1 Economic analysis and conjunctural assessment

1.1 Economic analysis at the ECB

1.2 Main features of the euro area economy

1.3 Conjunctural developments and the outlook

1.4 Business cycle synchronisation

2 Inflation developments in the euro area

2.1 Recent developments in euro area inflation

2.2 Euro area inflation through the lens of the Phillips curve

2.3 Structural drivers of inflation

2.4 Inflation outlook

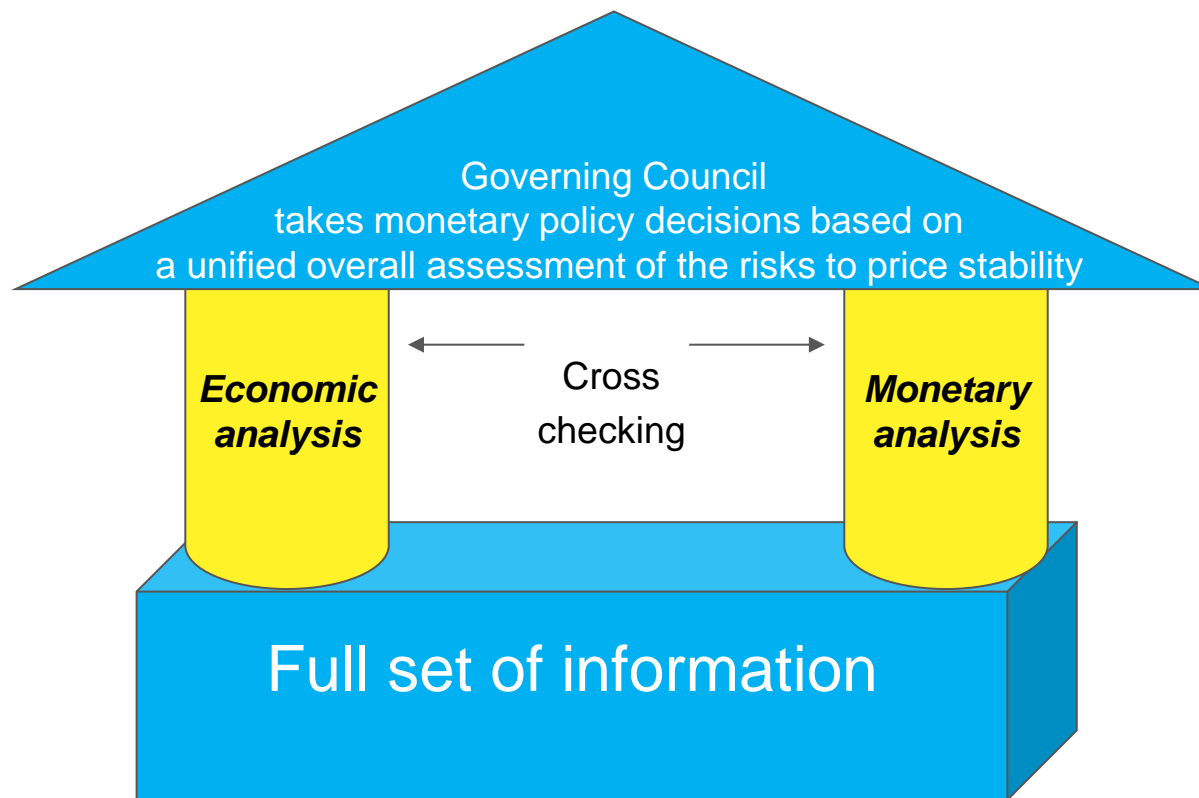


EUROPEAN CENTRAL BANK

EUROSYSTEM

Economic Analysis at the ECB

Economic analysis as part of the information set to inform monetary policy decisions



- Assessment of **short to medium-term determinants of price developments**
- Forward-looking assessment of relevant information from a variety of indicators (e. g. business cycle, wages, exchange rate, asset prices, financial yields, fiscal policy, etc.)
- Quarterly macroeconomic projections for inflation and growth in the euro area, prepared by staff of the Eurosystem/ ECB

Monitoring

Analysing

Forecasting



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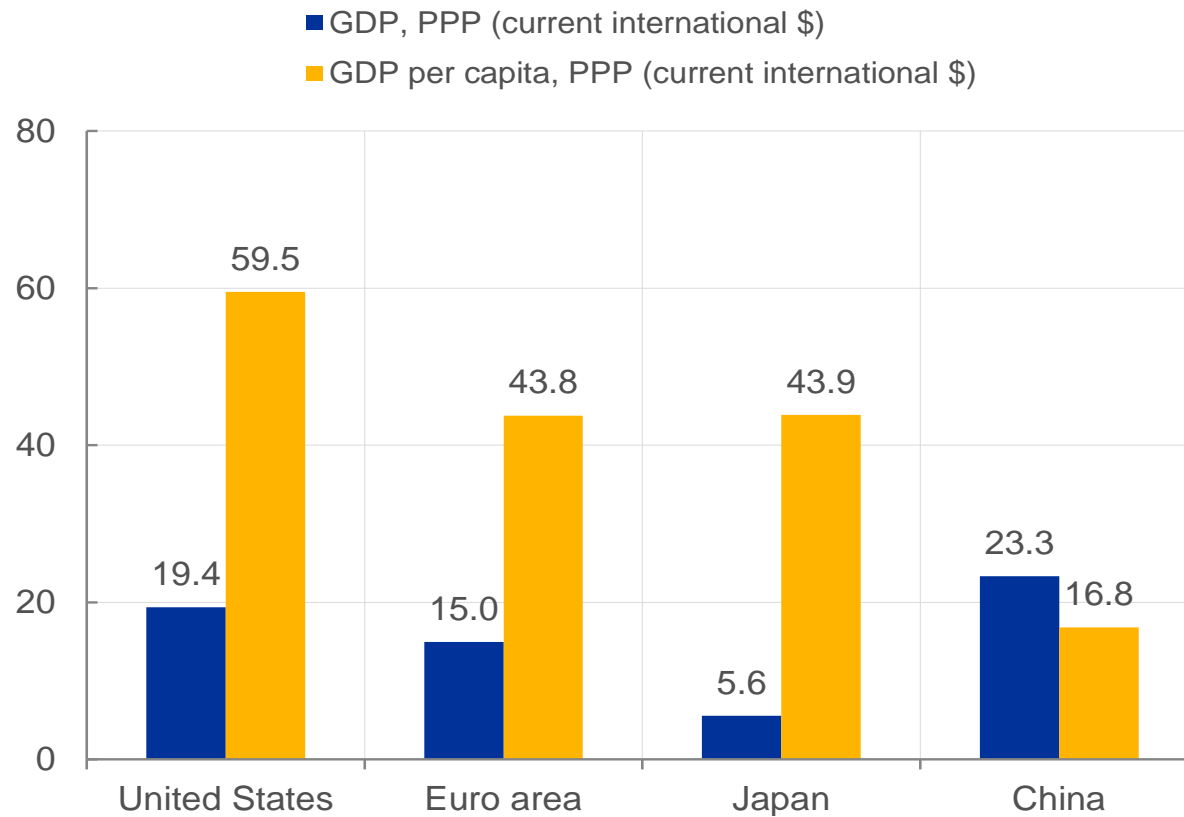
2.1 Recent developments in euro area inflation

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Size and per capita income – international comparison

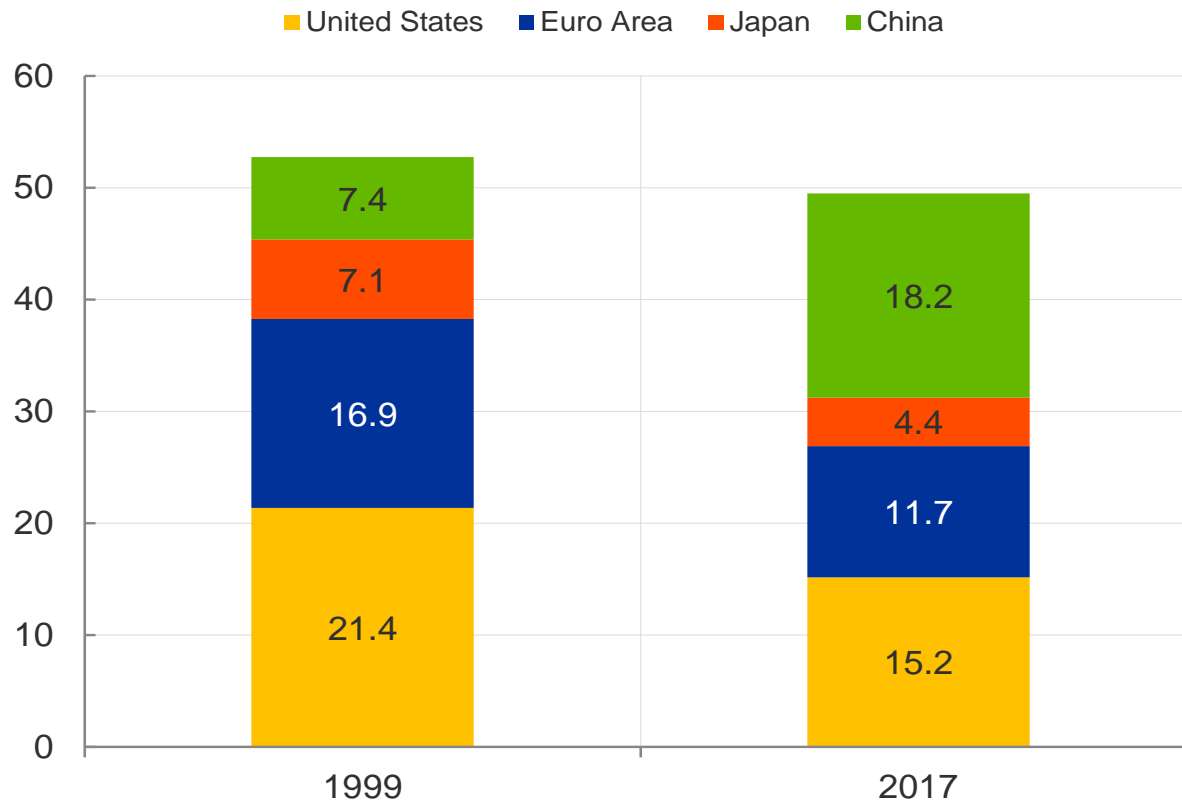


Sources: Worldbank International Comparison Database.

Note: Data for 2017, expressed in trillion current international \$ PPP for GDP and thousands international \$ PPP for GDP per capita.

Advanced economies share in world GDP is shrinking

Share in world GDP (annual, based on PPP)



Sources: World Bank International Comparison Database.

Note: The GDP shares are based on the purchasing-power-parity (PPP) valuation of country GDPs.



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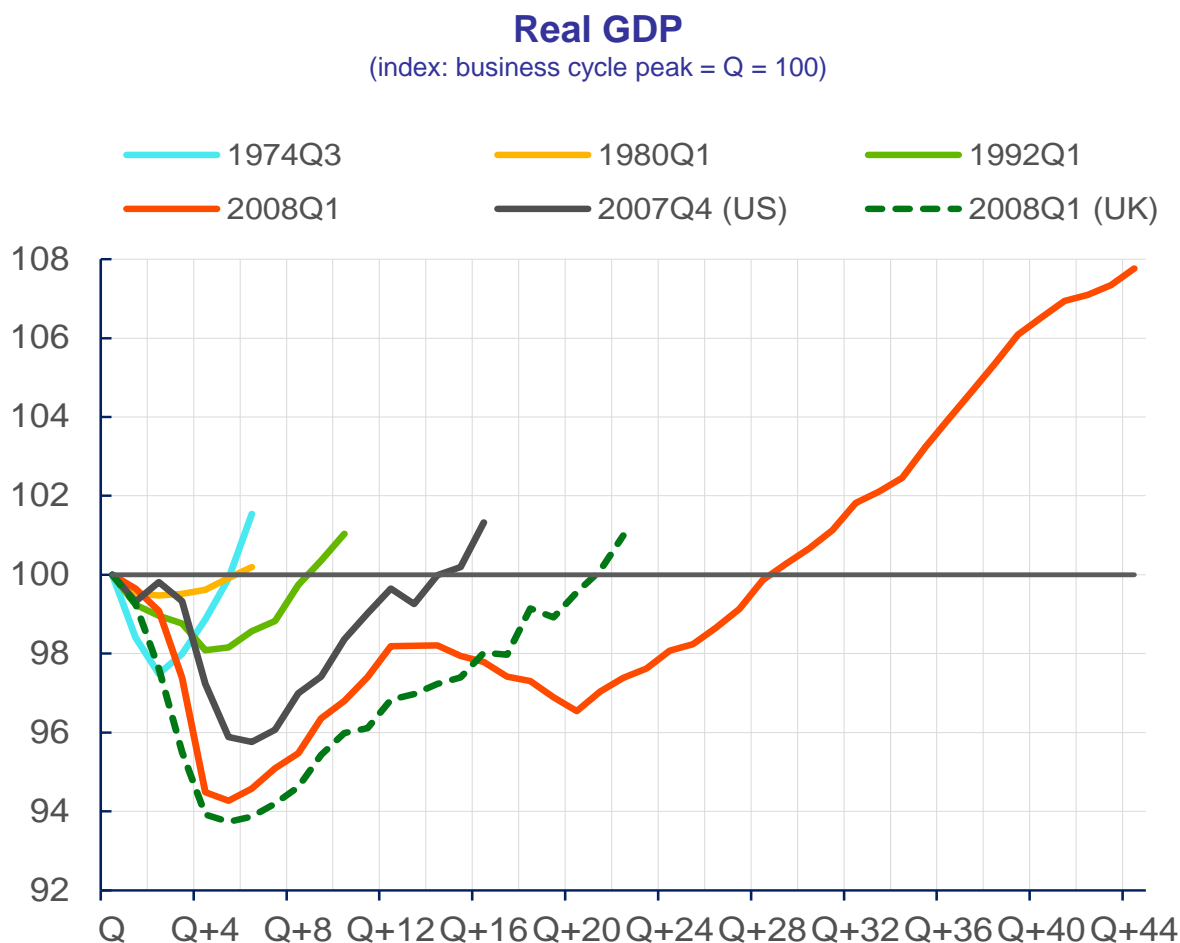
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The euro area expansion follows an unusually deep and protracted recession



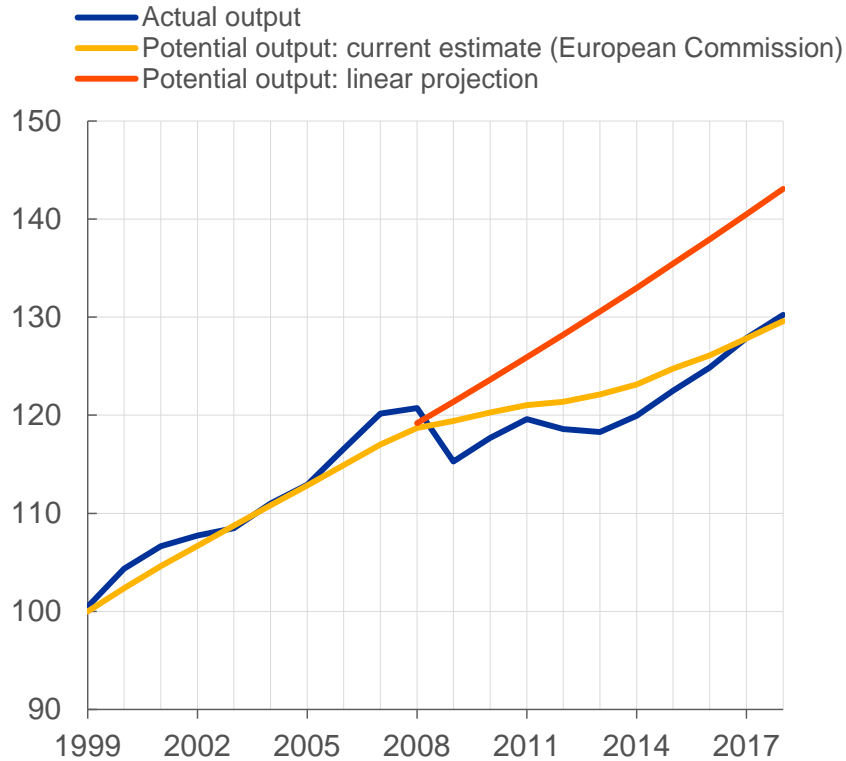
Sources: Eurostat and ECB calculations.

Note: The peaks are defined by the CEPR Euro Area Business Cycle Dating Committee.

Latest observations: 2019Q1 for the euro area.

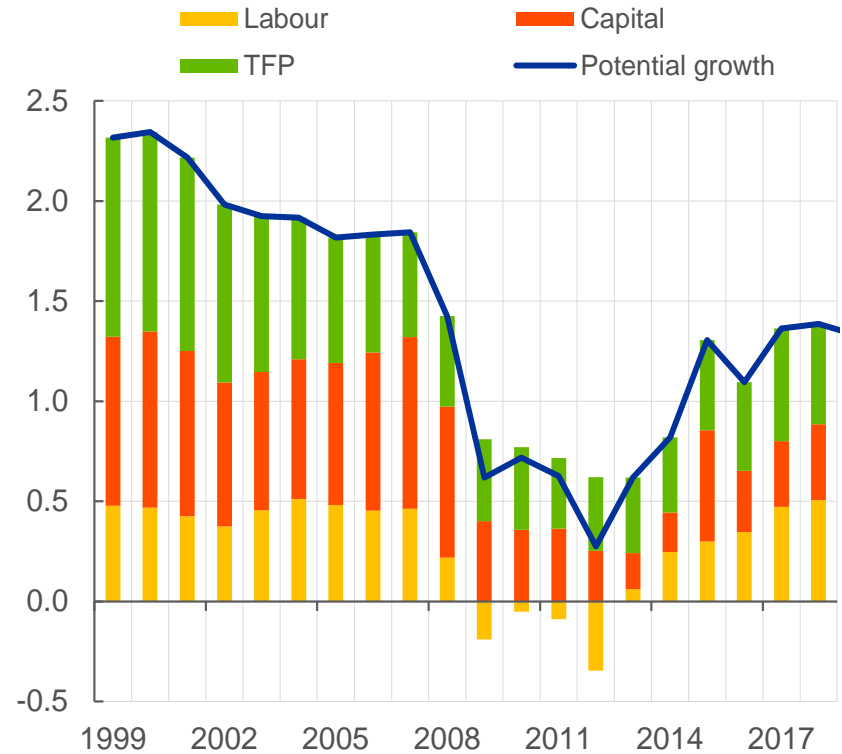
Levels of actual and potential output

(index: 1999=100)



Decomposition of potential growth

(percentage points and contribution)

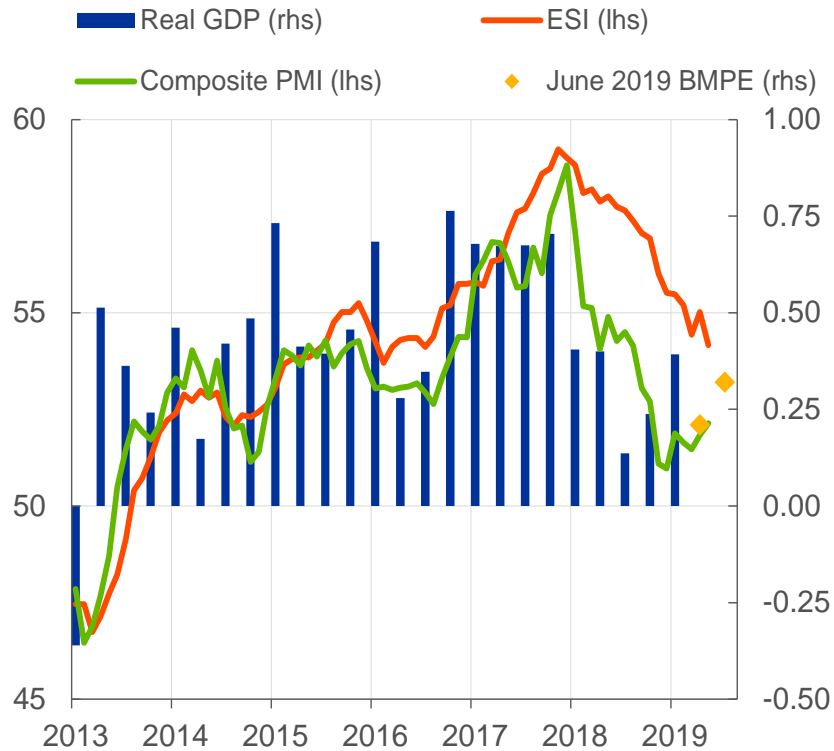


Sources: Eurostat, European Commission and ECB staff calculations.
 Notes: Actual output is real GDP. Potential output is based on European Commission estimates. The counterfactual scenario assumes that from 2007 onwards potential output steadily increased at the potential growth rate recorded in that year.
 Latest observation: 2018.

Sources: European Commission, ECB calculations.
 Latest observation: 2018.

Real GDP, short-term indicators and estimates

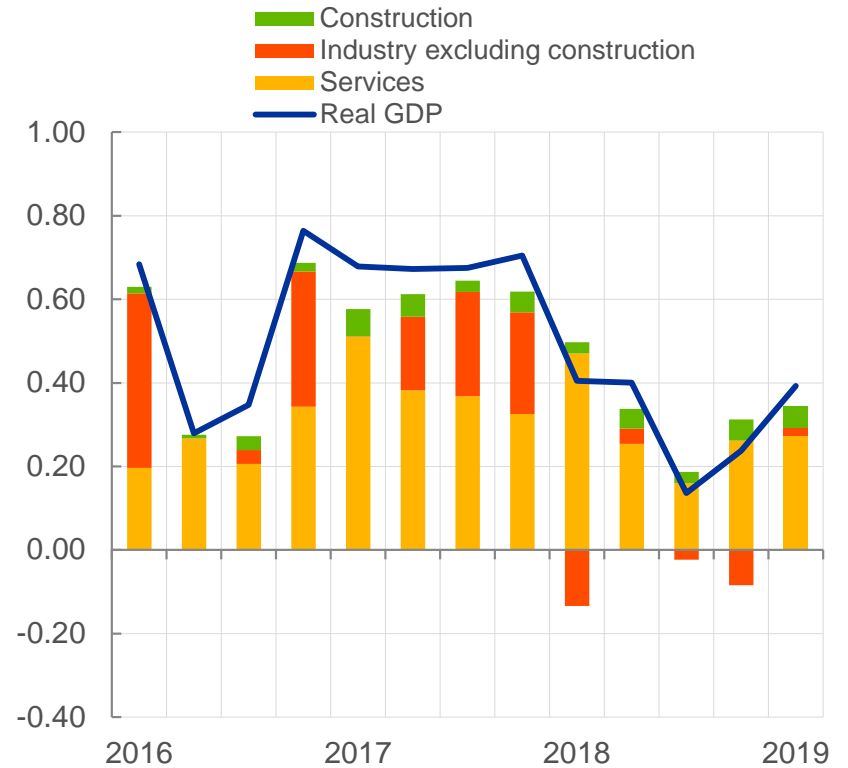
(lhs: index, rhs: quarter-on-quarter % changes)



Sources: Markit, Eurostat, June 2019 BMPE, ECB calculations.
Latest observations: 2019Q1 for GDP, June 2019 for PMI and ESI.

Supply breakdown

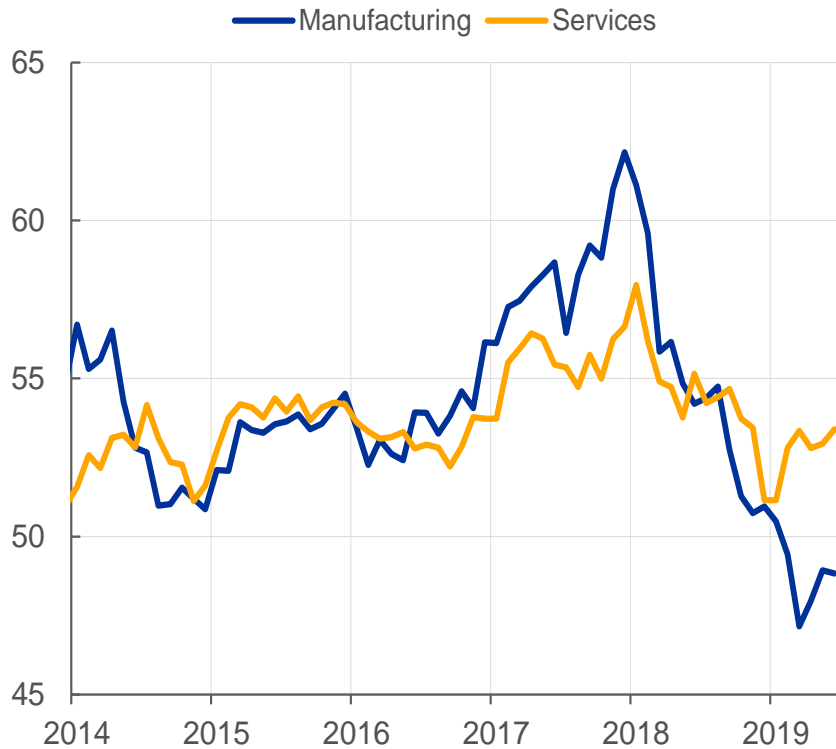
(quarter-on-quarter % changes and contributions to growth)



Sources: Eurostat, ECB calculations.
Note: The contributions of agriculture, energy and taxes less subsidies on production are not shown.
Latest observations: 2019Q1.

PMI manufacturing and services output

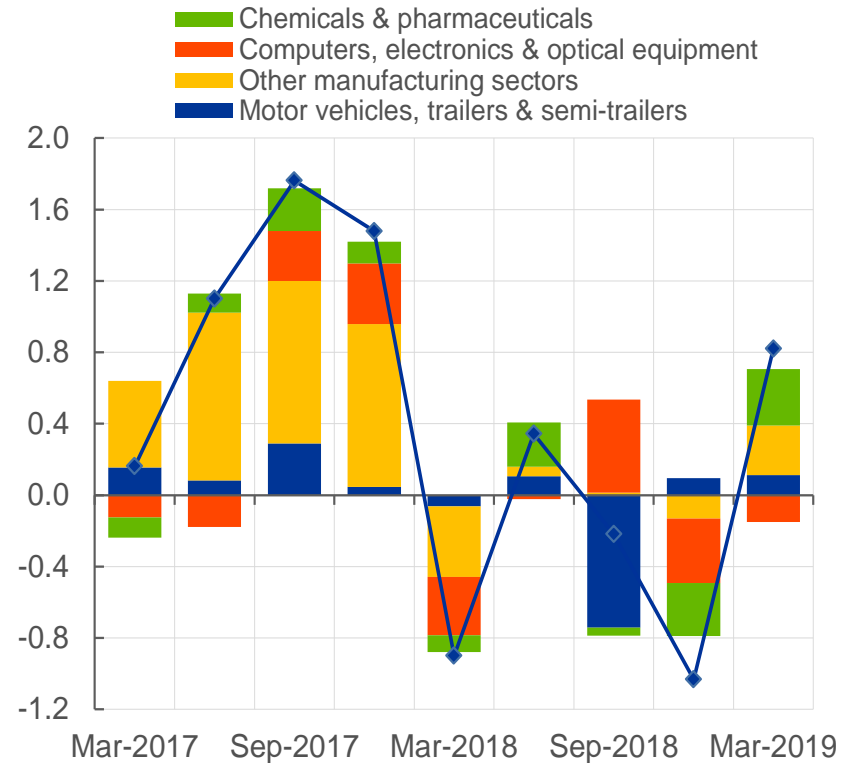
(diffusion index, 50 = no change)



Sources: Markit.
Latest observation: June 2019.

Contributions to q-o-q growth of manufacturing output

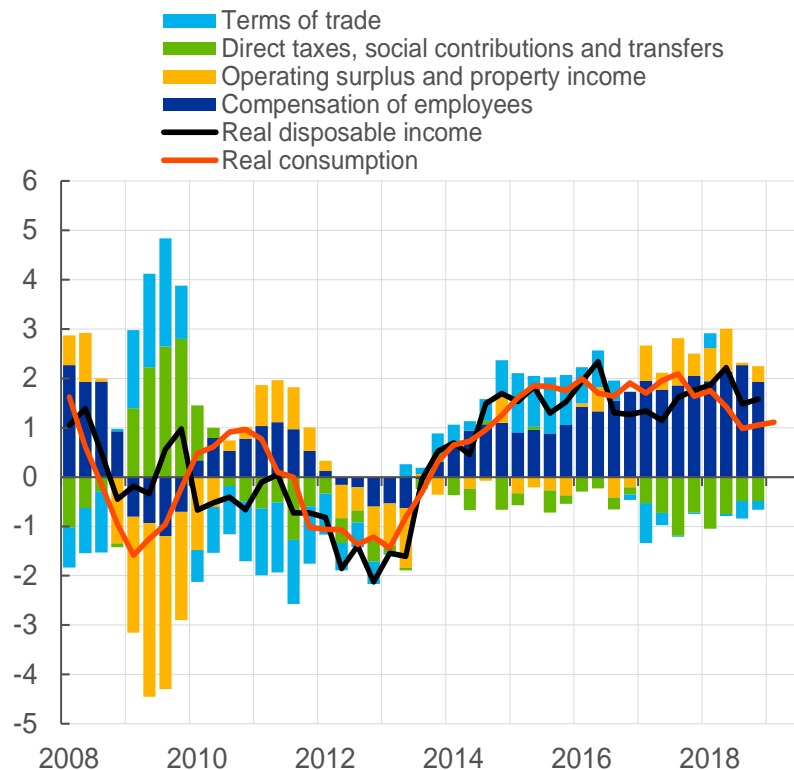
(quarter-on-quarter % changes and contributions to growth)



Sources: Eurostat, ECB calculations.
Notes: Manufacturing output refers to industrial production in the manufacturing sector. Contributions to growth are based on annual IP weights and are therefore approximate. Latest observation: 2019Q1.

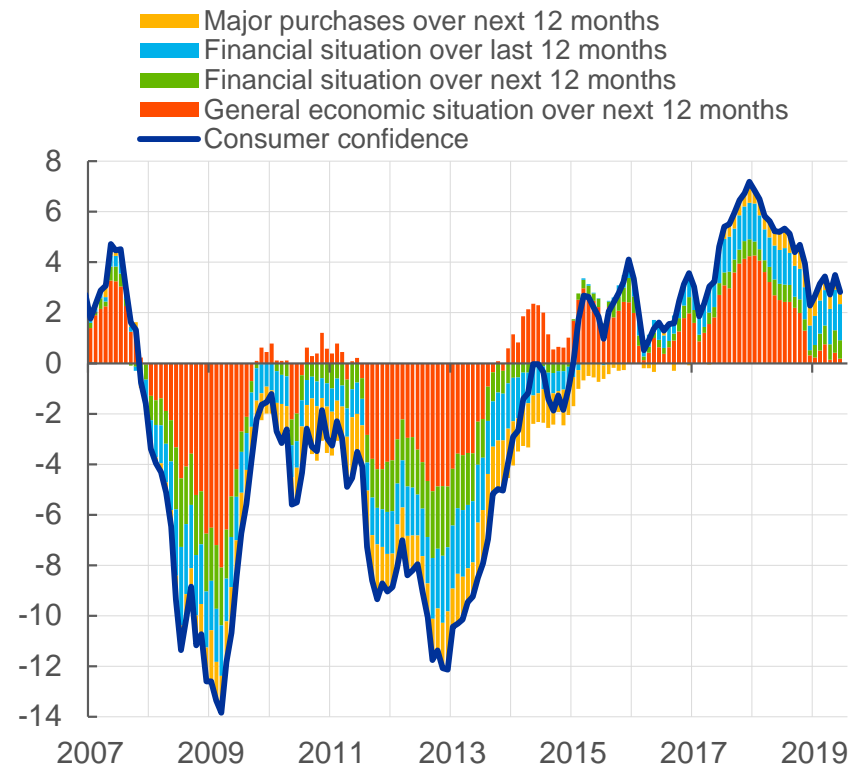
Real private consumption and disposable income

(year-on-year % changes, pp contributions)



Consumer confidence

(% balances, deviation from mean)



Sources: Eurostat, June 2019 BMPE, ECB calculations.

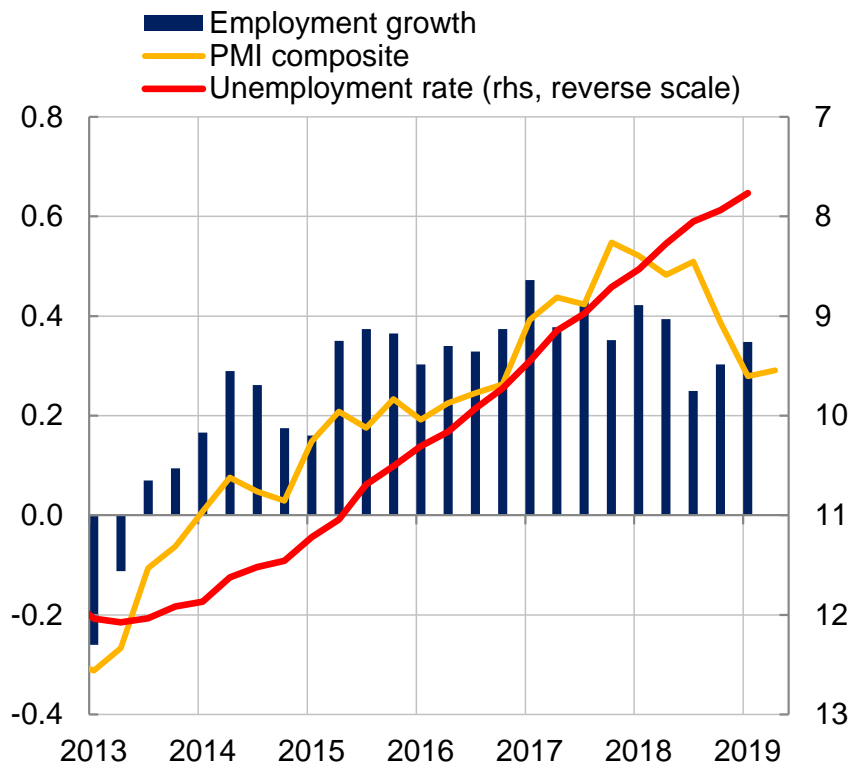
Notes: All income components are deflated with the GDP deflator. The contribution from the terms of trade is proxied using the difference between the GDP and consumption deflators. Consumption and total disposable income are deflated with the consumption deflator. Latest observations: 2019Q1 for real consumption, 2018Q4 for other..

Sources: European Commission, ECB calculations.

Latest observation: June 2019.

Employment growth, unemployment rate and the PMI on employment

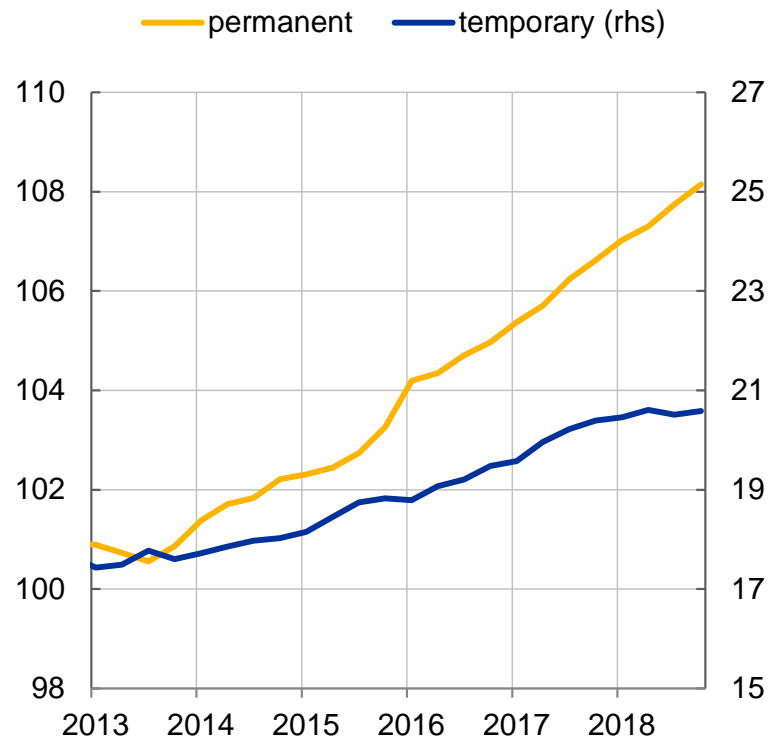
(quarter-on-quarter growth rate, diffusion index and %)



Sources: Eurostat, Markit.
 Note: The Purchasing Managers' Index (PMI) is expressed as a deviation from 50 divided by 10.
 Latest observations: 2019Q1 for employment growth and the unemployment rate, June 2019 for PMI.

Permanent and temporary employees

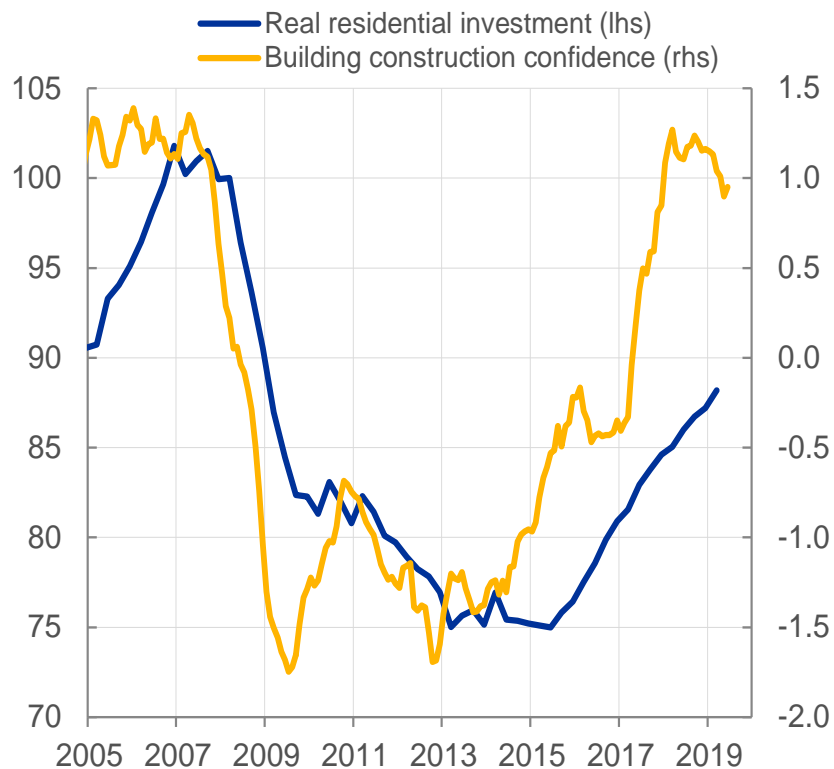
(millions)



Sources: Eurostat - EU-LFS.
 Note: 15-74 age group.
 Latest observations: 2018Q4.

Real residential investment and building construction confidence

(lhs: 2008Q1= 100, rhs: standardised index)



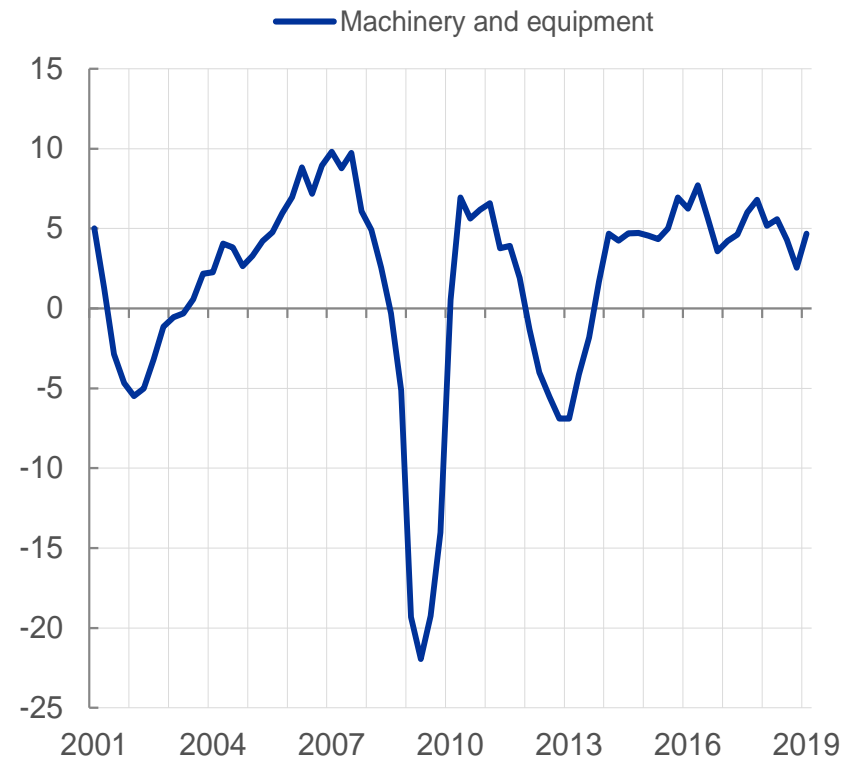
Sources: Eurostat, ECB calculations.

Note: Building construction confidence is standardised so as to have zero mean and unit standard deviation. It is expressed as a moving average of the current and two preceding months.

Latest observation: 2019Q1 for residential investment, June 2019 building construction confidence.

Business investment

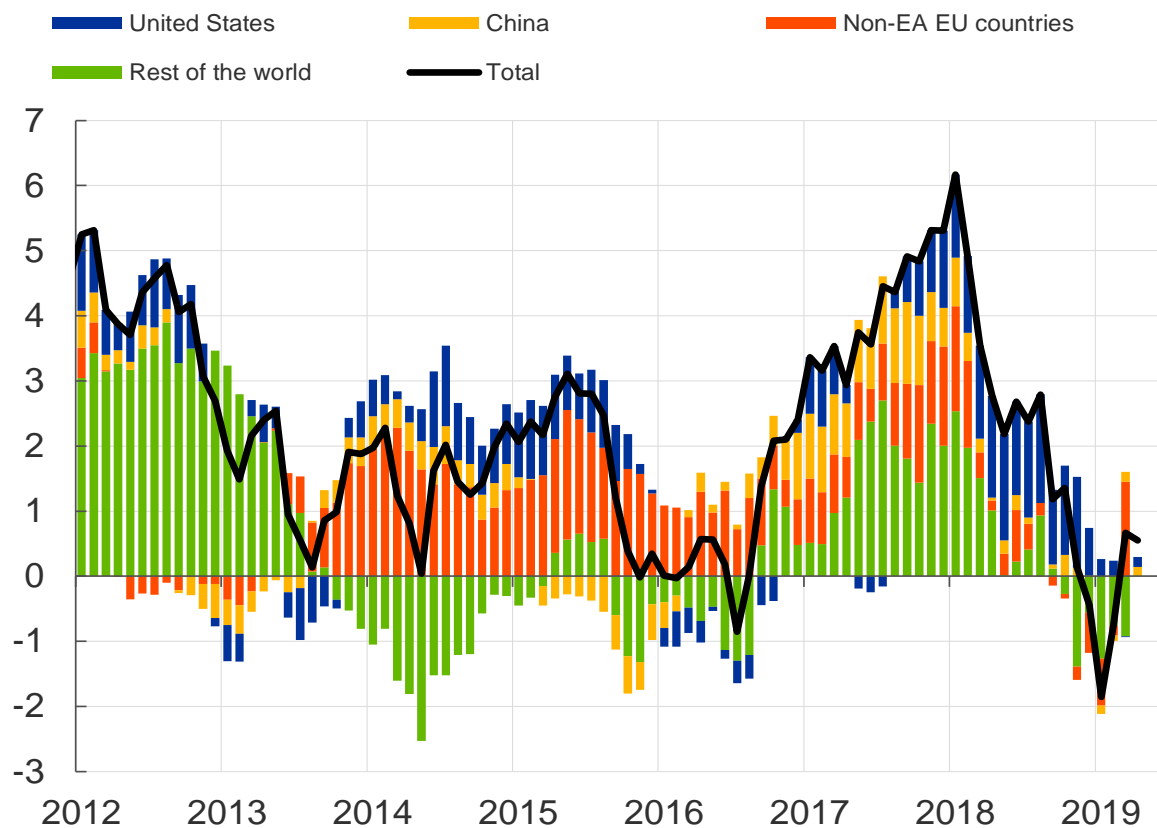
(real, annual % change)



Sources: Eurostat, ECB calculations.

Latest observation: 2019Q1.

Extra-euro area exports (volumes, 3mma annual %-changes, pp contribution)

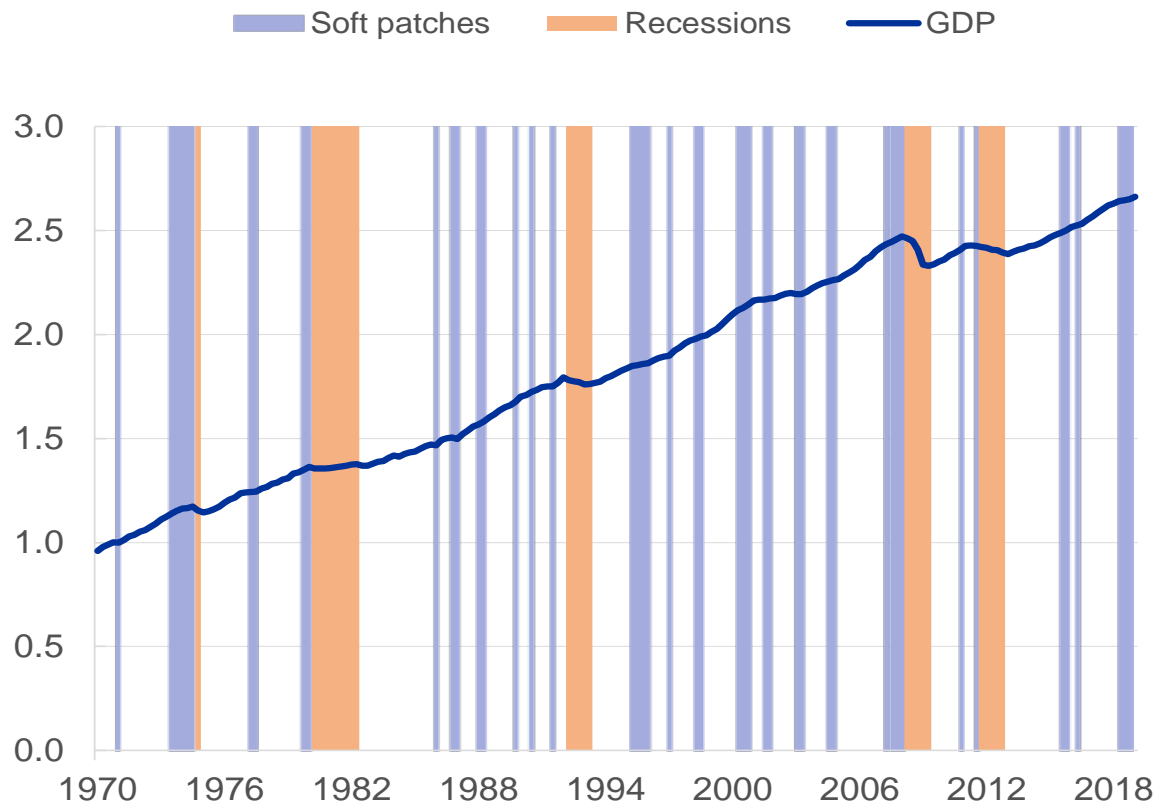


Sources: Eurostat and ECB staff calculations.

Note: Latest observation April 2019 (United States, China, total), March 2019 (all other regions).

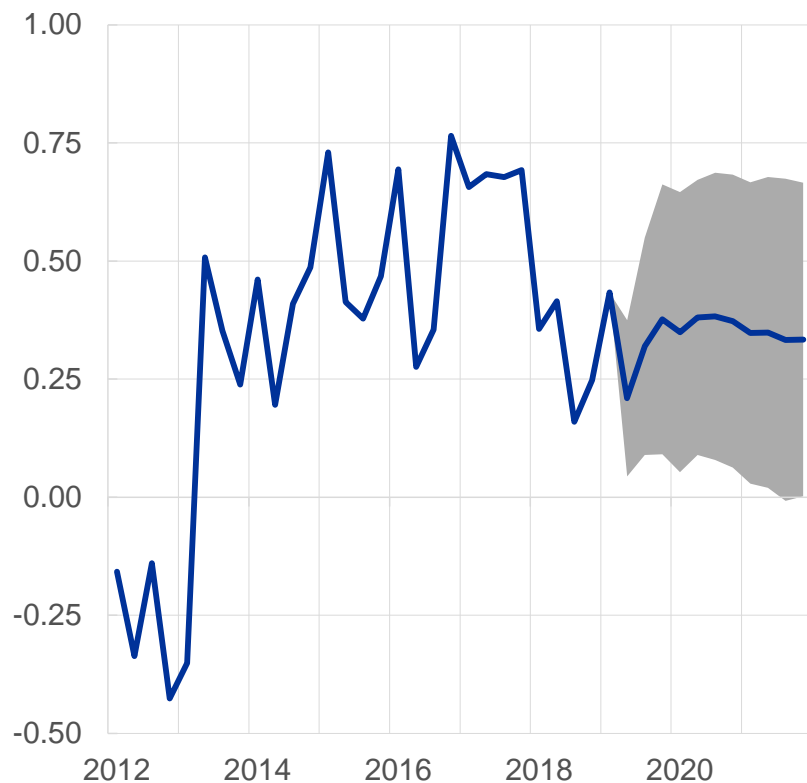
Soft patches and recessions since 1970

(EUR trillions)



Sources: Eurostat, CEPR and AWM database.
Note: Shaded areas indicate recessions/ soft patches.
Latest observtain: 2019Q1.

Euro area: real GDP growth



Source: ECB, June 2019 BMPE.

Medium-term growth outlook

- Over the medium term, the baseline assumes a gradual dissipation of global headwinds, allowing fundamental factors supporting the euro area expansion to regain traction
- Nevertheless, the fading out of some tailwinds would lead to slower growth towards the end of the projection horizon
- Altogether, real GDP growth is projected to decline from 1.8% in 2018 to 1.2% in 2019 before increasing to 1.4% in 2020 and 2021
- Compared with the March 2019 projections, real GDP growth in 2019 has been revised up slightly, as the upward impact of a stronger than expected first quarter more than offsets downward revisions to growth in the following quarters, mainly due to more persistent weakness in global trade. This implies a weaker carry-over into 2020. In addition, the medium-term projections have been revised down marginally.



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2.1 Recent developments in euro area inflation

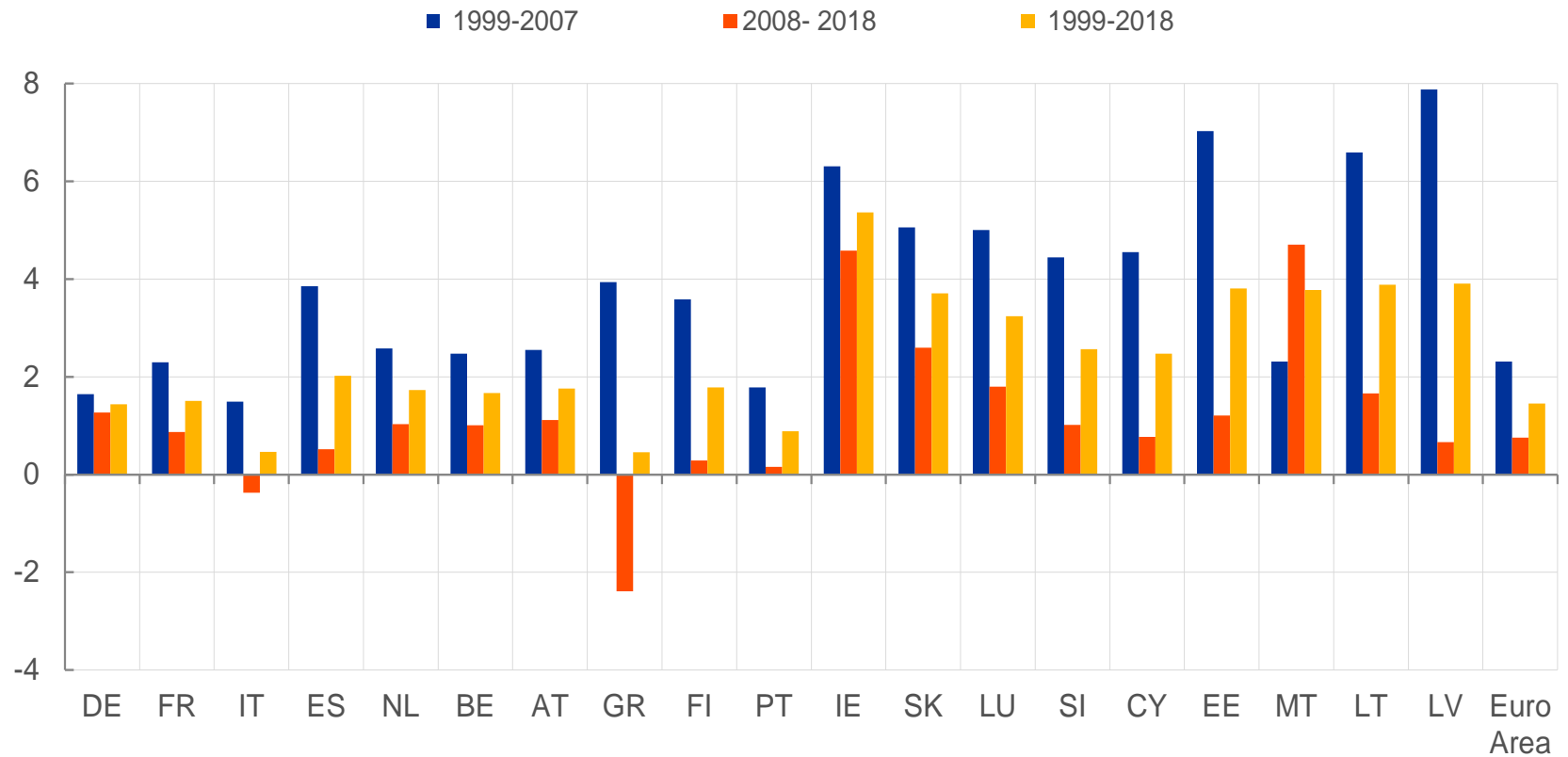
2.2 Euro area inflation through the lens of the Phillips curve

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GDP growth heterogeneous across countries

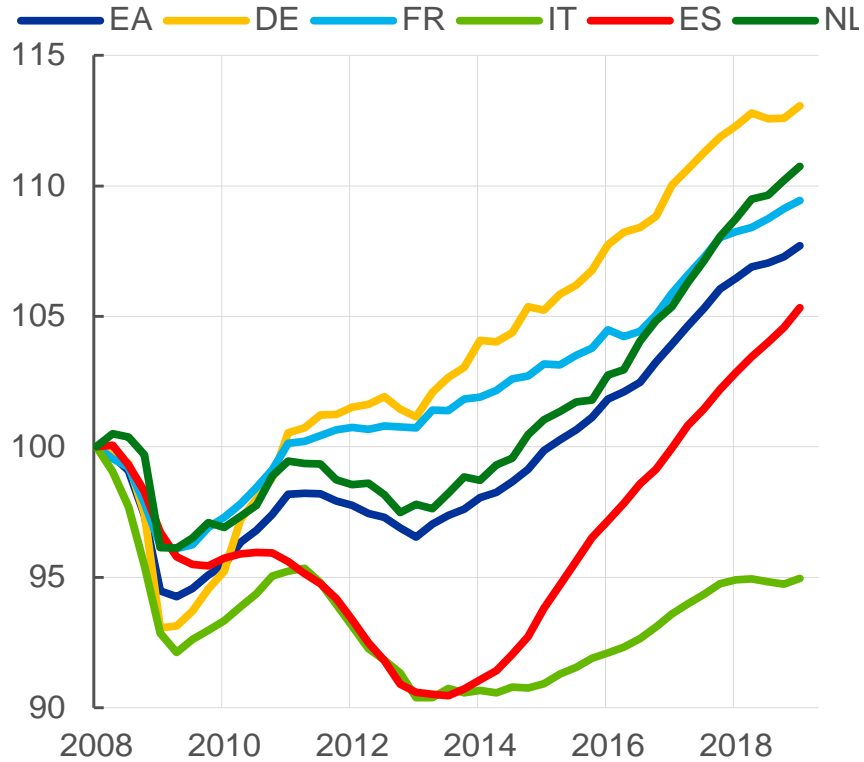
GDP growth across euro area countries (averages of annual percentage changes)



Sources: Eurostat and ECB calculations.
Latest observation: 2018.

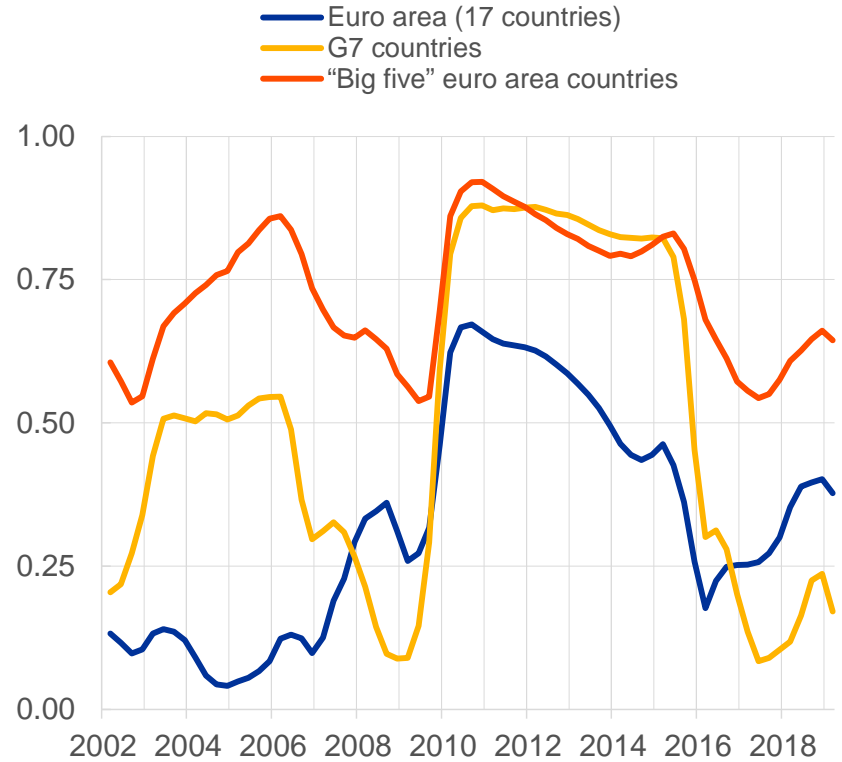
Real GDP

(index: 2008Q1 = 100)



Sources: Eurostat and ECB calculations.
Latest observation: 2019Q1.

Business cycle correlations across euro area and G7 countries



Sources: OECD, Eurostat and ECB calculations.

Notes: The measure of business cycle correlation is a weighted average of pairwise cross-country correlations of real GDP growth, following Stock and Watson (2008). The pairwise correlations have been computed over a five-year rolling window. For the euro area two different groupings are considered: the "euro area" (all euro area countries excluding Malta and Ireland owing to data availability) and the "big five" euro area countries (the five largest euro area economies). Latest observation: 2019Q1.



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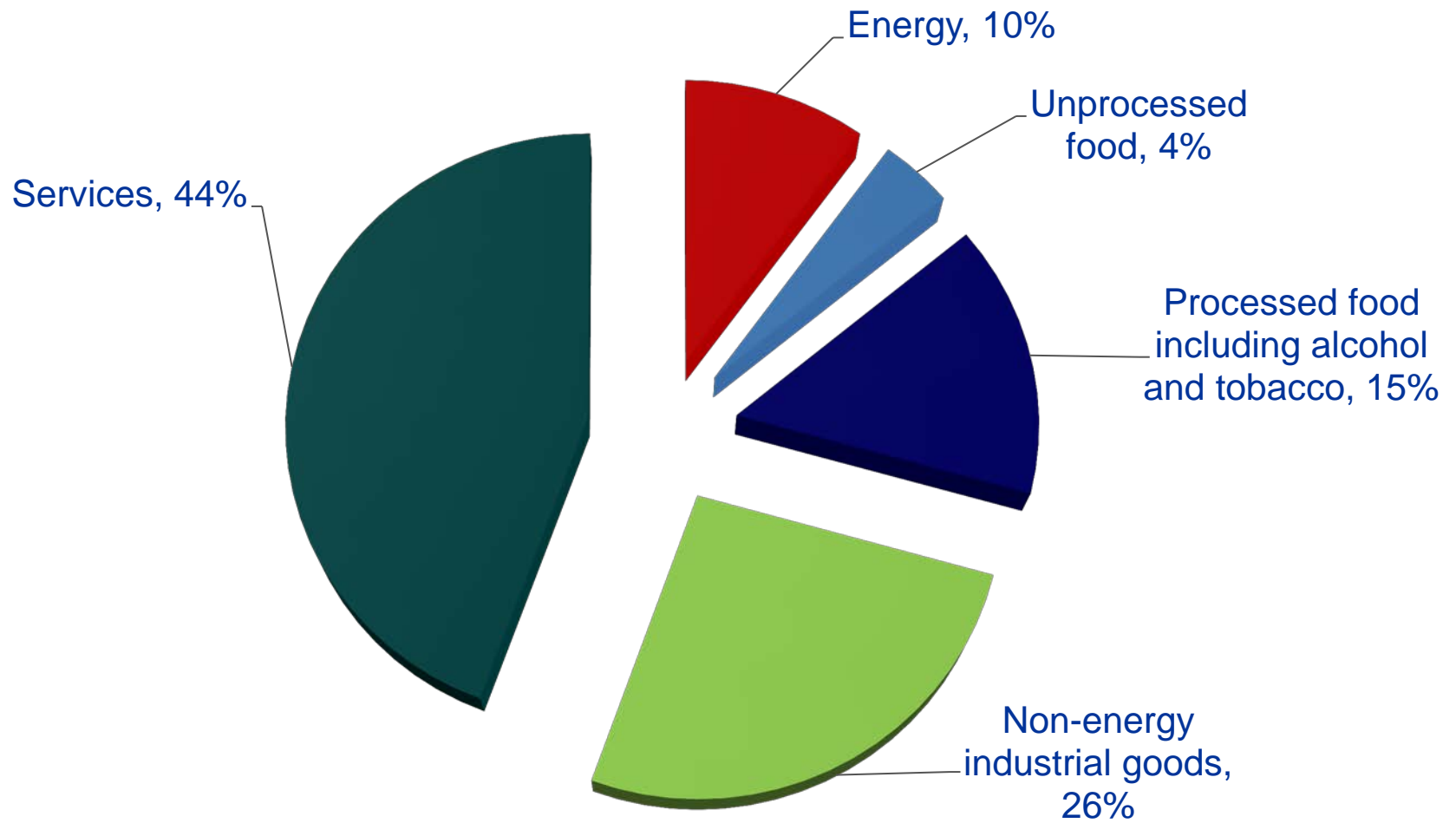
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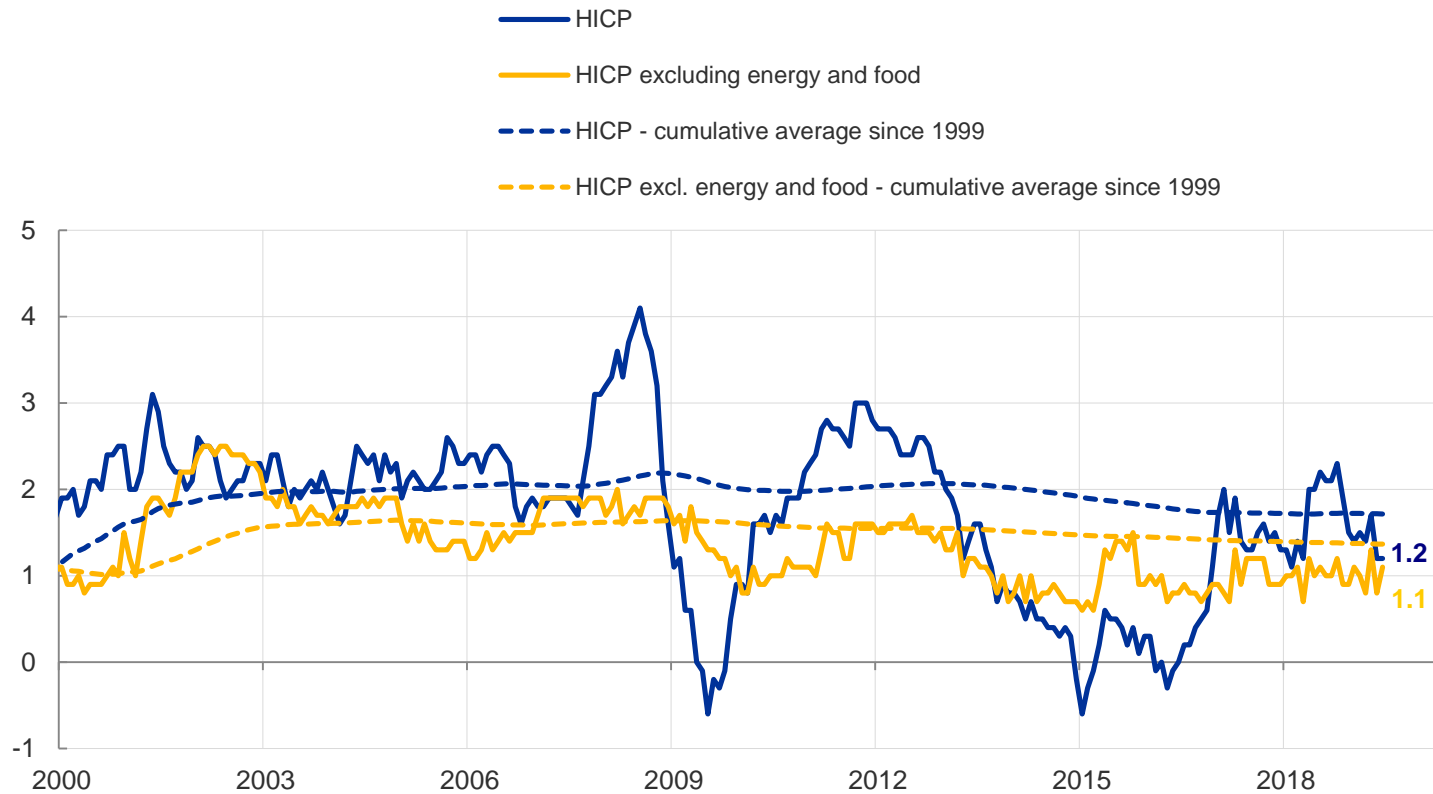
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Weights of HICP components (in %)



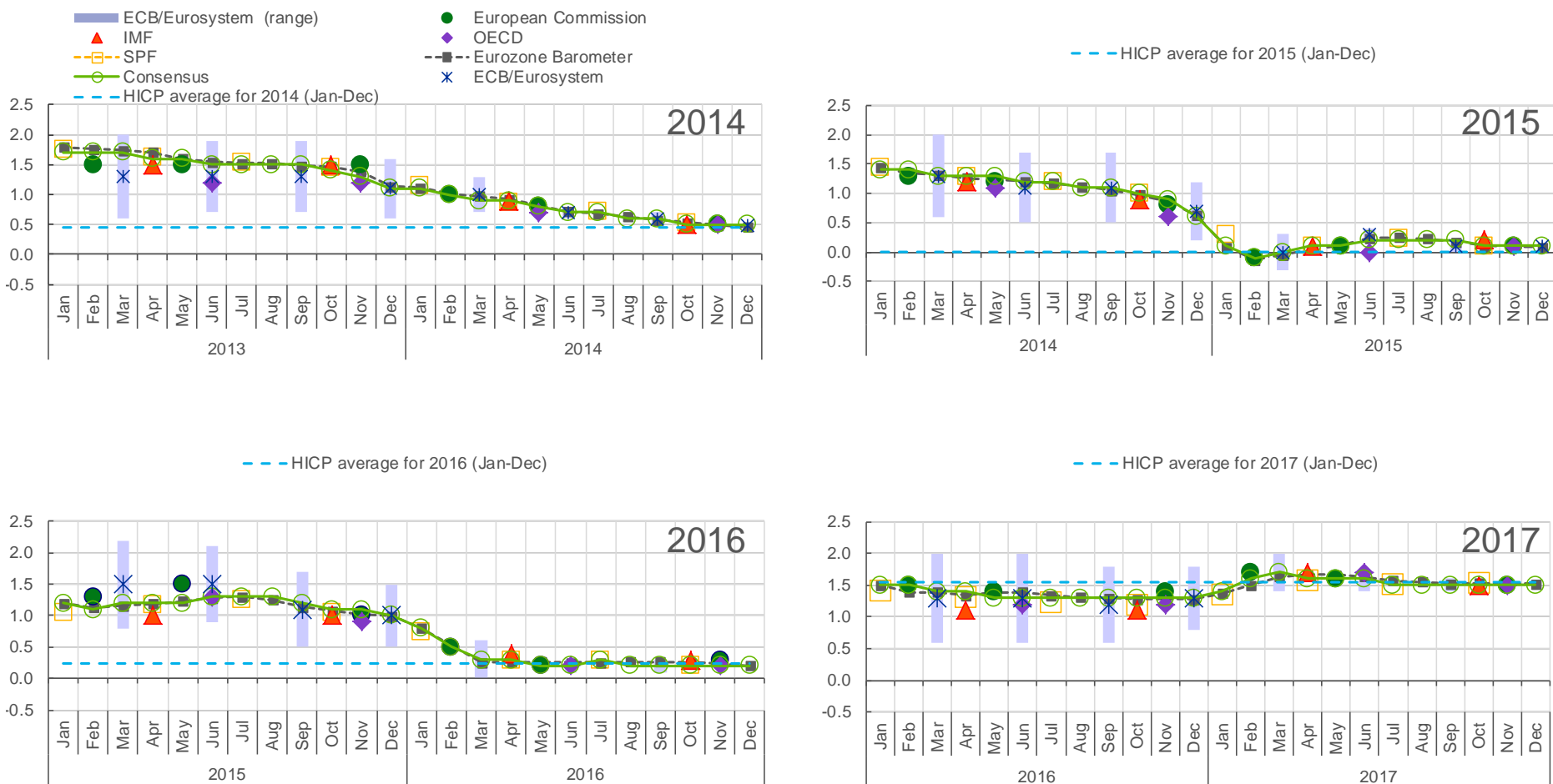
HICP and HICP excluding energy and food (annual percentage changes)



Sources: Eurostat and ECB calculations.

Note: Latest observations are for June 2019 (flash estimates). The cumulative averages are the averages of the annual inflation rates from January 1999 to each month.

Evolution of projections for average headline inflation in 2014, 2015, 2016 and 2017



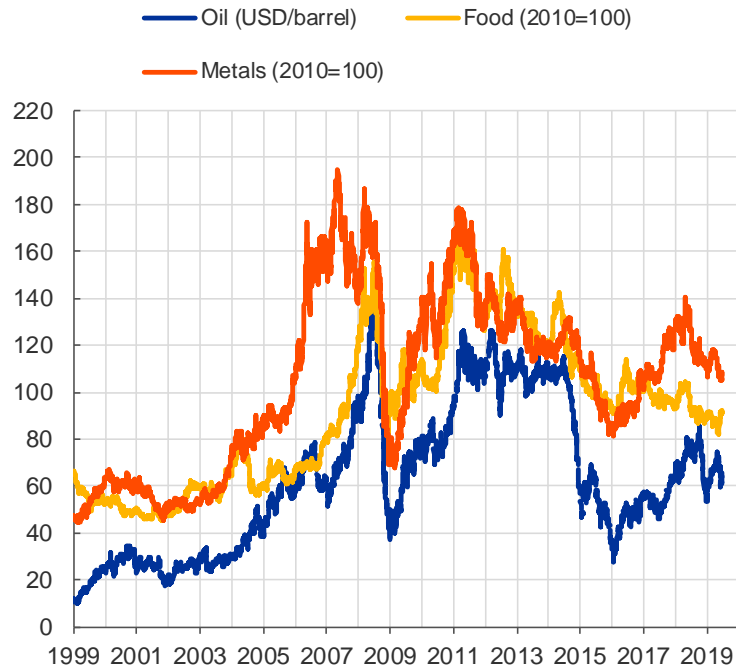
Source: Ciccarelli and Osbat (2017), "Low inflation in the euro area: Causes and consequences", ECB OP no. 181.

Data sources: ECB, IMF, European Commission, OECD, Consensus Economics, Eurozone Barometer.

Note: The horizontal axis shows the publication date of the forecast.

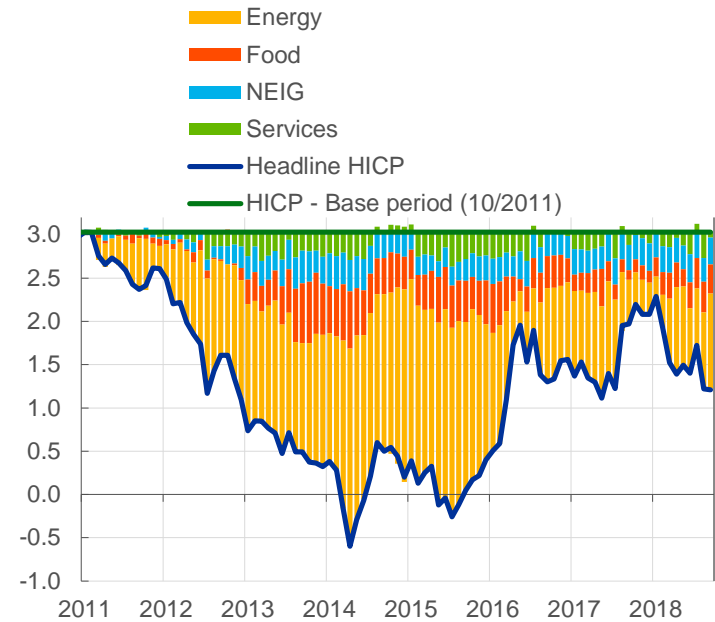
Brent crude oil, food and metals prices

(USD per barrel for oil; index food/metal)



Contributions to the decline in HICP inflation

(overall index: annual growth rates; and contributions in p.p.)



Source: ECB.

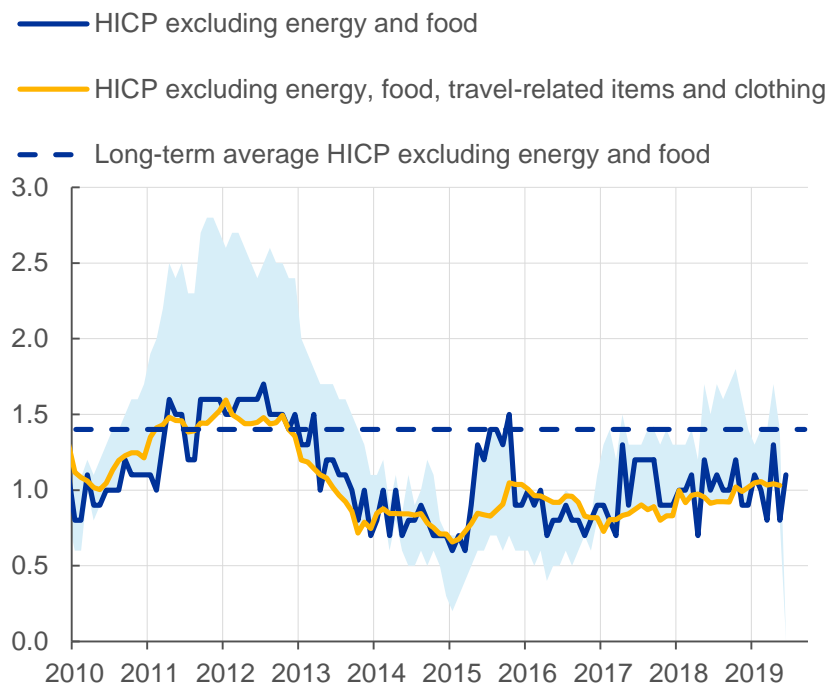
Notes: The index for metals is composed of Aluminium, Lead, Copper, Nickel, Zinc and Tin. Latest observations refer to 27 June 2019 for oil and to 21 June 2019 for food and metals.

Sources: Eurostat and ECB staff calculations.

Note: Latest observation: June 2019 (flash estimates). The base period refers to the latest peak.

Measures of underlying inflation

(annual percentage changes, percent)

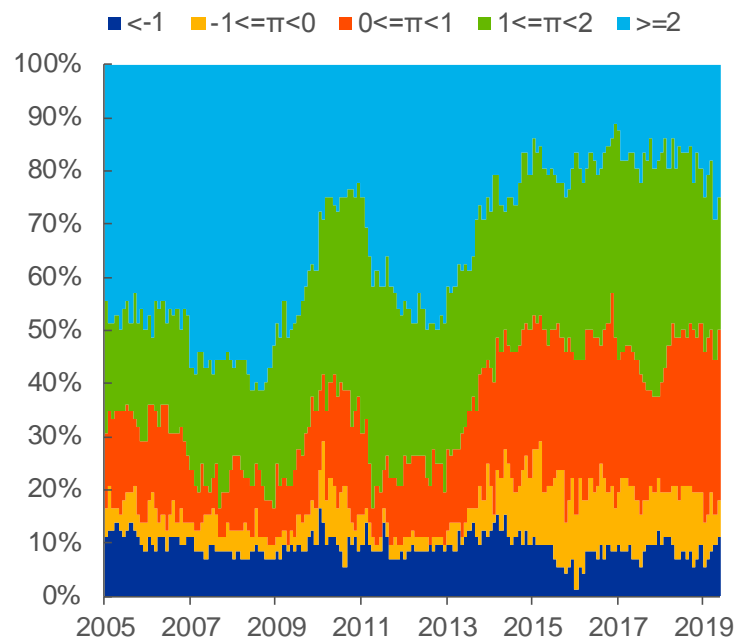


Sources: Eurostat and ECB calculations.

Notes: The range includes exclusion-based measures, trimmed means and a weighted median. Latest observation: June 2019 (flash estimate) for HICP excluding energy and food and May 2019 for the rest.

Share of items with high/low inflation in HICP excluding food and energy

(unweighted share)

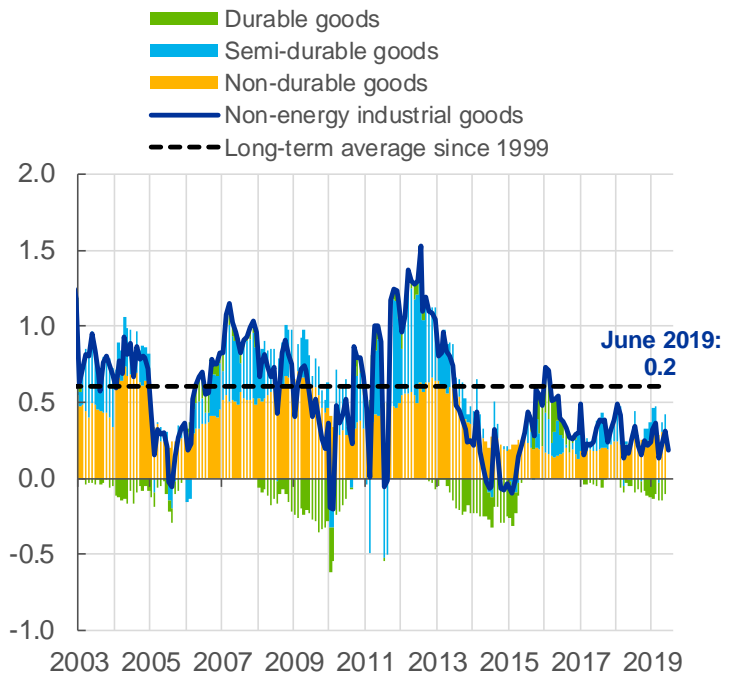


Sources: Eurostat and national statistical offices

Notes: The coloured areas reflect the unweighted share of items in HICP excluding food and energy within the respective range. Latest observation: May 2019.

HICP non-energy industrial goods (NEIG)

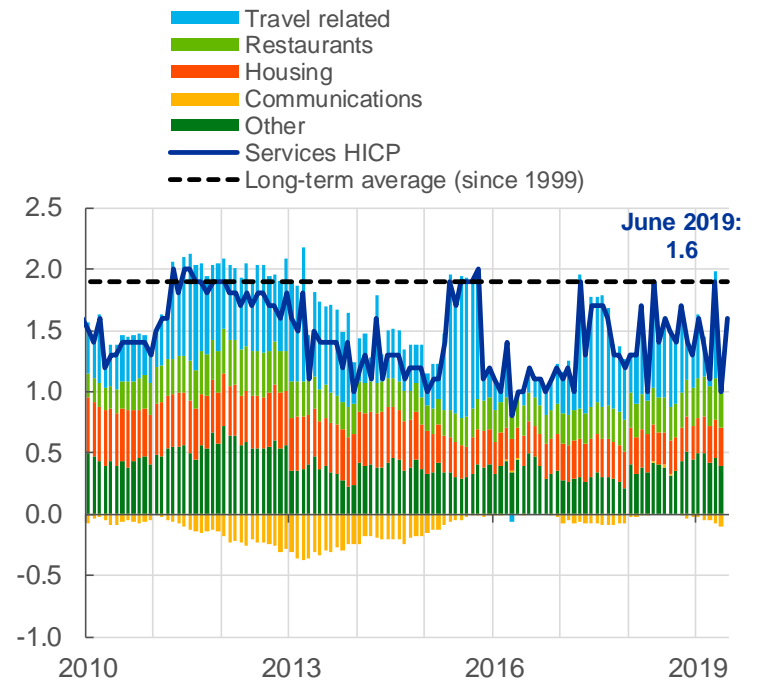
(annual percentage change, percentage point contributions)



Sources: Eurostat and ECB calculations.
 Latest observations: June 2019 (flash estimate) for HICP non-energy industrial goods, and May 2019 for the rest.

HICP services

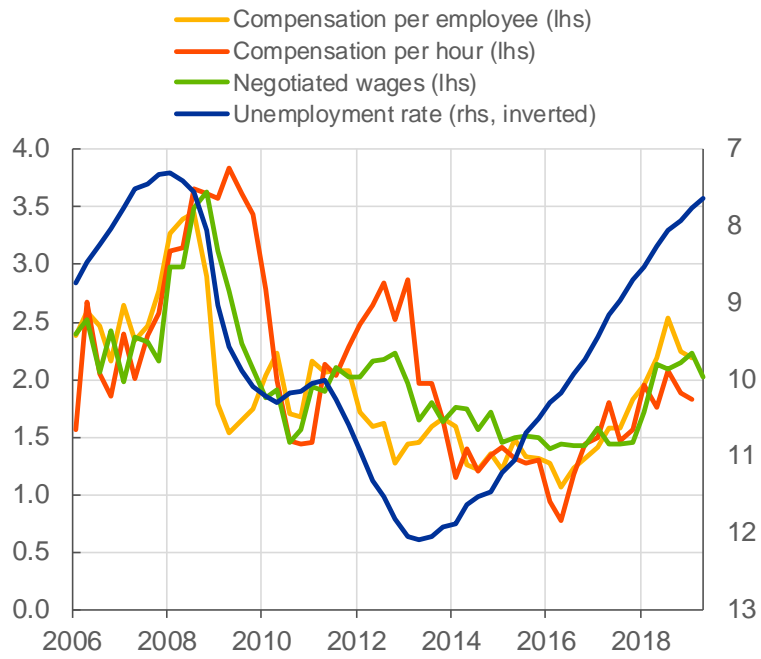
(annual percentage change, percentage point contributions)



Sources: Eurostat and ECB calculations.
 Latest observations: June 2019 (flash estimate) for services HICP, and May 2019 for the rest.

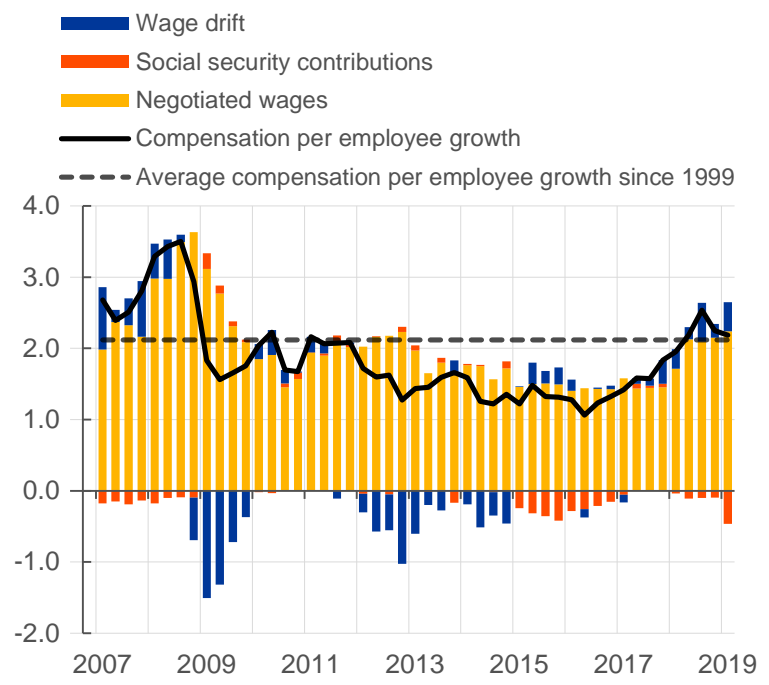
Labour costs and unemployment developments

(lhs: annual percentage changes; rhs: percentage)



Decomposition of wage developments

(annual percentage changes, percentage point contributions, quarterly data)



Sources: Eurostat, ECB calculations.
 Latest observation: 2019Q2 (based on May 2019) for unemployment rate and negotiated wages, and 2019Q1 for the rest.

Sources: Eurostat and ECB calculations.
 Note: The latest observation refers to 2019Q1. Dashed line reflects long-term average of compensation per employee since 1999Q1.



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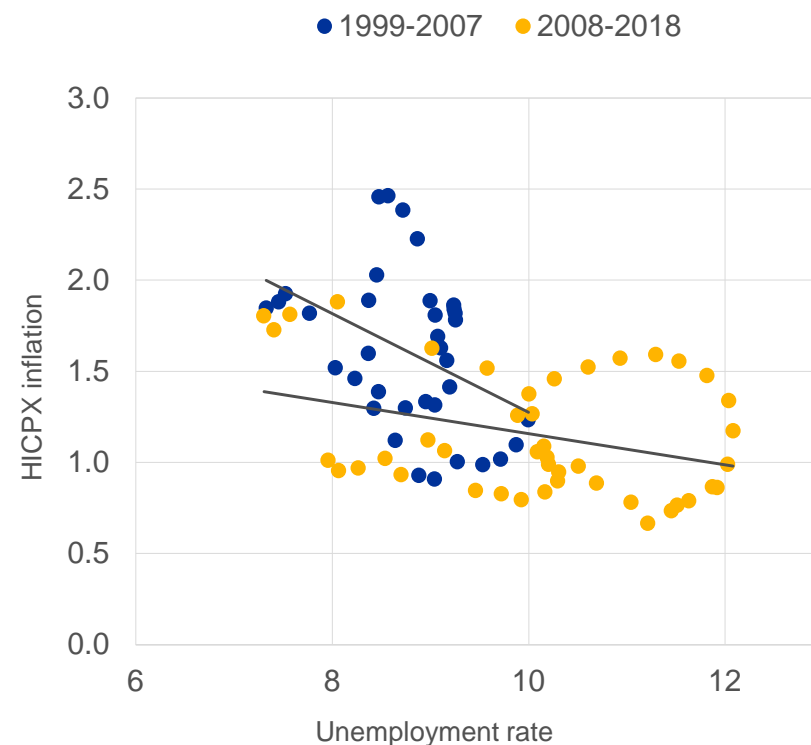
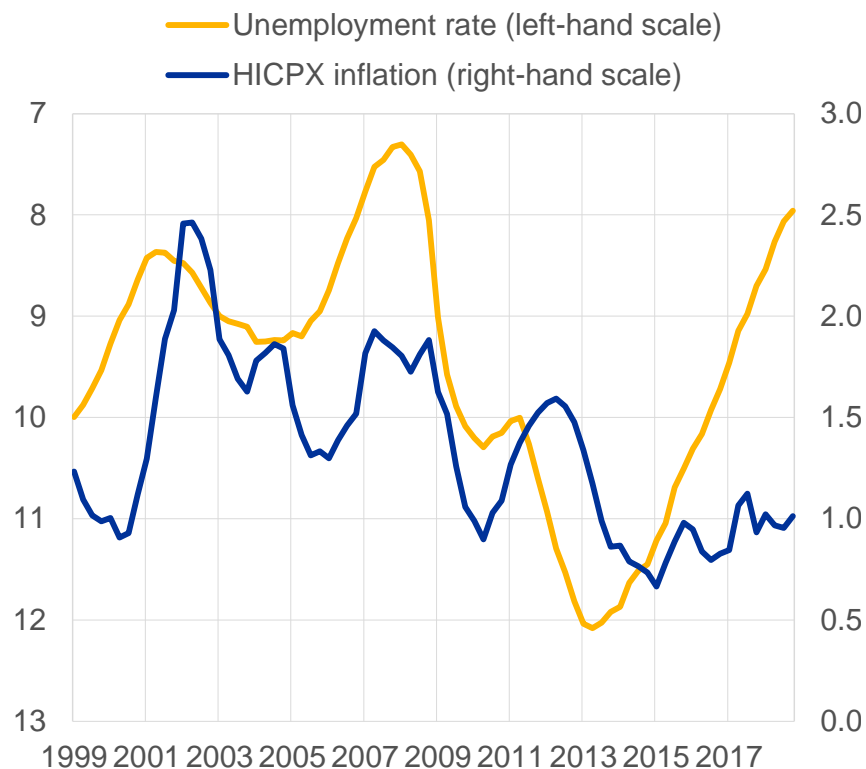
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HICPX inflation and the unemployment rate in the euro area

(annual percentage changes and percent, in deviations from long term average)



Sources: Eurostat, European Commission, ECB staff calculations.

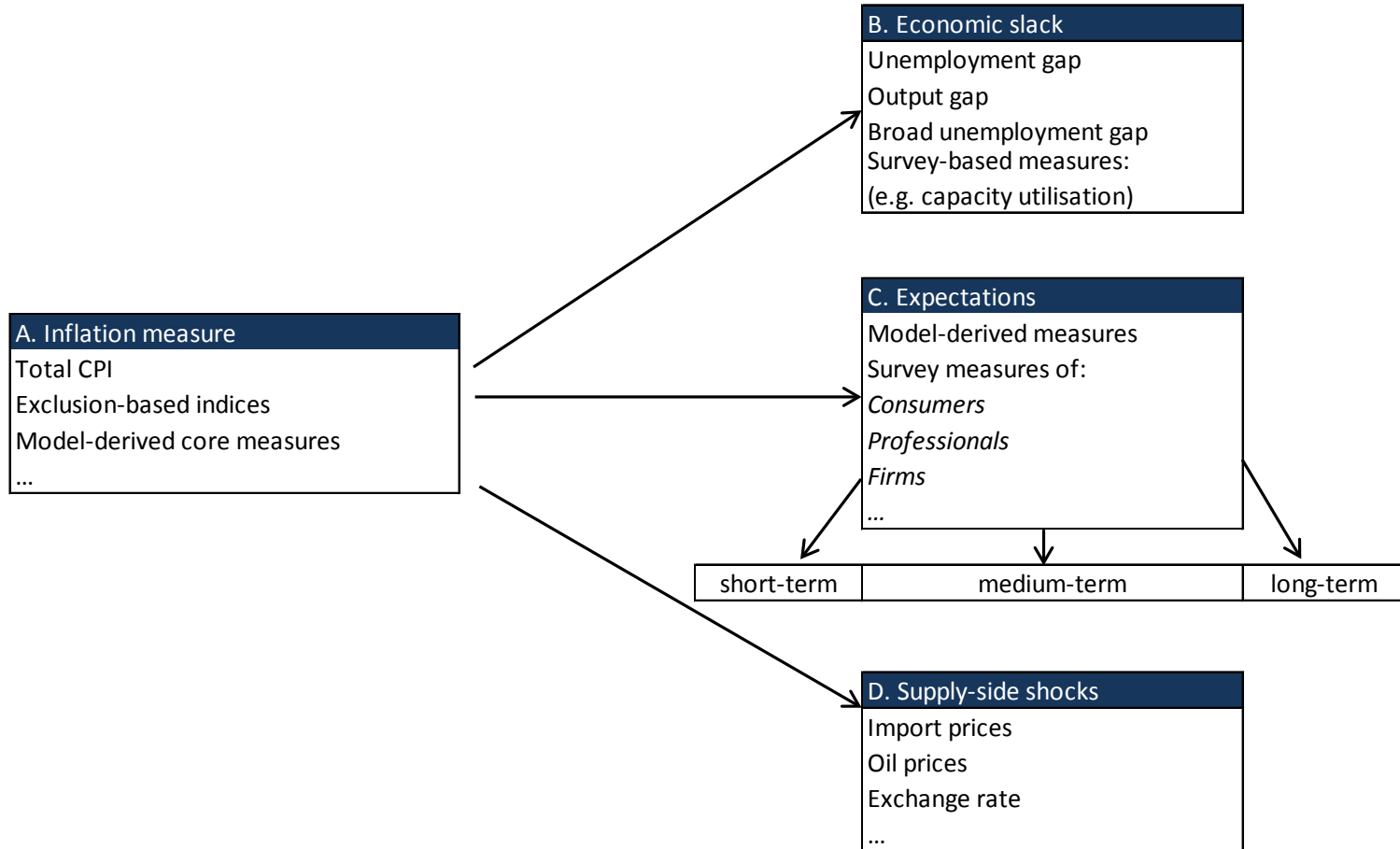
Latest observation: 2018Q4.

For details see: Drivers of underlying inflation in the euro area over time: a Phillips curve perspective – ECB Economic Bulletin article 04/2019

https://www.ecb.europa.eu/pub/economic-bulletin/articles/2019/html/ecb.ebart201904_02-d438b3e4d4.en.html#toc2

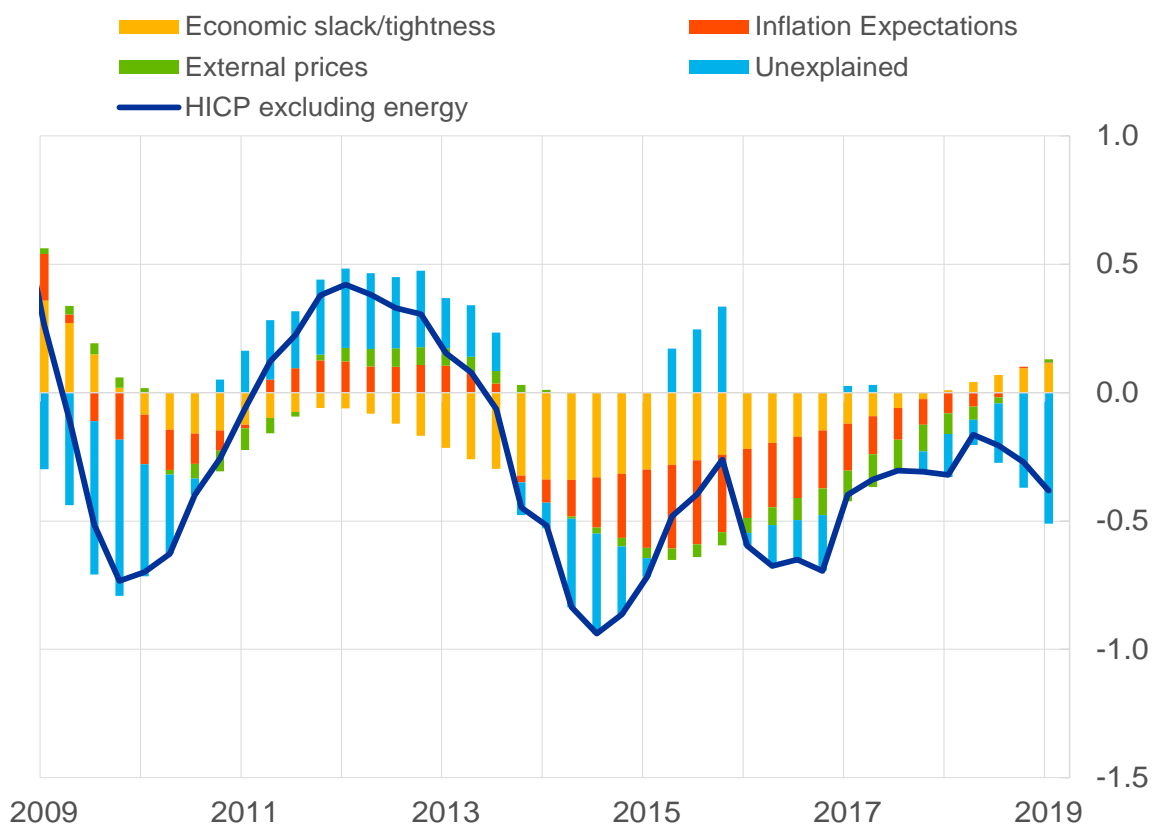
Stylised decision tree for the specification of a reduced-form Phillips curve model

(annual percentage changes and percent, in deviations from long term average)



Phillips curve-based decomposition of HICP inflation excluding energy

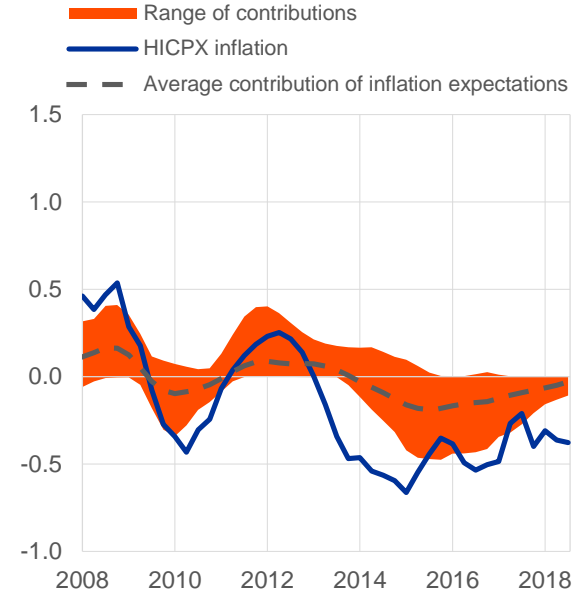
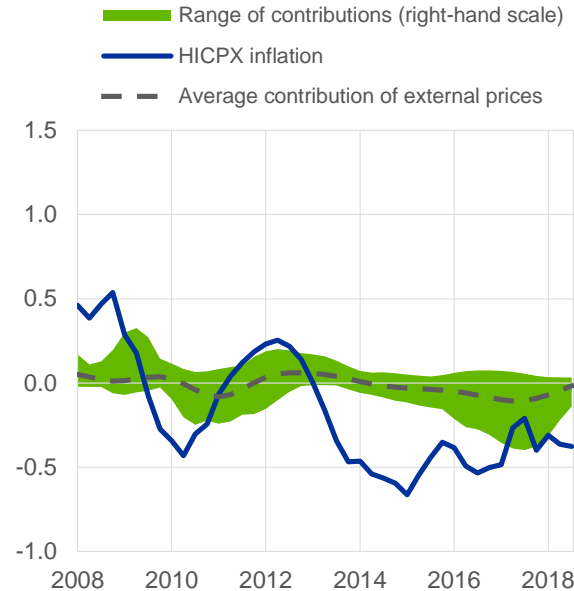
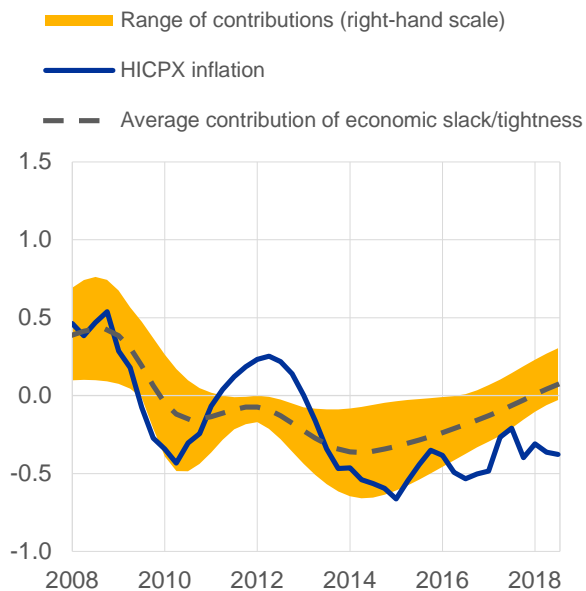
(annual percentage changes and percentage point contributions; all values in terms of deviations from their averages since 1999)



Source: ECB calculations.
Notes: The bars show average contributions across 550 models with different permutations of external price, economic slack and expectations measures. Contributions are derived as in Yellen, J. L., "Inflation Dynamics and Monetary Policy", speech at the Philip Gamble Memorial Lecture, University of Massachusetts, Amherst, 24 September 2015
Latest observation: 2019Q1.
For details see: Drivers of underlying inflation in the euro area over time: a Phillips curve perspective – ECB Economic Bulletin article 04/2019 https://www.ecb.europa.eu/pub/economic-bulletin/articles/2019/html/ecb.ebart201904_02-d438b3e4d4.en.html#toc2

Range of contributions of the main drivers to underlying inflation

(annual percentage changes and percentage point contributions; all values in terms of deviations from their averages since 1999)



Sources: Eurostat, ECB staff calculations.

Notes: The swathe shows the range of contributions of measures of economic slack/tightness/ external prices/ inflation expectations to underlying inflation across the 550 models that are estimated; the black dashed line shows the average contribution, which corresponds to the yellow bars in Chart 6. Contributions are derived as in Yellen, J. L., "Inflation Dynamics and Monetary Policy", speech at the Philip Gamble Memorial Lecture, University of Massachusetts, Amherst, 24 September 2015.

For details see: Drivers of underlying inflation in the euro area over time: a Phillips curve perspective – ECB Economic Bulletin article 04/2019 https://www.ecb.europa.eu/pub/economic-bulletin/articles/2019/html/ecb.ebart201904_02-d438b3e4d4.en.html#toc2



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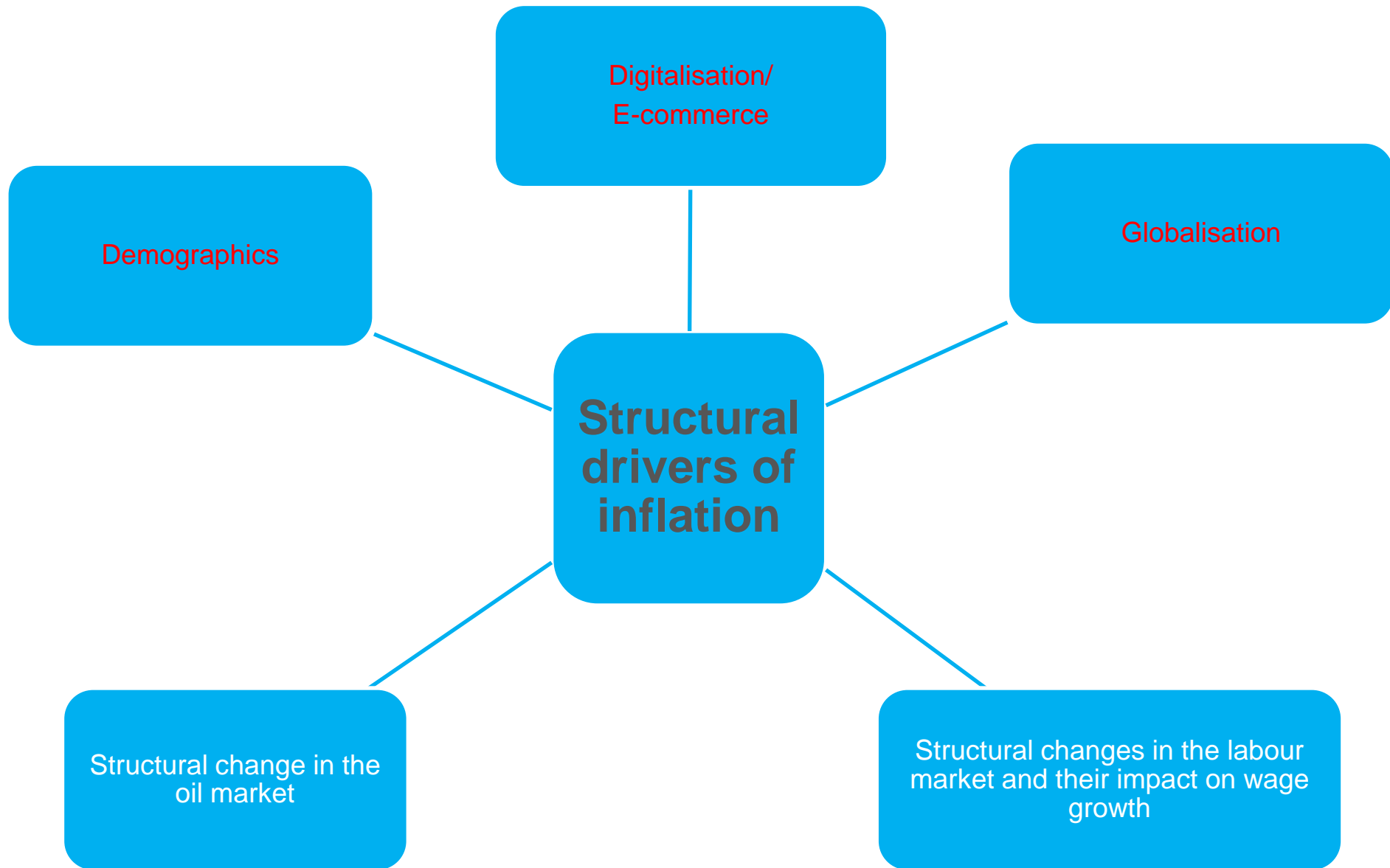
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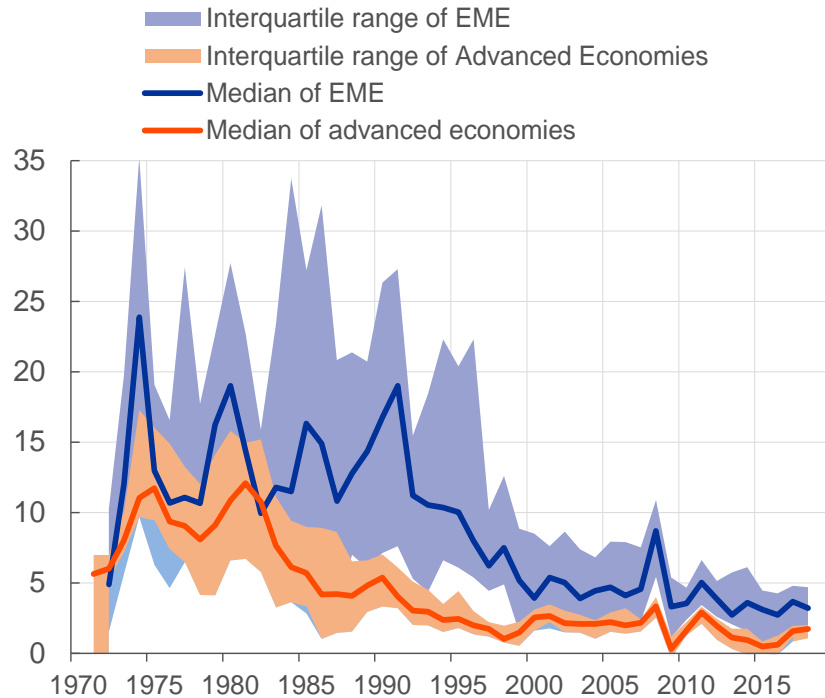
2.3 Structural drivers of inflation

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Which structural drivers could have played a role for inflation developments?



Range of headline inflation in advanced and emerging economies over time (annual percentage changes)

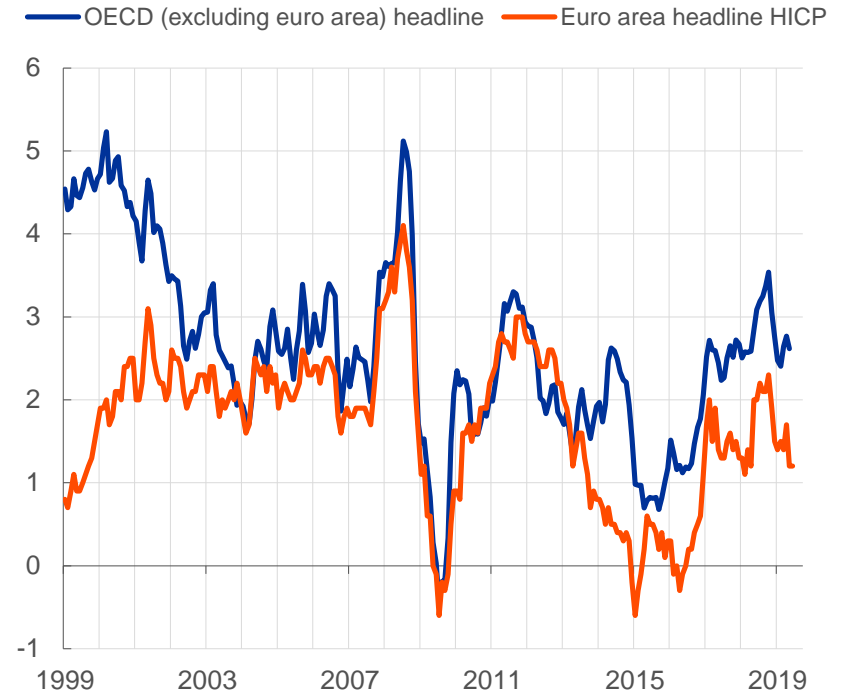


Source: Haver.

Latest observations: The latest observation is for 2018 (annual data).

Note: The interquartile range covers 50% of the samples of emerging and advanced economies. The sample includes 17 advanced economies (Australia, Austria, Belgium, Canada, France, Germany, Greece, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United States) and 25 emerging economies (Bolivia, Chile, Colombia, Côte d'Ivoire and others), Ecuador, Egypt, El Salvador, Guatemala, Honduras, Indonesia, Israel, Jamaica, South Korea, Malaysia, Mauritius, Mexico, Nigeria, Paraguay, the Philippines, Singapore, South Africa, Taiwan, Thailand, Tunisia, Turkey). Only countries for which data going back to 1970 are available have been included.

Headline inflation developments in OECD and EA countries (annual percentage changes)



Sources: OECD, Eurostat, and ECB calculations

Latest observations: June 2019 (flash estimate) for the Euro Area, and May 2019 for the non-euro area OECD countries. Monthly data.

Note: Due to data availability the observation for May 2019 for the non-euro area OECD countries does not include Australia and New Zealand.

See for details: ECB Economic Bulletin 04/2017: Domestic and global drivers of inflation in the euro area



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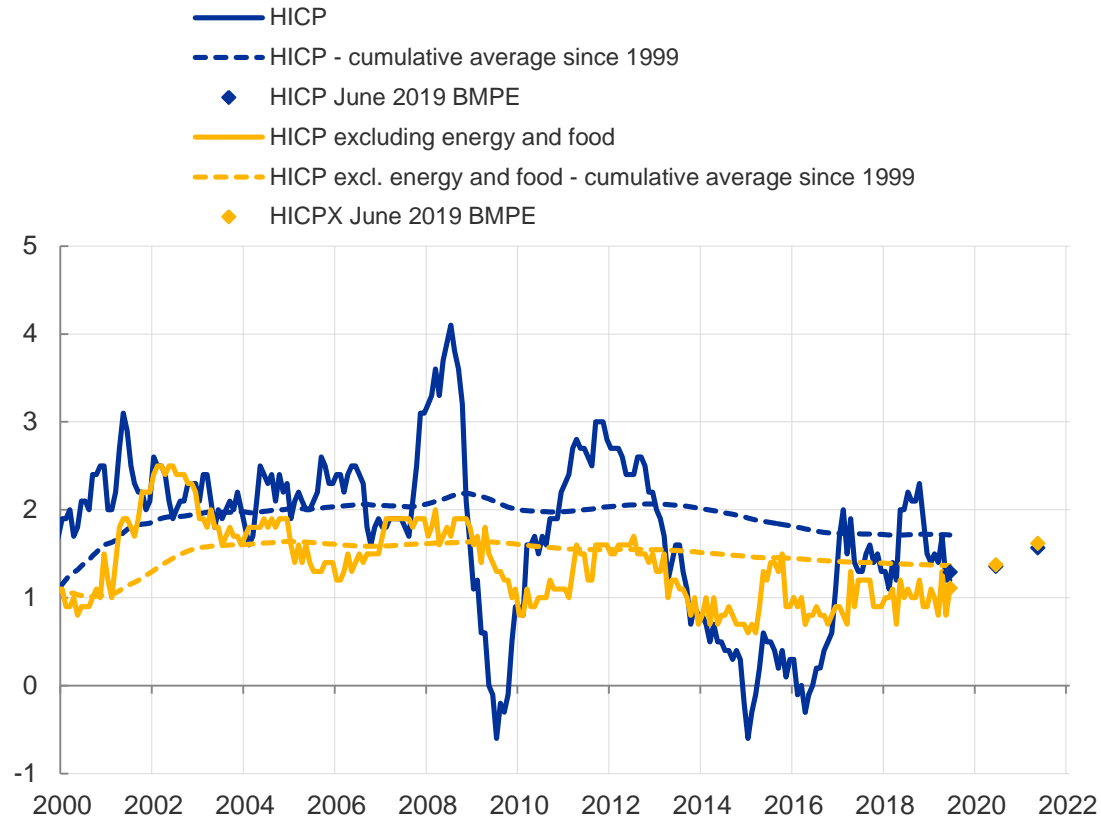
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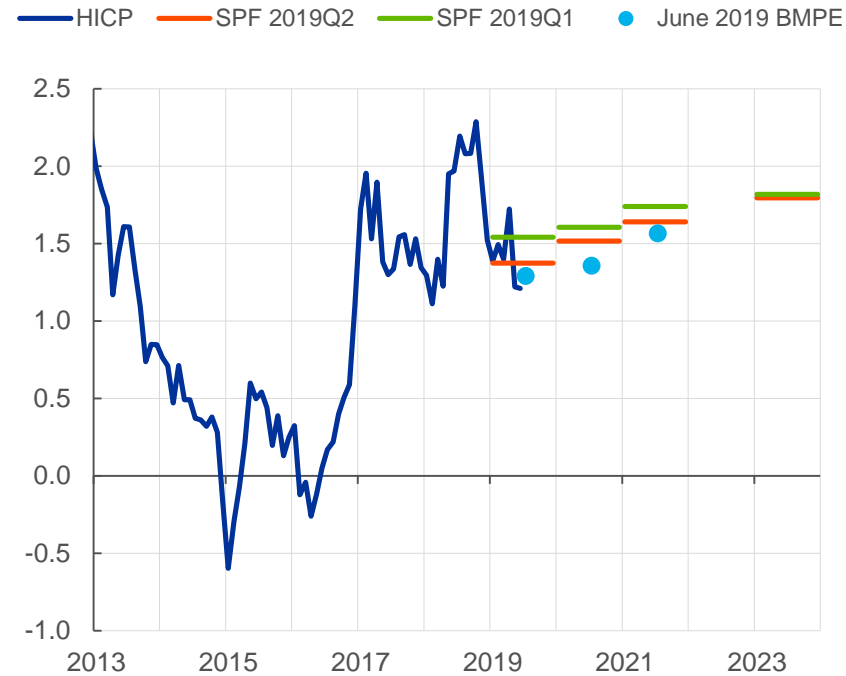
HICP and HICP excluding energy and food (annual percentage changes)



Sources: Eurostat, ECB staff calculations, Eurosystem/ECB staff macroeconomic projections.

Note: Latest observations are for June 2019 (flash estimates). The cumulative averages are the averages of the annual inflation rates from January 1999 to each month.

Inflation path in the survey of professional forecasters 2019Q2 (annual percentage changes)



Source: Eurostat, June 2019 BMPE, ECB Survey of Professional Forecasters (SPF).
Notes: ECB SPF 2019Q2 survey conducted 18-22 of March 2019, ECB SPF 2019Q1 survey conducted 7-11 of January 2019.



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Summing up: Economic Analysis at the ECB

Economic analysis as part of the information set to inform monetary policy decisions

