



EUROPEAN CENTRAL BANK

EUROSYSTEM

# Inflation and monetary policy in the euro area

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Michael Chae Seminar on  
Macroeconomic Policy,  
Harvard University

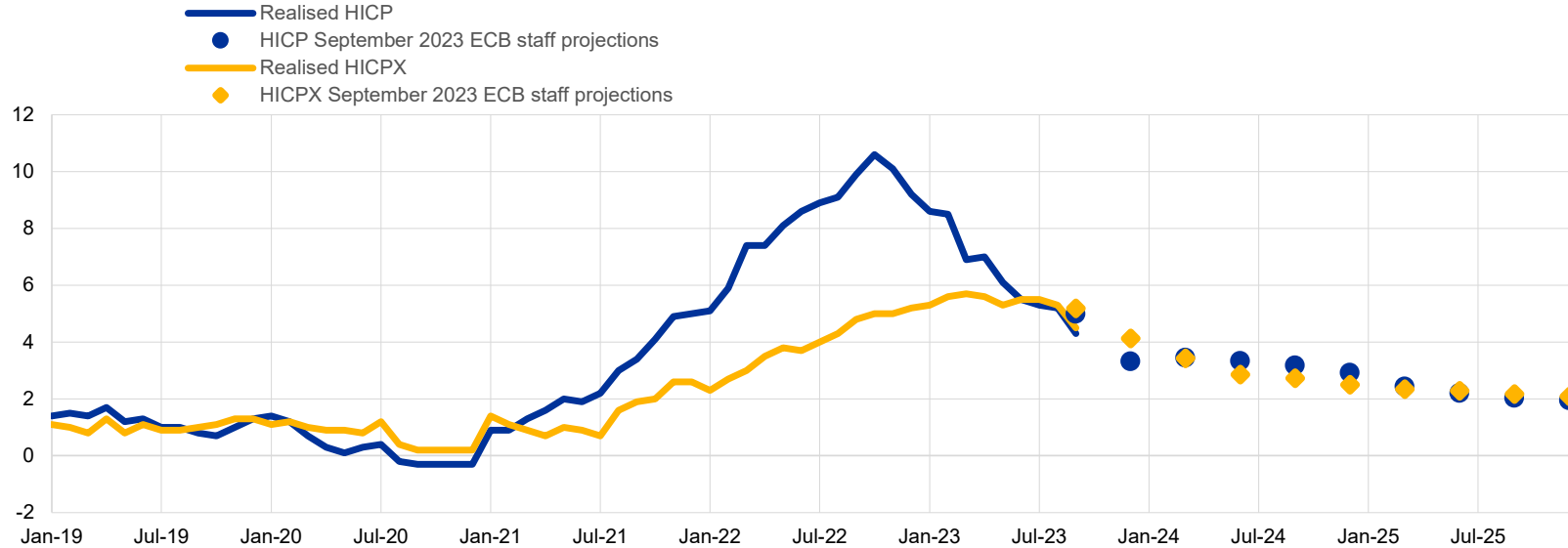
28 November 2023



**Philip R. Lane**  
Member of the Executive Board

# Headline inflation, core inflation and ECB staff projections

(annual percentage changes)

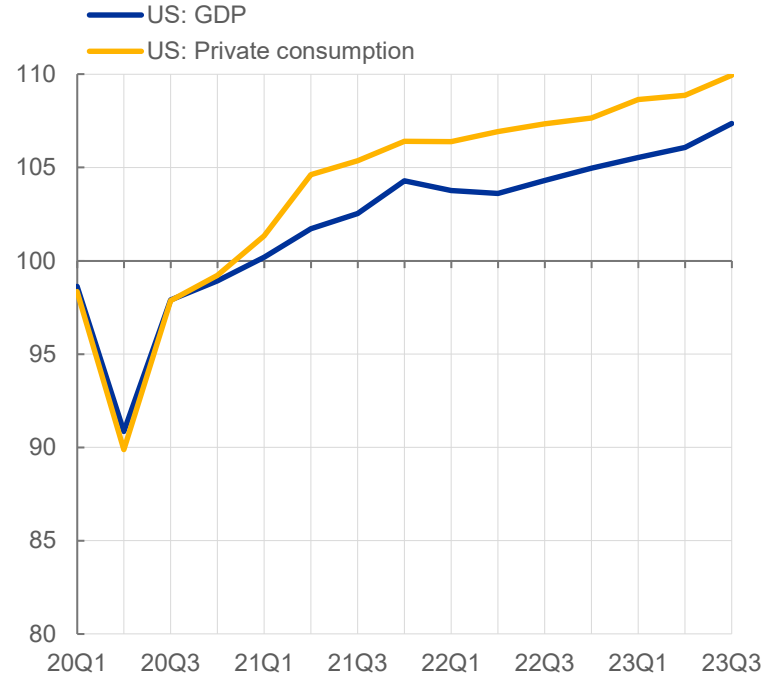
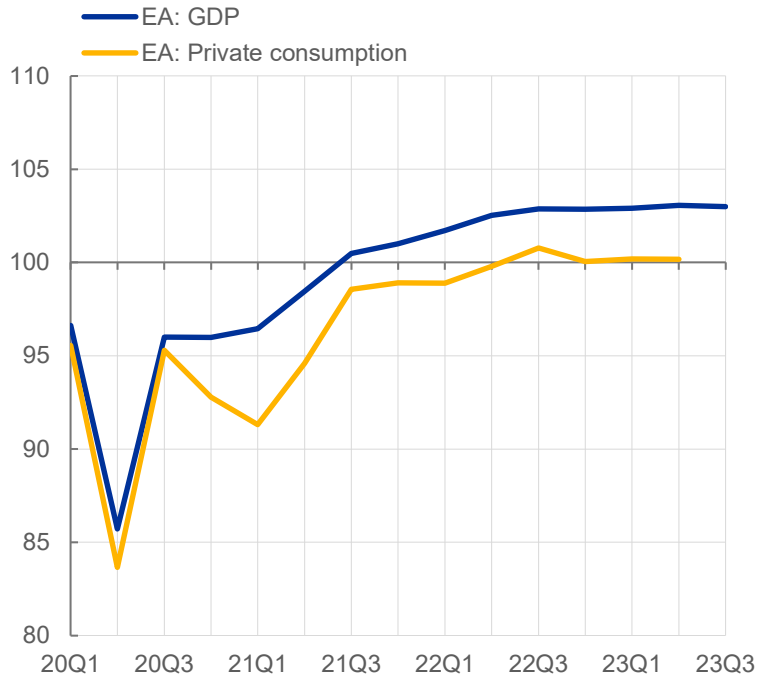


Source: ECB staff macroeconomic projections exercise.

Notes: HICP refers to headline inflation and HICPX to HICP excluding food and energy. Realised HICP and HICPX are at a monthly frequency, and HICP and HICPX projections are at a quarterly frequency. The latest observations for realised HICP and HICPX are for the third quarter of 2023.

# Real GDP and private consumption

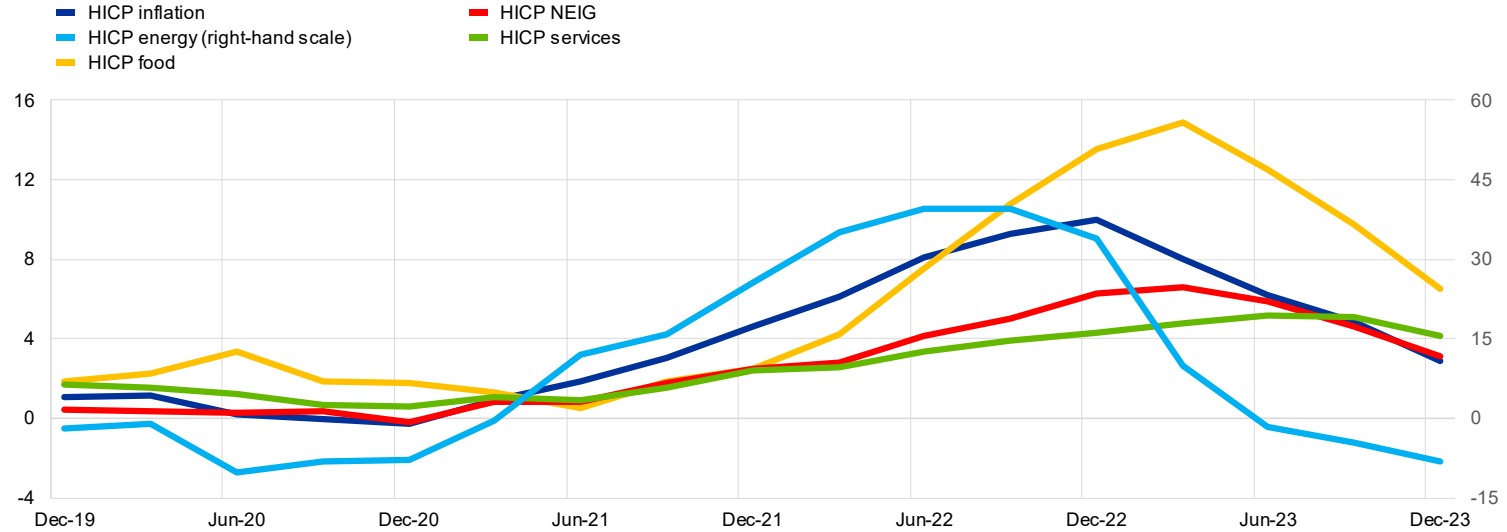
(index: Q4 2019 = 100)



Sources: Eurostat and Bureau of Economic Analysis.  
Latest observation: Q2 2023 for euro area private consumption and Q3 2023 for the rest.

# HICP inflation and inflation across HICP components

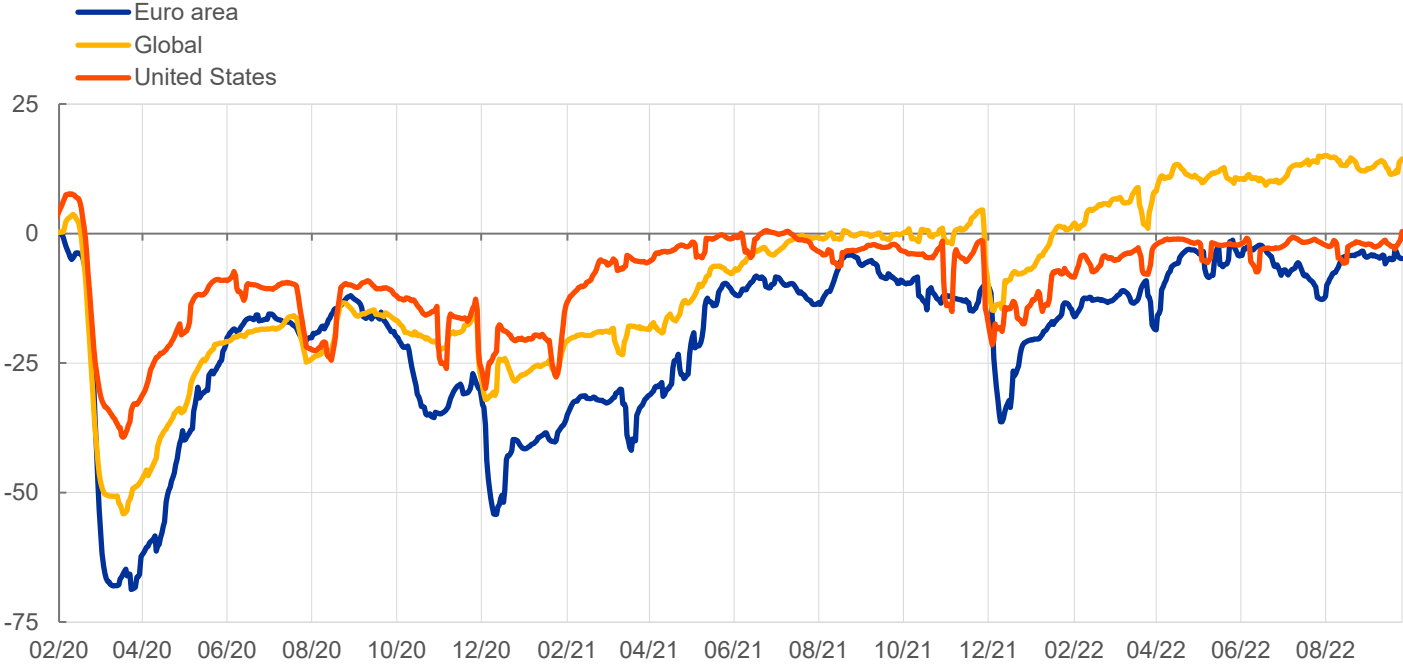
(annual percentage changes)



Sources: Eurostat.

Notes: HICP NEIG refers to non-energy industrial goods. The latest observations are for Q4 2023 (based on October data).

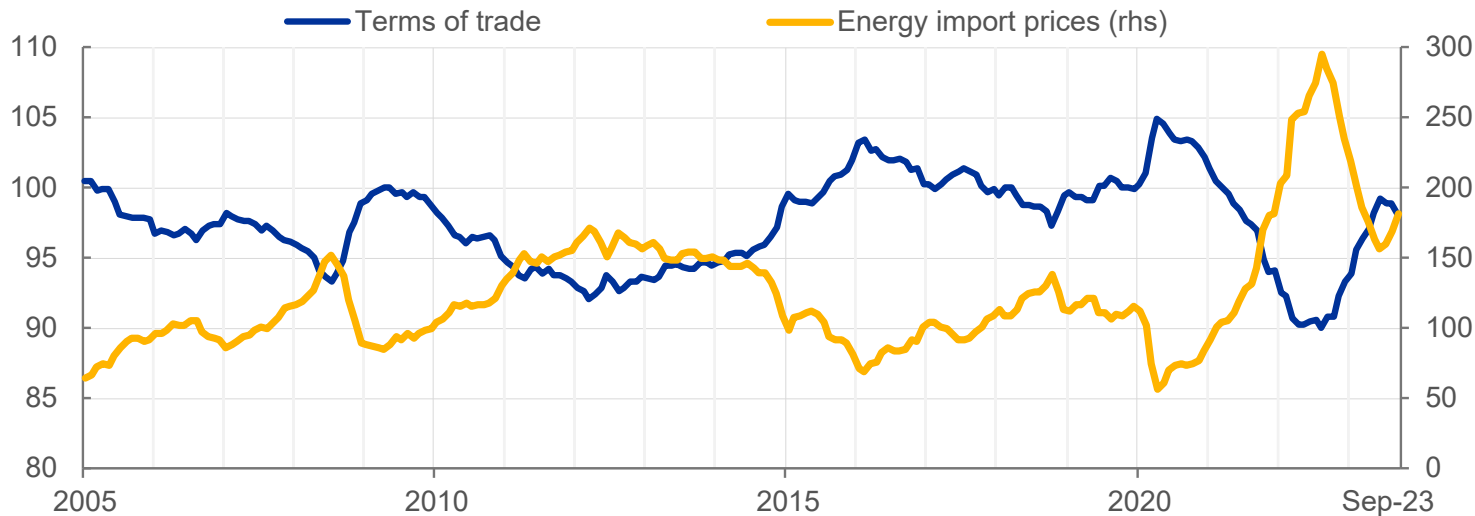
# Mobility index



Source: Google mobility trend indicator.  
Notes: The series are displayed as weekly moving averages. The index was discontinued in October 2022. The latest observation is for 15 October 2022.

## Euro area terms of trade and energy import prices

(left-hand scale: index, right-hand scale: ratio)



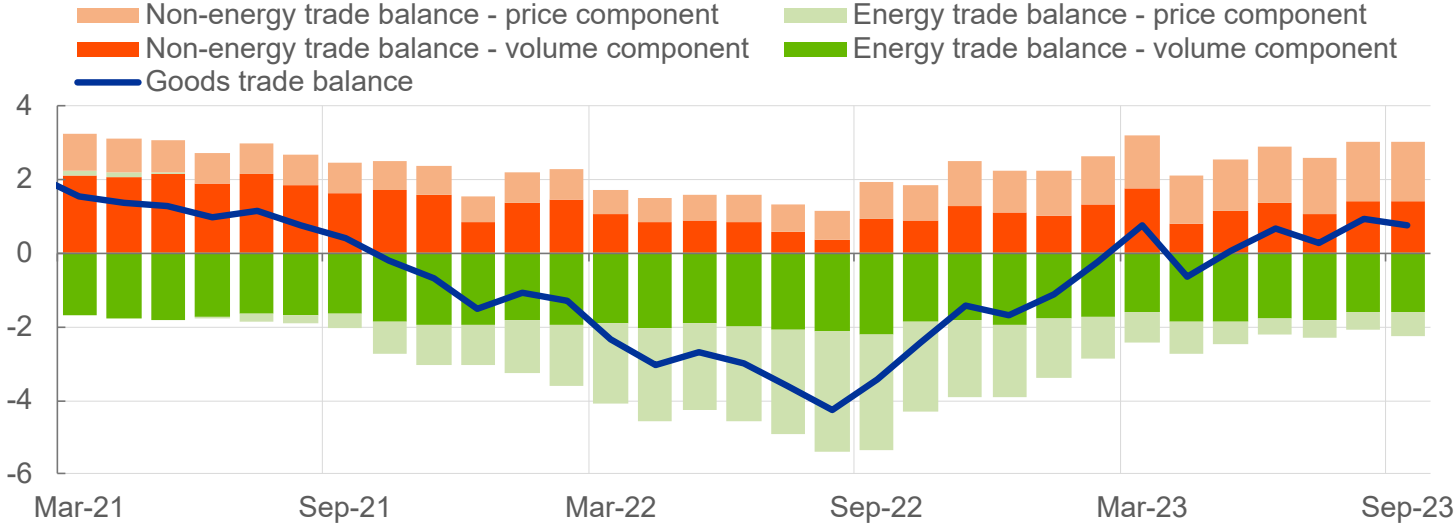
Sources: Eurostat and ECB staff calculations.

Notes: The terms of trade are expressed as the ratio of export and import prices.

The latest observations are for September 2023.

# Goods trade balance

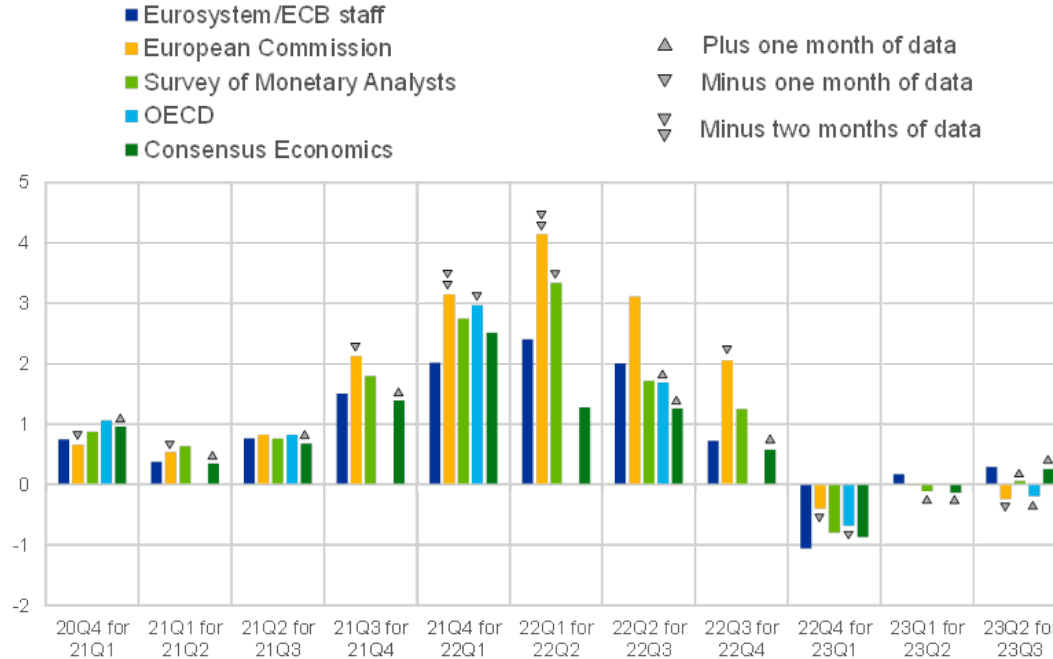
(in percentages of GDP)



Sources: Eurostat, Forecast Database and ECB staff calculations.  
Notes: Volume component is calculated dividing nominal imports and exports by import and export prices growth with respect to 2010.  
Euro area GDP for Jul-Sep 2023 was forecasted using the preliminary December BMPE growth rate for Q3 2023.  
The latest observations are for September 2023.

# One-quarter-ahead errors for euro area HICP inflation projections by forecaster

(percentage points)

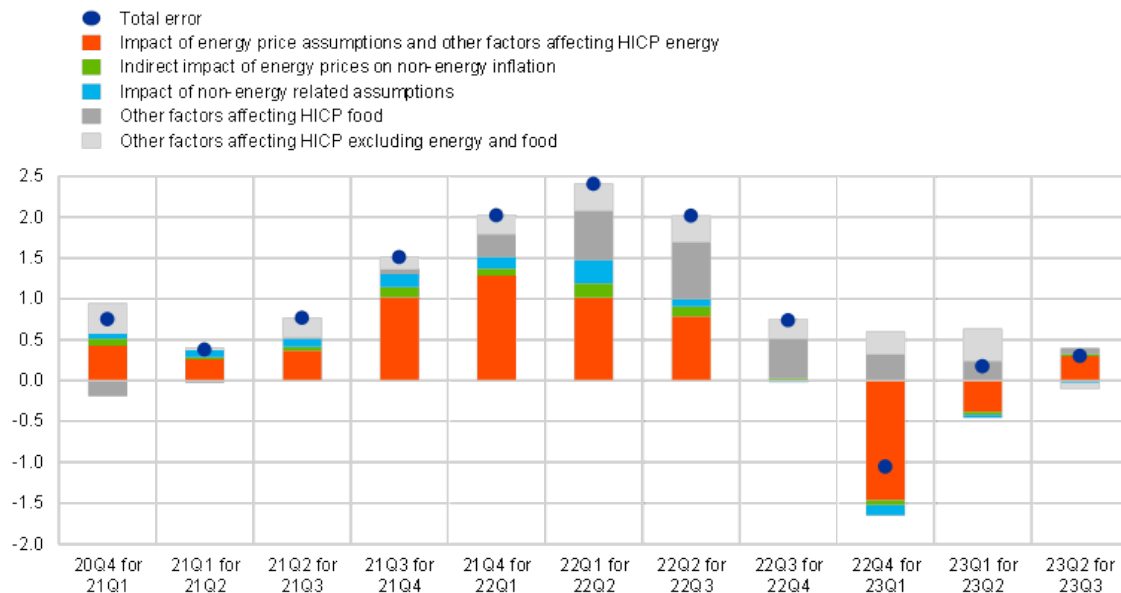


Sources: Eurosystem/ECB staff projections, Consensus Economics, Survey of Monetary Analysts (SMA), European Commission, OECD and Eurostat.

Notes: See also Chahad, M., Hofmann-Drahonsky, A.-C., Page, A. and Tirpák, M. (2023), "An updated assessment of short-term inflation projections by Eurosystem and ECB staff", Economic Bulletin, Issue 1/2023, ECB. For other forecasters, the errors are shown for publications where the corresponding cut-off date is closest to that of the Eurosystem/ECB staff projections. For the SMA, the median of survey respondents is shown. The arrows indicate differences in the months of available HICP data at the cut-off point for each publication relative to the Eurosystem/ECB staff projections. An upward arrow indicates one additional month of data, a downward arrow indicates one month less data, and two downward arrows indicate two months less data. Quarterly projections from the OECD are only available twice per year and therefore no error is shown in the first and third quarters.



## Decomposition of recent one-quarter-ahead HICP inflation errors in Eurosystem/ECB staff projections (percentage points)

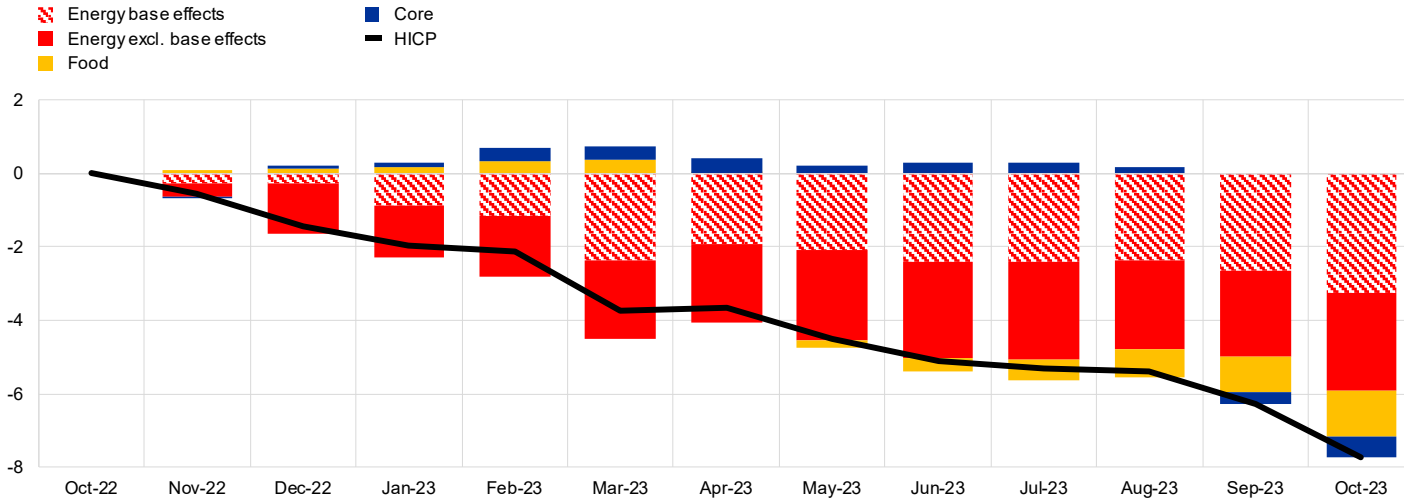


Source: ECB calculations.

Notes: See also Chahad, M., Hofmann-Drahonsky, A.-C., Page, A. and Tirpák, M. (2023), "An updated assessment of short-term inflation projections by Eurosystem and ECB staff", Economic Bulletin, Issue 1/2023, ECB. "Total error" is the outcome minus the projection. "Indirect impact of energy prices on non-energy inflation" is the sum of the indirect effects of oil, gas and electricity prices. (For oil, these are based on the elasticities derived from the Eurosystem staff macroeconomic models, and for gas and electricity these are computed assuming an elasticity proportional to the oil price shock.) "Impact of non-energy related assumptions" represents the assumptions for short and long-term interest rates, stock market prices, foreign demand, competitors' export prices, food prices and the exchange rate.

# Headline inflation vis-à-vis peak in October 2022

(annual percentage changes, percentage point contributions)



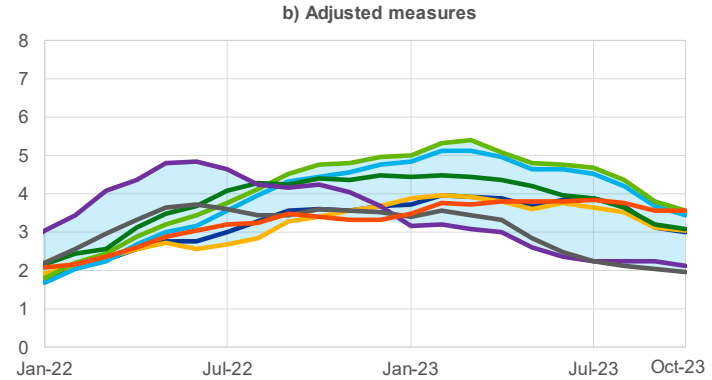
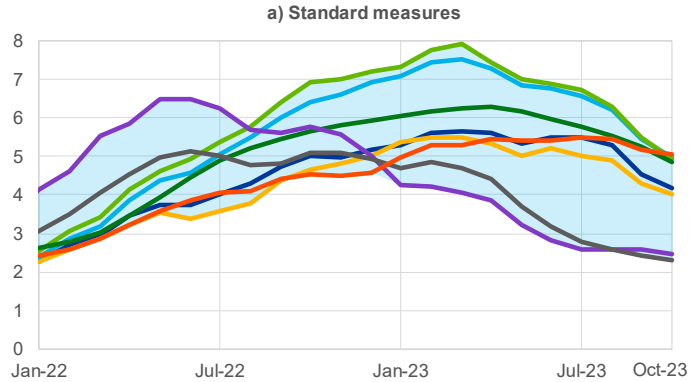
Sources: Eurostat and ECB calculations.  
Note: The latest observations are for October 2023.

# Measures of underlying inflation

(annual percentage changes)

- HICPX
- HICPXX
- Domestic
- HICP excl. unprocessed food and energy

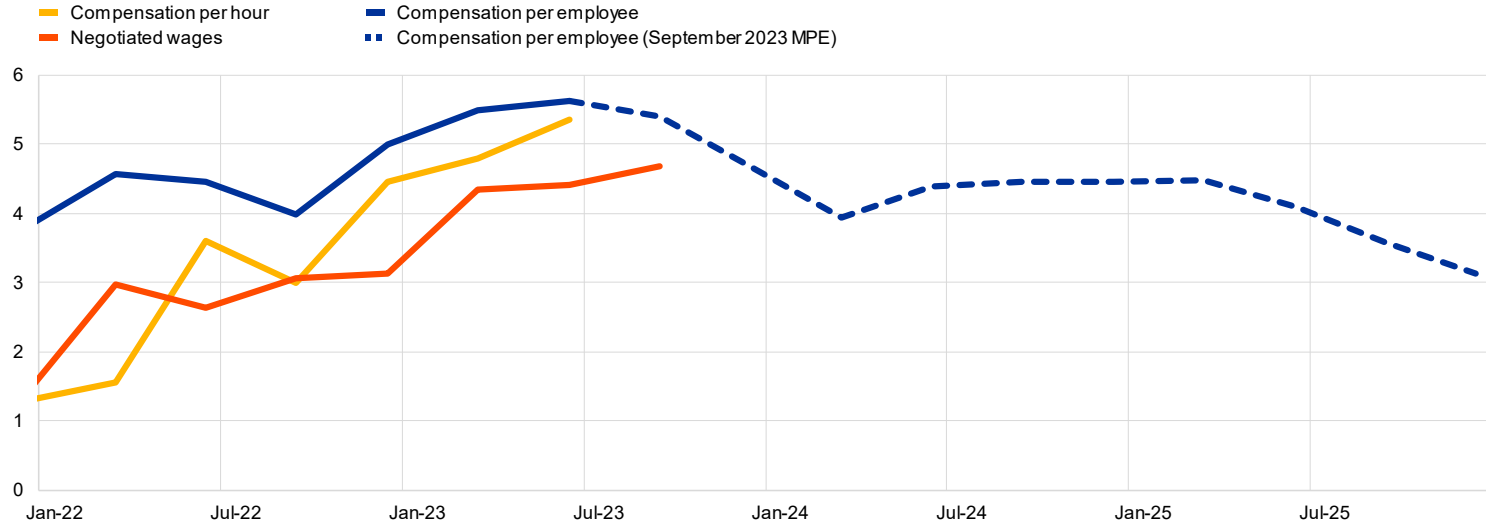
- HICP excl. energy
- Supercore
- PCCI
- PCCI excl. energy



Sources: Eurostat and ECB calculations. Notes: Adjustments based on Bañura, M., Bobeica, E. and Martínez Hernández, C. (2023), "What drives core inflation? The role of supply shocks", ECB Working Paper, No 2875, using a large BVAR model accounting for many drivers of inflation, identified with zero and sign restrictions. Latest observations are for October 2023.

# Wage developments

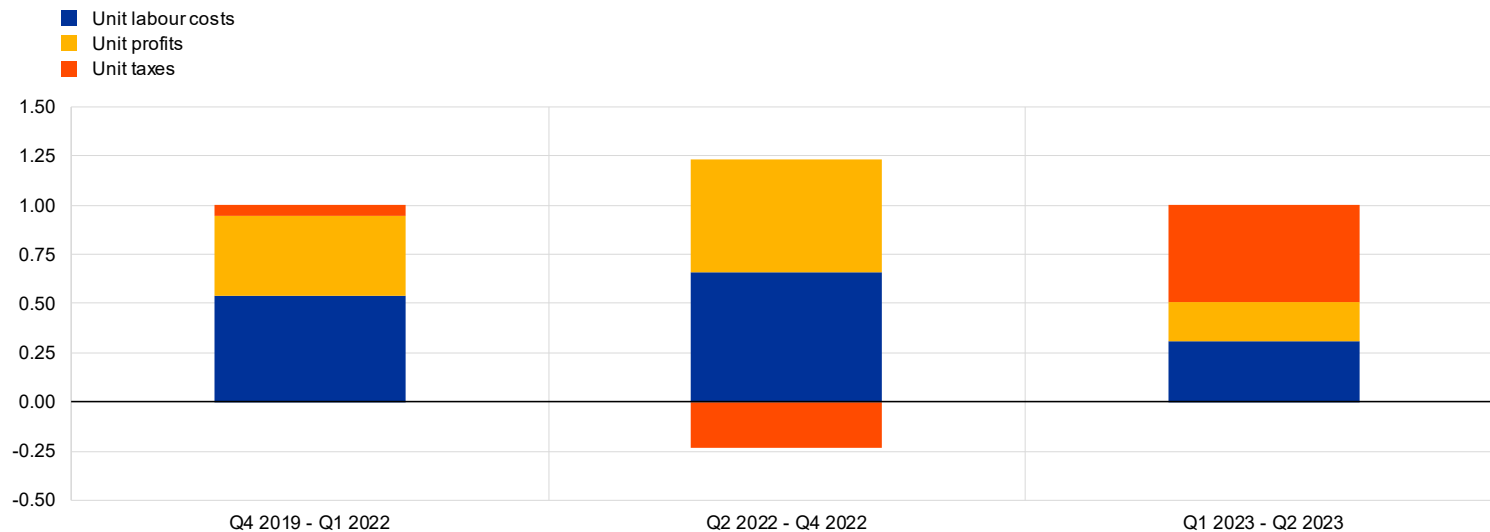
(annual percentage changes)



Sources: Eurostat, ECB and ECB staff macroeconomic projections exercise. Latest observations are for Q3 2023 for negotiated wages and Q2 2023 for compensation per hour and compensation per employee.

# Contributions of unit profits and unit labour costs to domestic price pressures as reflected in the GDP deflator

(relative shares)

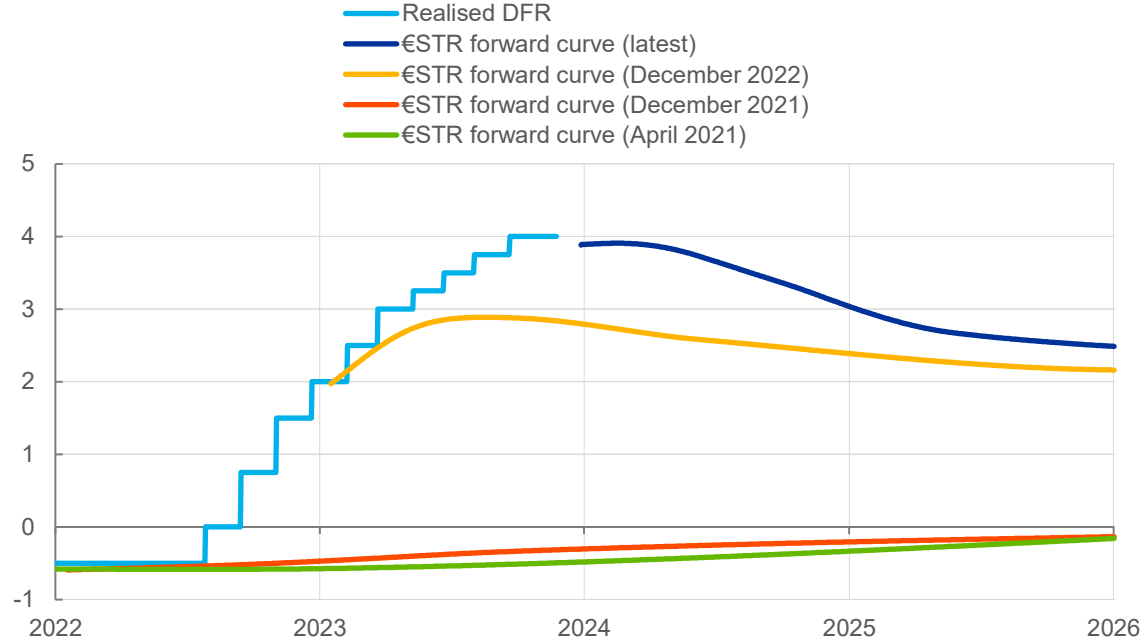


Sources: Eurostat and ECB staff calculations.

Notes: Unit taxes reflect taxes minus subsidies. In case the contribution of subsidies on products is larger than the contribution of indirect taxes, the unit tax contribution turns negative. Columns reflect changes between the indicated quarters.

# The ECB policy rate and the €STR forward curve

(percentages per annum)

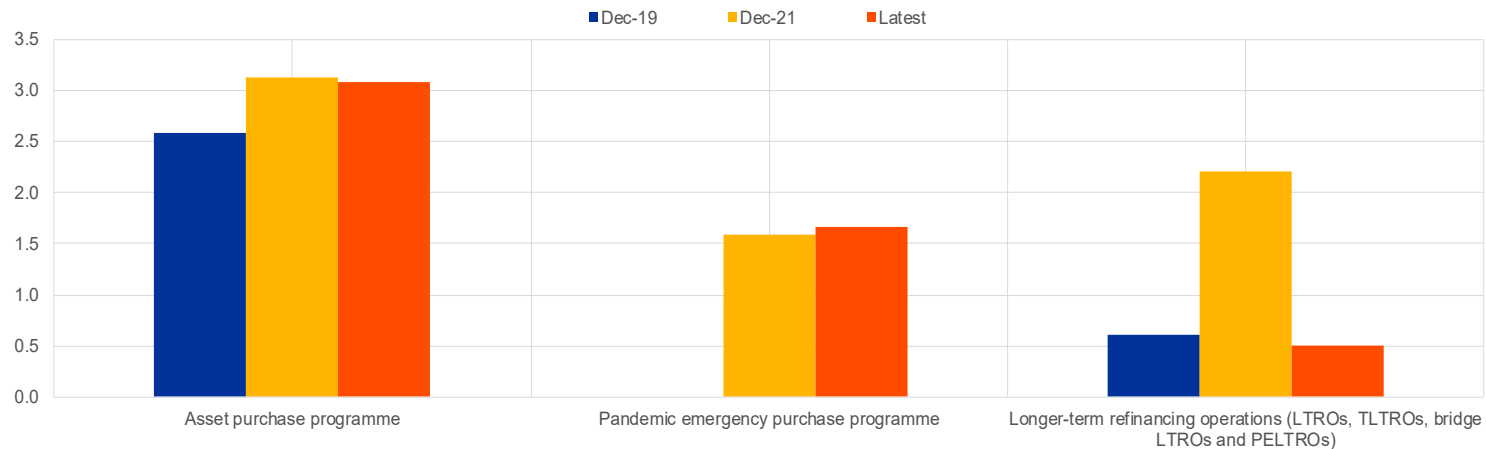


Sources: Bloomberg and ECB calculations.

Notes: Lines corresponding to April and December refer to 21 April and 15 December respectively. The curve for December 2022 refers to 14 December 2022.

The latest observation is 27 November 2023 for realised €STR.

## The evolution of monetary policy outright portfolios and targeted lending operations (EUR trillions)



Source: ECB.

Note: The latest observation is for 20 October 2023.

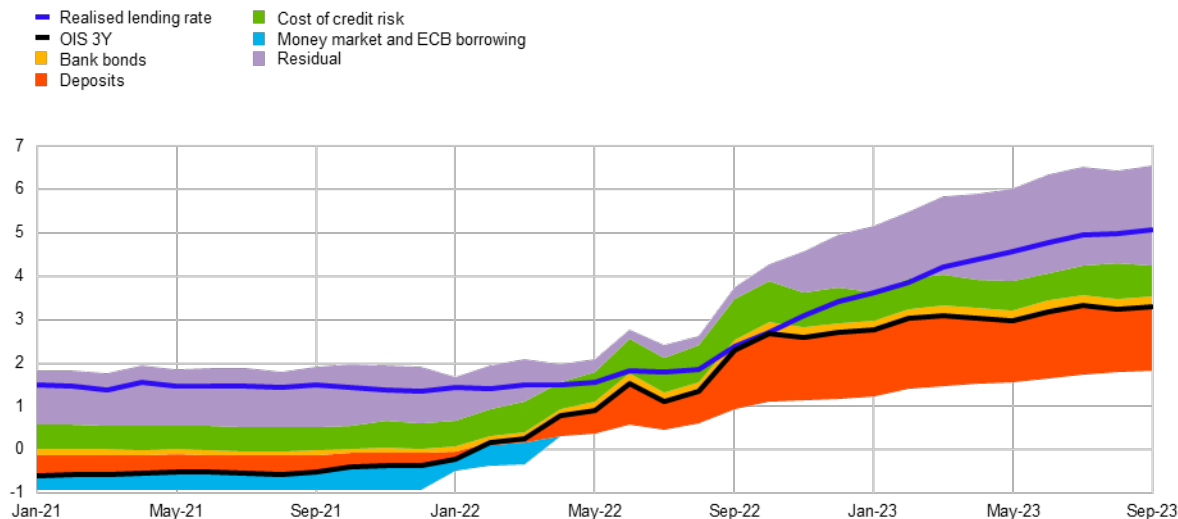
## Euro area 10-year GDP-weighted sovereign yield (percentage per annum)



Sources: Refinitiv, Bloomberg and ECB calculations.  
Note: The latest observation is for 27 November 2023.



## Lending rate to non-financial corporations and its components (percentages per annum)



Sources: ECB (BSI, MIR), Bloomberg, Moody's and ECB calculations.

Notes: The chart decomposes the realised lending rate to non-financial corporations (blue line) into contributions from bank cost components. The residual between the realised lending rate and the various cost components identifies a measure of intermediation margin. Deposits, bank bonds and money market and ECB borrowing are expressed as spreads vis-à-vis the base rate (i.e. the three-year overnight index swap (OIS), black line), weighted by their respective importance in banks' funding mix. The latest observations are for September 2023.