



EUROPEAN CENTRAL BANK

EUROSYSTEM

# Monetary policy in times of stubborn inflation

---

Isabel Schnabel

*Member of the Executive Board  
of the European Central Bank*

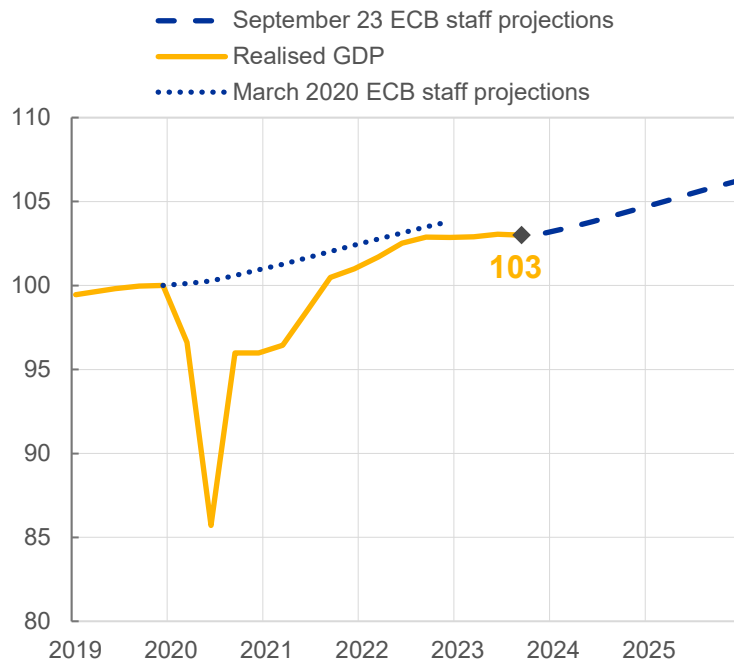


Anniversary Dinner  
Porto Business School, 23 November 2023

# Economic growth and inflation in the euro area since the start of the pandemic

## Real GDP

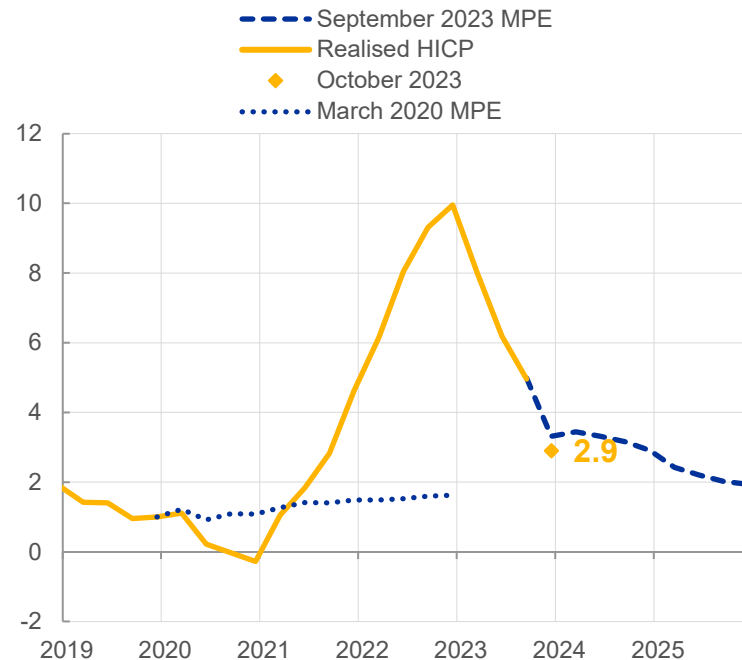
(index: Q4 2019 = 100)



Sources: Eurostat, ECB and Eurosystem.  
Latest observation: Q3 2023 for realised GDP (diamond).

## Inflation

(annual percentage changes, quarterly data)



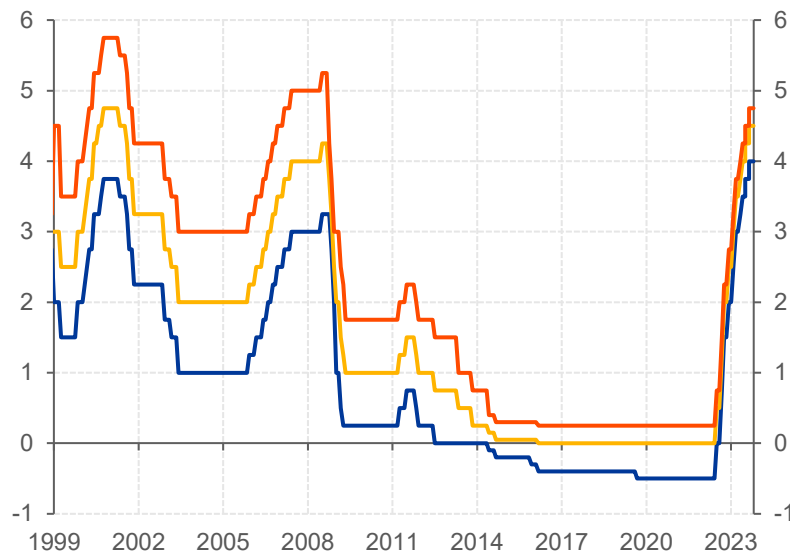
Sources: Eurostat, ECB and Eurosystem.  
Latest observation: Q3 2023 for quarterly data, October 2023 for monthly data (diamond).

# ECB has taken determined policy action to tackle unprecedented inflation surge

## ECB key interest rates

(%)

— DFR — MRO — MLF

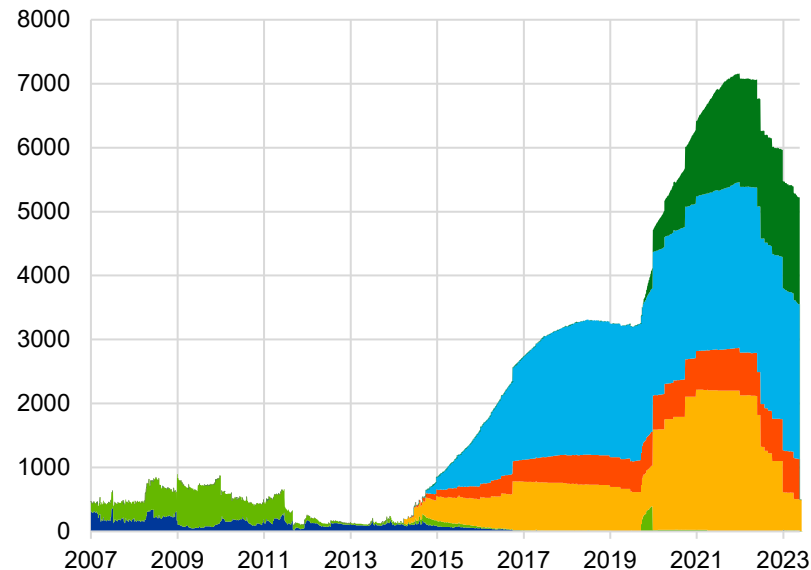


Source: ECB.  
Latest observation: November 2023.

## Monetary policy assets

(€ billion)

■ MRO ■ LTRO ■ TLTRO ■ Private APP ■ Public APP ■ PEPP

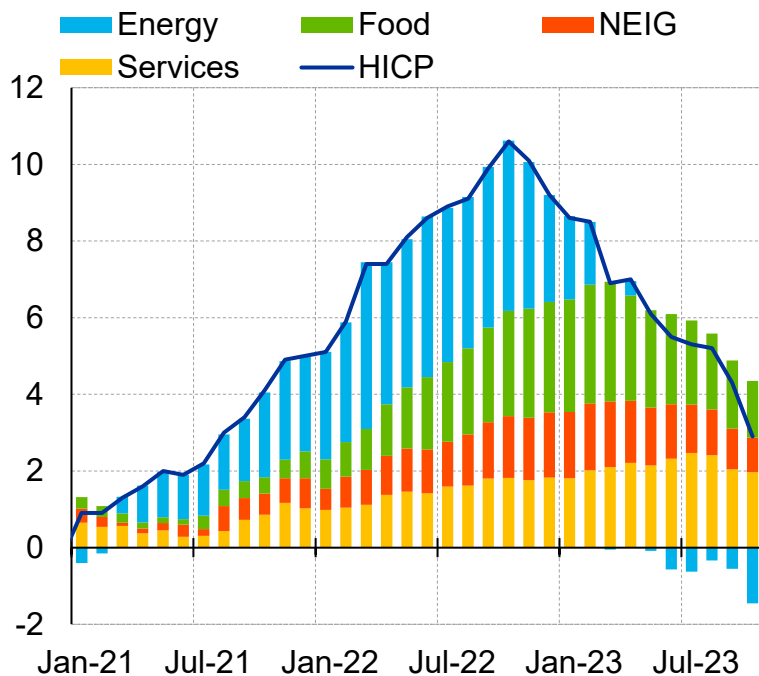


Source: ECB.  
Notes: Public APP is PSPP, Private APP is CBPP3, ABSPP and CSPP.  
Latest observation: November 2023.

# Inflation has declined on the back of large base effects related to energy and food

## HICP inflation and contributions

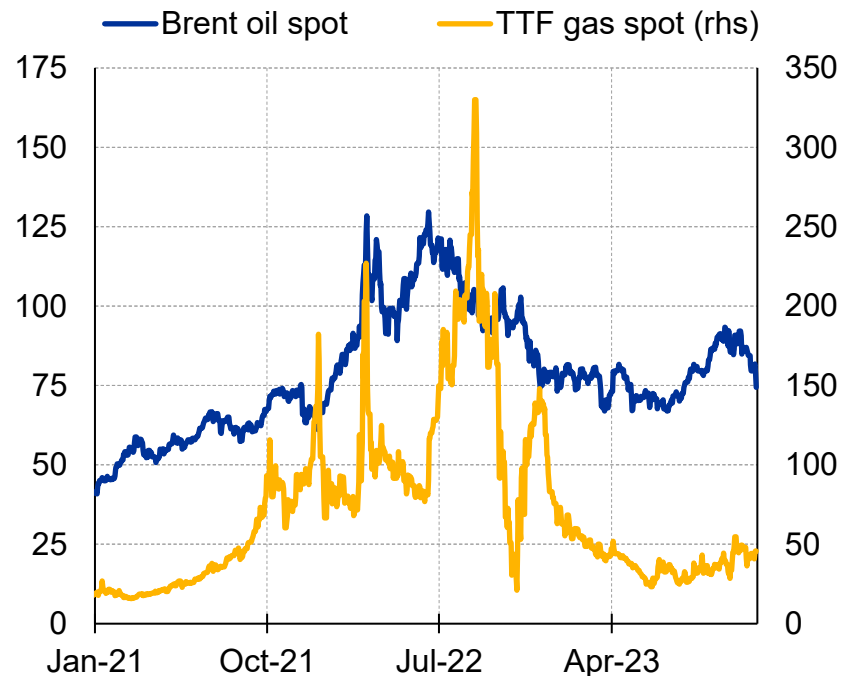
(annual percentage changes and percentage point contribution)



Sources: Eurostat and ECB calculations.  
Latest observation: October 2023.

## Crude oil and natural gas prices

(oil: EUR/barrel, gas: EUR/MWh)

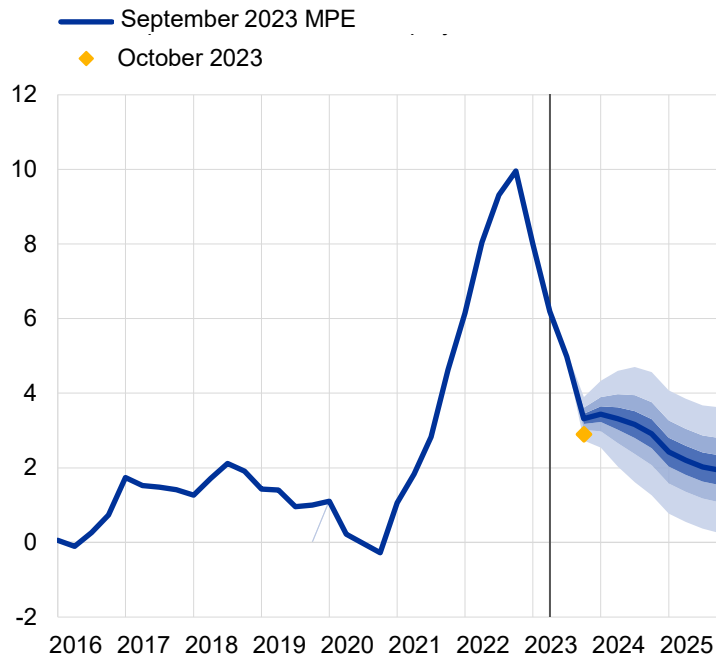


Sources: Bloomberg and ECB calculations.  
Latest observation: 16 November 2023.

# Disinflation process is projected to slow with inflation moving towards 2% by end-2025

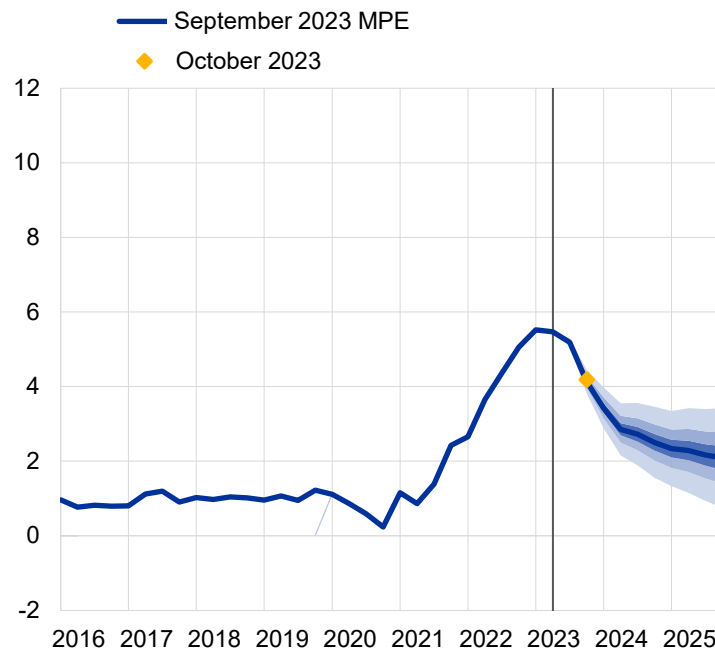
## HICP inflation projections

(annual percentage changes)



## HICP excluding energy and food inflation projections

(annual percentage changes)



Source: September 2023 MPE and Eurostat.

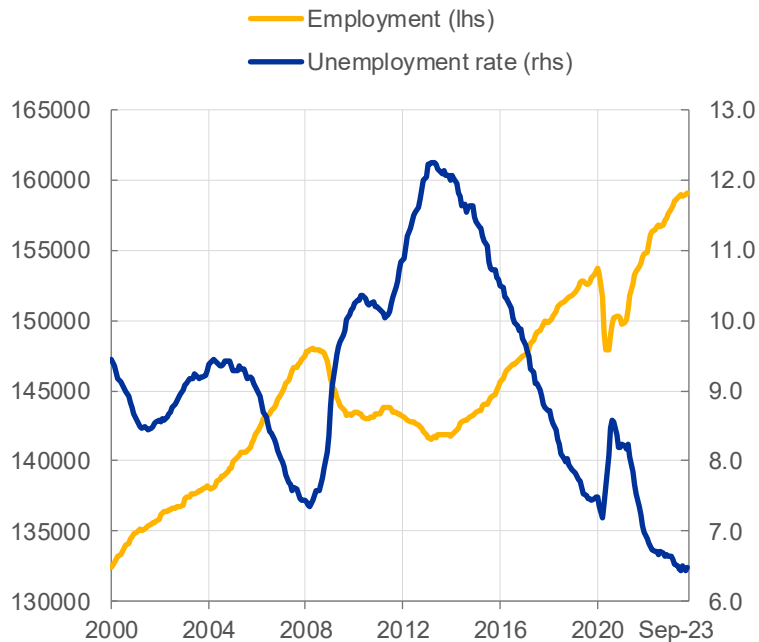
Notes: The ranges shown around the central projections are based on past projection errors, after adjustment for outliers. The bands, from darkest to lightest, depict the 30%, 60% and 90% probabilities that the outcome will fall within the respective intervals. For more information, see Box 6 of the March 2023 ECB staff macroeconomic projections for the euro area.

Latest observation: October 2023 for monthly data (diamond).

# Labour hoarding weakens monetary transmission as labour shortages persist

## Unemployment rate and employment

(lhs: thousands of persons; rhs: percentage of the labour force)



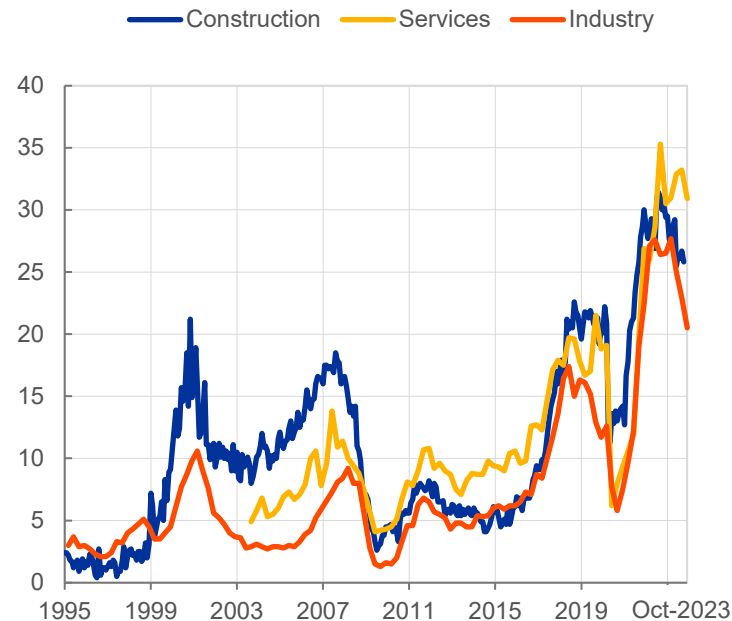
Source: ECB calculations based on Eurostat data.

Notes: The monthly employment data have been computed manually as the difference between labour force and unemployment.

Latest observation: September 2023.

## Labour as a factor limiting production

(percentage of firms)



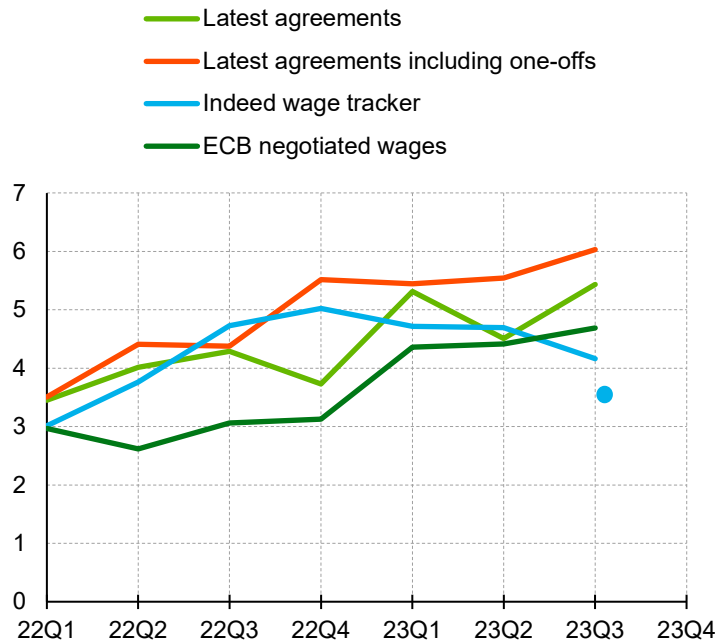
Source: European Commission.

Latest observation: October 2023.

# Strong wage growth and falling productivity put upward pressure on unit labour costs

## Wage trackers

(annual percentage change)



Sources: Calculated based on micro data on wage agreements provided by Deutsche Bundesbank, Banco de España, the Dutch employer association (AWVN), Oesterreichische Nationalbank, Bank of Greece, Banca d'Italia and Banque de France.

Notes: Indicator of latest wage agreements shows the wage growth implied by agreements reached in a quarter for 12 months ahead. Indeed tracker measures wage growth in online job ads, computed by the Central Bank of Ireland.

Latest observations: October 2023 for Indeed Wage Tracker; Q3 2023 for indicators of latest agreements and ECB negotiated wages.

## Labour productivity per hour

(index 2019 Q4 = 100)



Sources: ECB calculation based on Eurostat data.

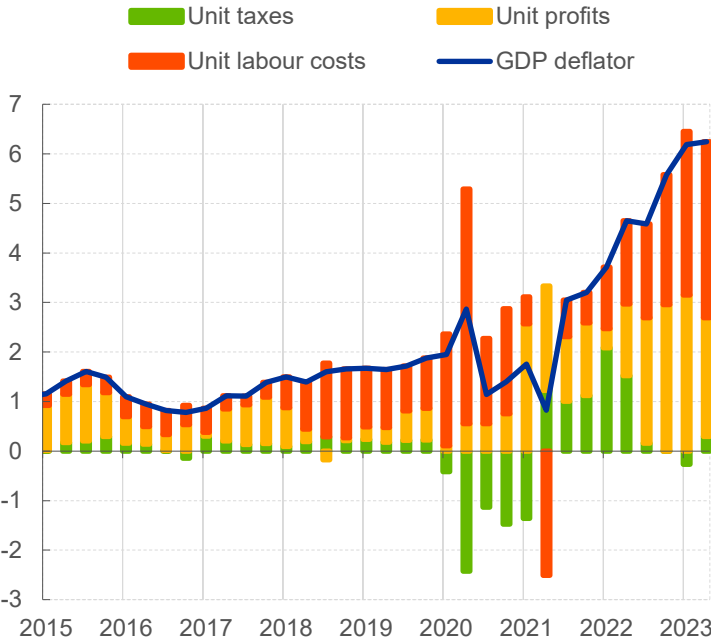
Notes: The dashed line represents the historical average from January 2000 to December 2019.

Latest observation: 2023 Q2.

# Firms often raised prices above cost increases but are more reluctant to lower them

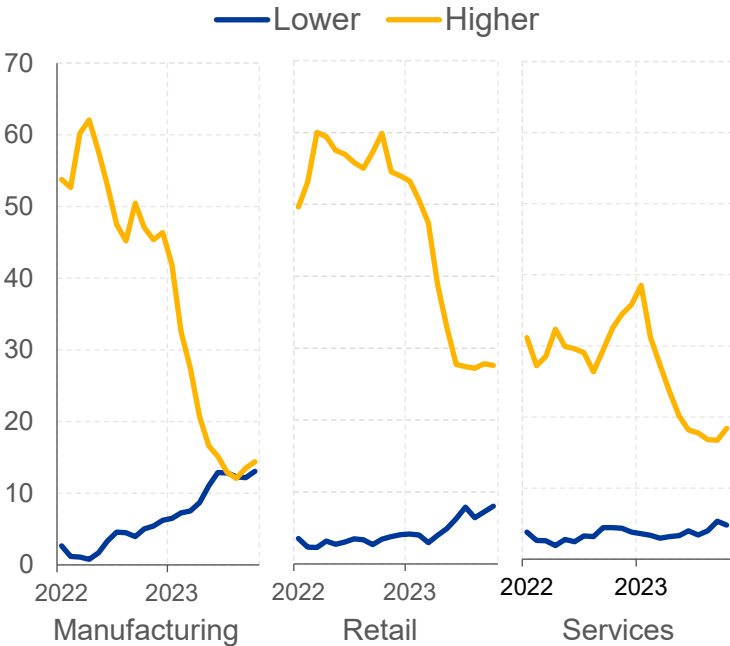
## Contributions to GDP deflator

(annual percentage changes and percentage change contributions)



## Selling price expectations

(share of firms expecting lower/higher selling prices)



Sources: Eurostat, ECB calculations.  
Notes: Unit taxes refer to unit net indirect taxes defined as indirect taxes minus subsidies.  
Latest observation: 2023 Q2.

Source: European Commission (including Eurostat) and ECB calculations.  
Notes: Data are non-seasonally adjusted.  
Latest observation: October 2023.

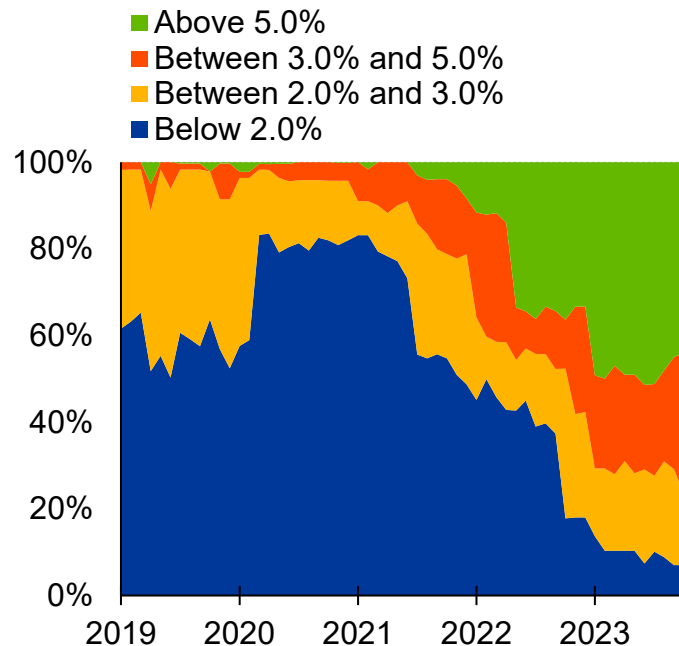


# Share of services and non-energy goods with very high inflation rates remains large

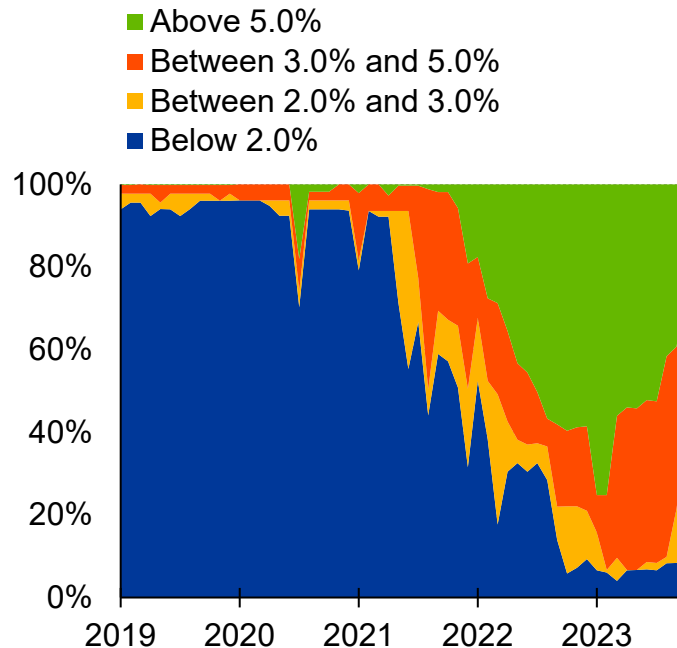
## Weighted distribution of price changes

(%)

### Services



### Non-energy industrial goods



Source: Eurostat, ECB calculations.

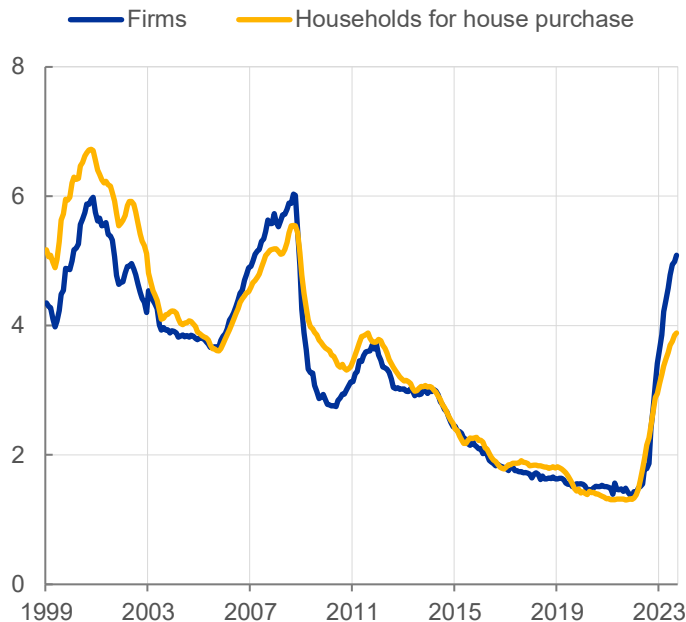
Notes: Based on 39 items for Services and 33 items for Non-energy industrial goods; the weight of items sums up the weight of items in the HICP basket in the different categories.

Latest observation: October 2023.

# Strong transmission of monetary policy to funding costs and bank lending

## Composite cost of borrowing

(percentages per annum)



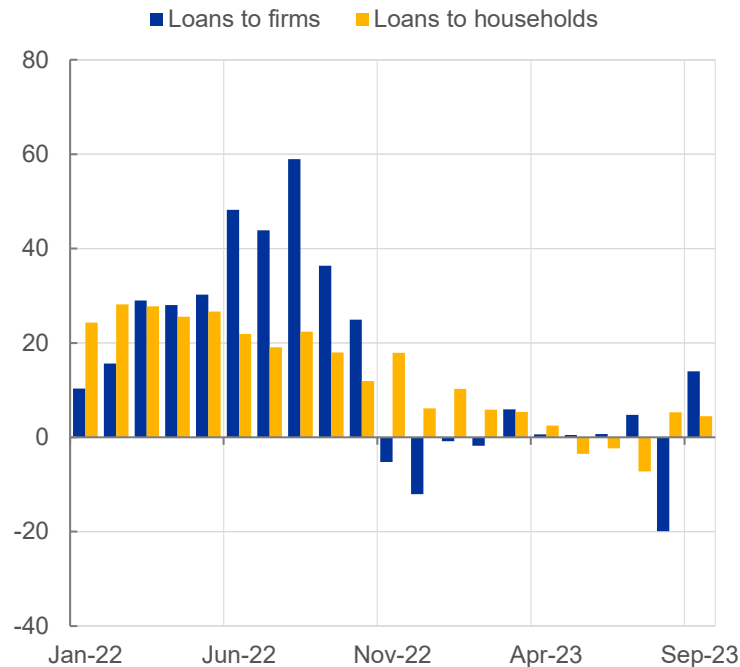
Sources: ECB (MIR) and ECB calculations.

Notes: The indicator for the total cost of bank borrowing for firms is calculated by aggregating short-term and long-term rates using a 24-month moving average of new business volumes.

Latest observation: September 2023.

## Bank loans to firms and households

(monthly flow in EUR bn)



Sources: ECB (BSI).

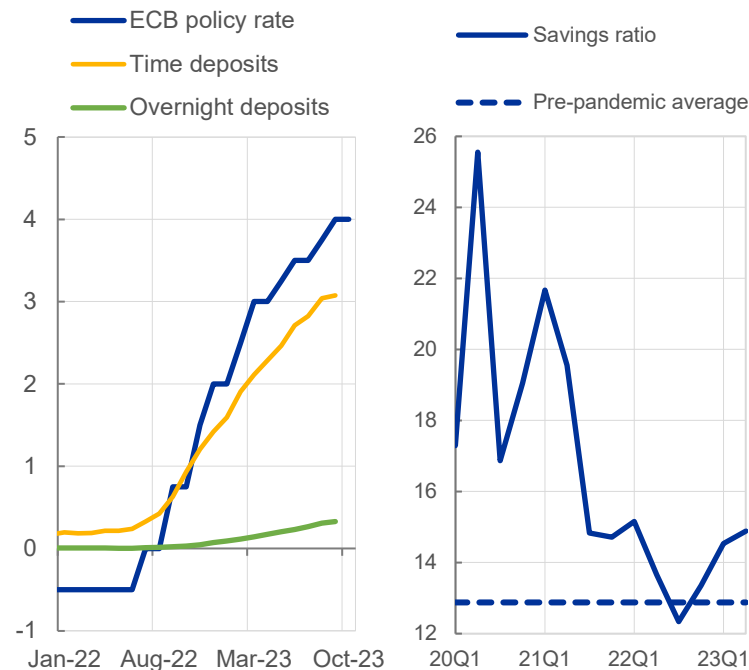
Notes: Loans to households and firms are adjusted for sales and securitisation. Loans to firms are also adjusted for cash pooling.

Latest observation: September 2023.

# Limited pass-through to deposit rates and moderate decline in house prices so far

## Household deposit rate pass-through and savings ratio

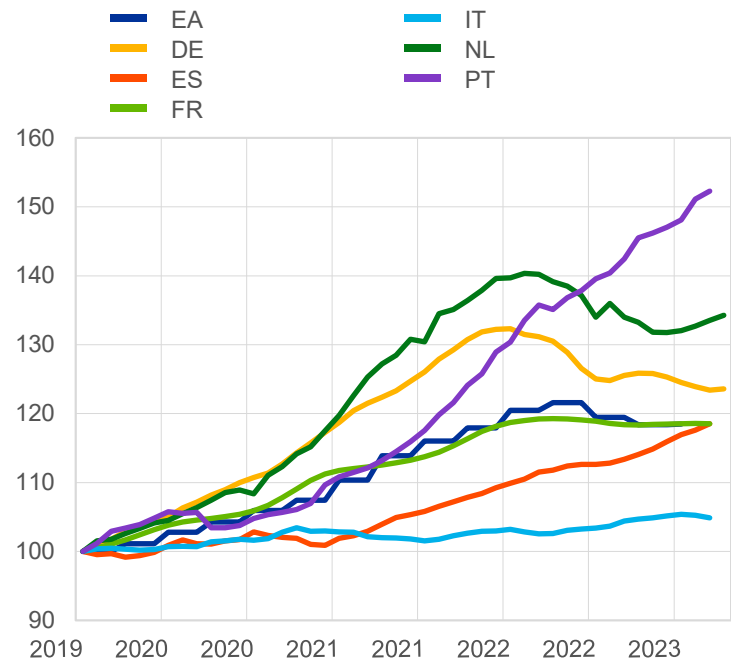
(lhs: percentage per annum: rhs: percentage share of nominal income)



Sources: Eurostat, ECB (MIR, FM) and ECB calculations.  
Notes: Time deposits are those of maturity of up to 2 years. Pre-pandemic average of savings ratio is calculated over the period 1999 Q1-2019 Q4.  
Last observations: October 2023 for the ECB policy rate, September 2023 for deposit rates, 2023 Q2 for savings ratio.

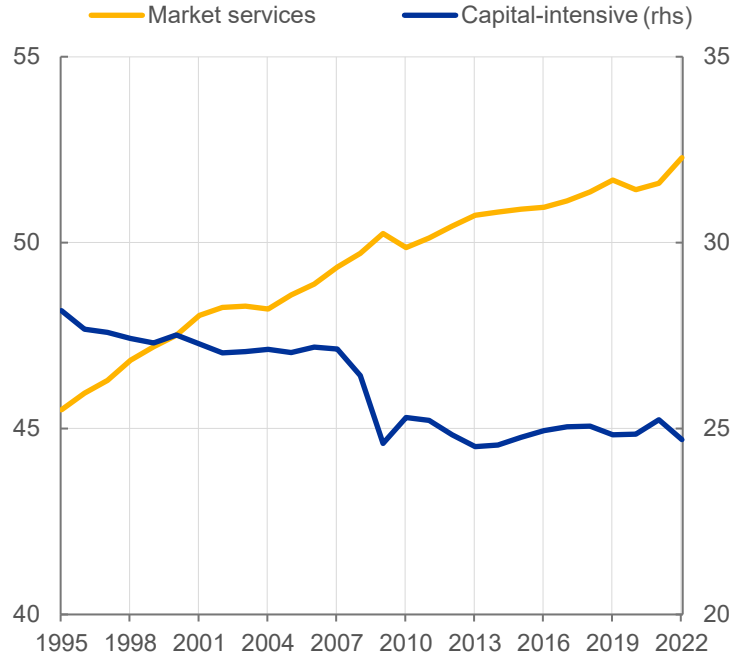
## House prices

(Monthly RRE price indices; December 2019 = 100)



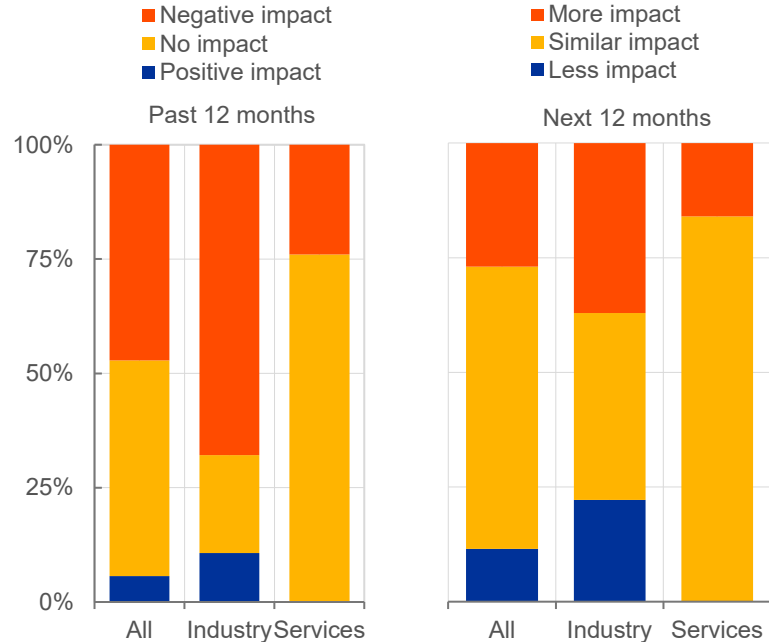
Sources: Europace, Eurostat, Immobiliare.it, Indomio.es, Meilleursagents.com, Statistics Netherlands.  
Notes: RRE stands for Residential Real Estate. Last EA observation from Eurostat is for Q2 2023, so several countries with more timely data available are added. For IT and ES an average listing price index is reported. For all other countries the index reported is a hedonic price index based on transaction prices. Latest observation: September 2023 for DE and NL, August 2023 for ES, FR, IT and PT, Q2 2023 for EA.  
[www.ecb.europa.eu](http://www.ecb.europa.eu)

Sectoral shares in euro area  
gross value added  
(percentages)



Sources: Eurostat and ECB calculations.  
Notes: The market services sector includes, among others, wholesale and retail trade, transportation, accommodation and food services, information and communication, and financial and real estate services. The capital-intensive sector includes, among others, mining, manufacturing, energy and water supply, and construction.

Survey: Impact of changes in financing  
conditions on firms' activity  
(percentage of firms)

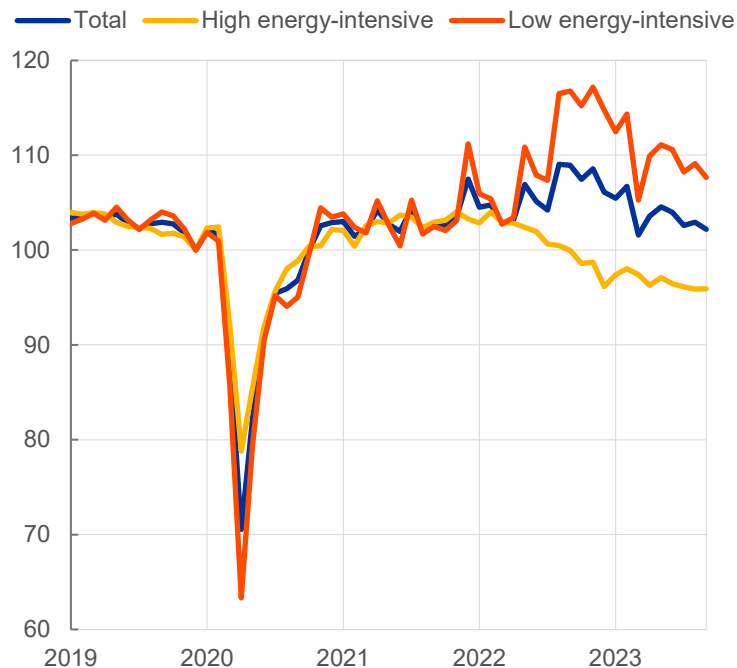


Sources: ECB Corporate Telephone Survey.  
Notes: The chart shows the answers to the question "How do financing conditions (cost and availability of funding) since mid-2022 affect business activity over past 12 months and in the next 12 months?".  
Latest observations: October 2023.

# Energy shock threatens to leave permanent scars in the euro area

## Industrial production: manufacturing sector

(index: December 2019 = 100)

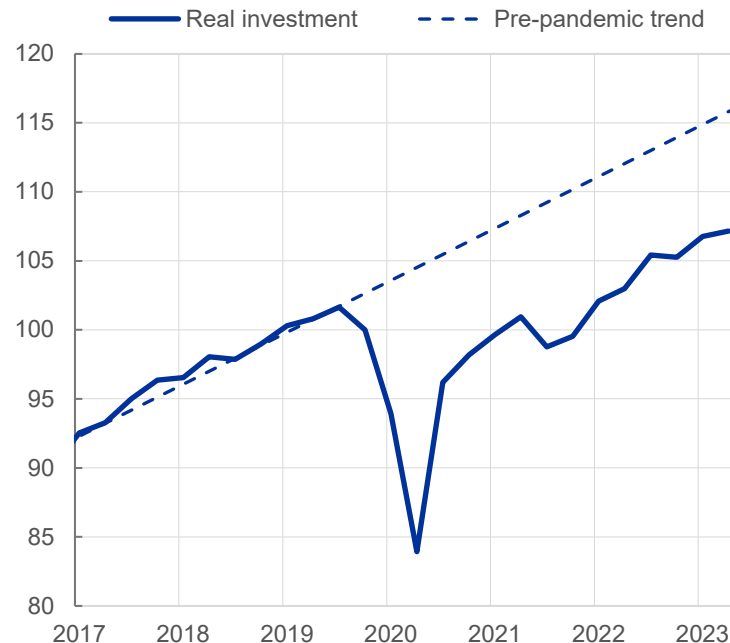


Sources: Eurostat, Trade Data Monitor and ECB staff calculations.

Notes: Data are seasonally-adjusted. Industrial production indices for individual sectors are aggregated with value-added weights. Low (high) energy-intensity sectors are defined as those with an energy intensity lower (higher) than that of the median sector. For more details, see [Chiacchio, De Santis, Gunnella and Lebastard \(2023\)](#). Latest observation: September 2023.

## Real business investment

(index: 2019 Q4 = 100)

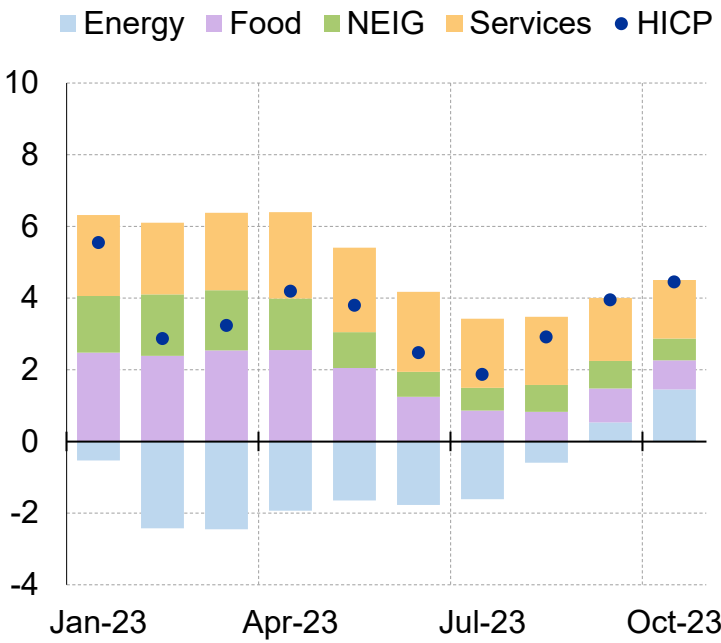


Source: ECB calculation based on Eurostat data.

Notes: Pre-pandemic trend estimated on the basis of quarterly data between 2013 Q1 and 2019 Q4. Real investment adjusted for the statistical volatility of intangible investment in Ireland. Latest observation: 2023 Q2.

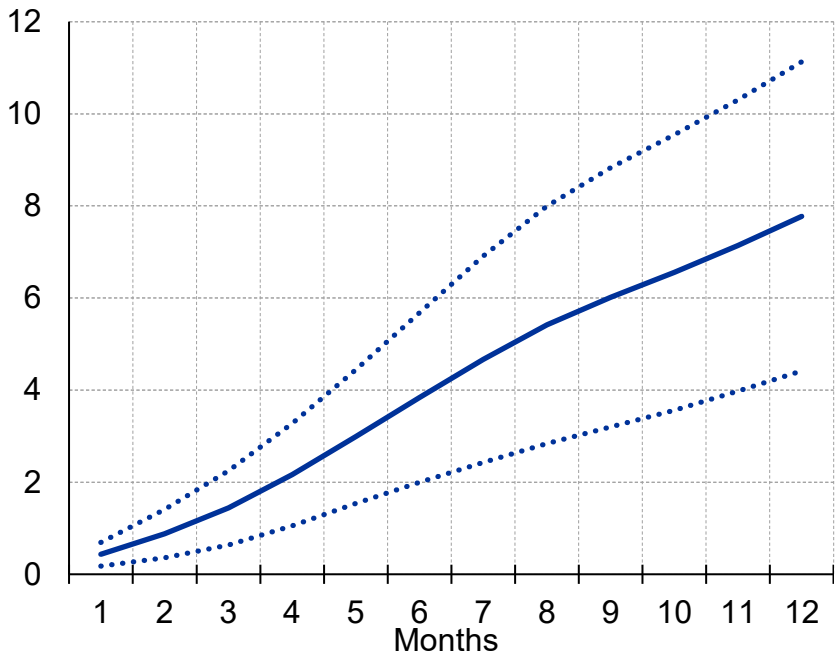
Momentum of HICP and main components

(annualised 3m-on-3m percentage changes, percentage points contributions)



Global food price effects of a one-degree temperature rise during El Niño

(percent)



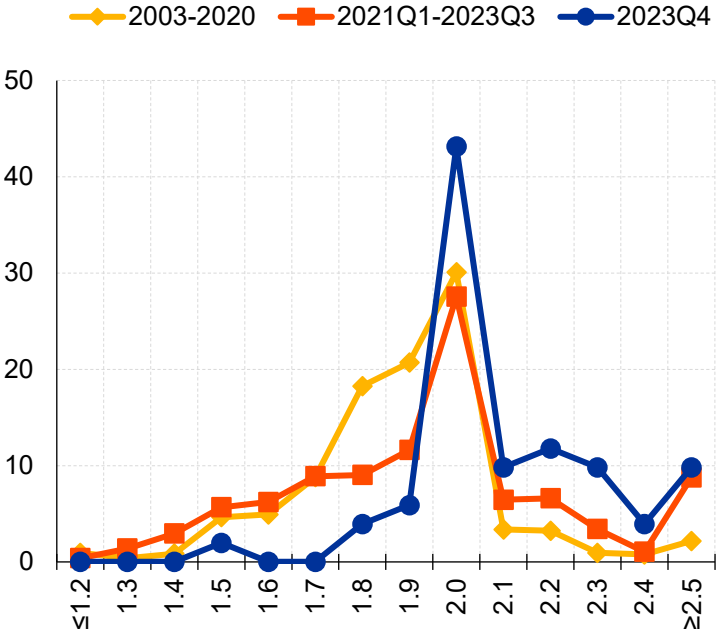
Sources: Eurostat, ECB calculations.  
Latest observation: October 2023.

Sources: Haver, NOAA, Bloomberg and ECB calculations.  
Notes: Price reaction shows impact of a 1°C increase in temperature during El Niño controlling for fertiliser and oil prices and global industrial activity with 68% confidence intervals.  
Latest observation: May 2023 (monthly sample starting in January 1960).

# Longer-term inflation expectations continue to signal some upside risks

## SPF: Cross-sectional distribution of longer-term inflation point forecasts

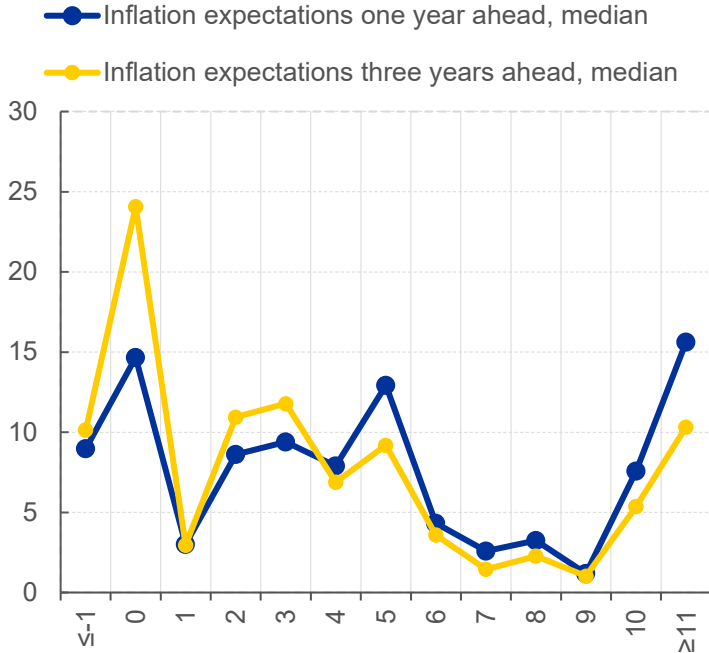
(percent)



Sources: ECB SPF  
Latest observation: 2023Q4.

## CES: Cross-sectional distribution of inflation point forecasts (1 to 3 years)

(percent)

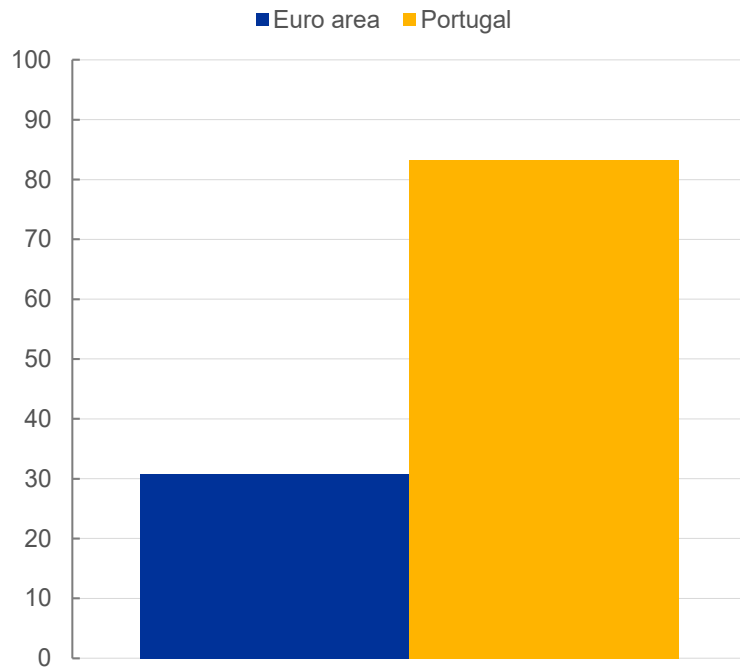


Sources: ECB CES and ECB calculations  
Latest observation: September 2023.

# Portugal: Variable mortgage rates accelerate monetary policy transmission

## Share of stock of loans to households repricing within one year (June 2022)

(percentages)



Sources: ECB (BSI) and ECB calculations.

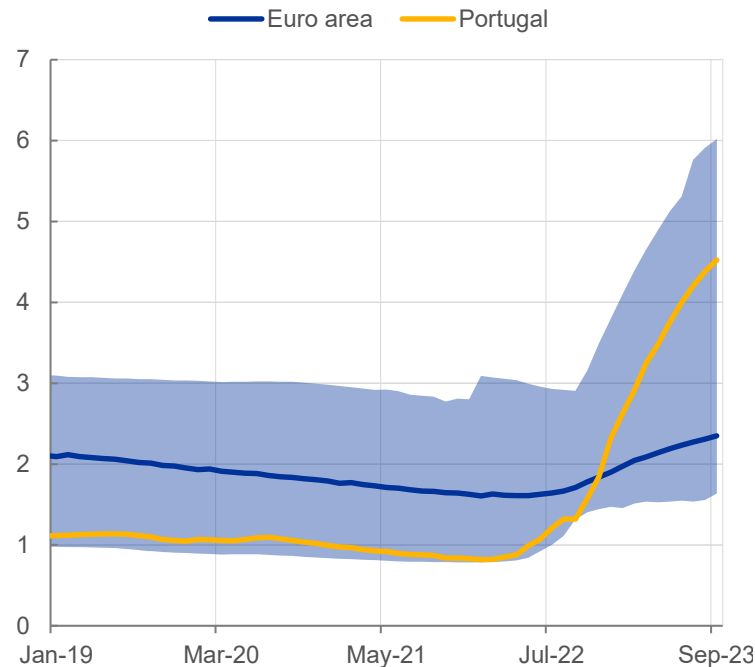
Notes: Short-term debt includes short-term loans, long-term loans expiring within a year and long-term loans with residual time to next interest rate fixation lower than a year.

Long-term debt includes long-term loans not considered as short-term debt.

Latest observation: June 2022.

## Lending rates on outstanding mortgages

(percentages per annum)



Sources: ECB (MIR) and ECB calculations.

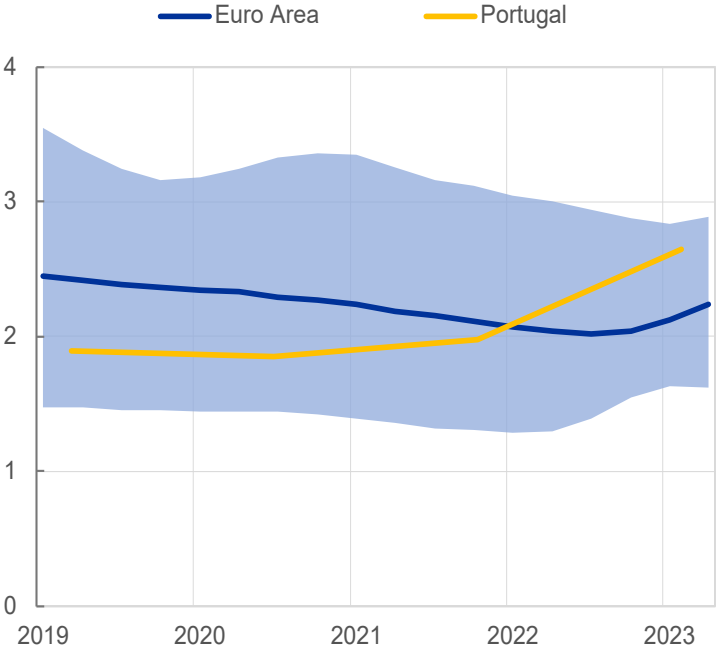
Notes: The shaded area represents the country range.

Last observation: September 2023.



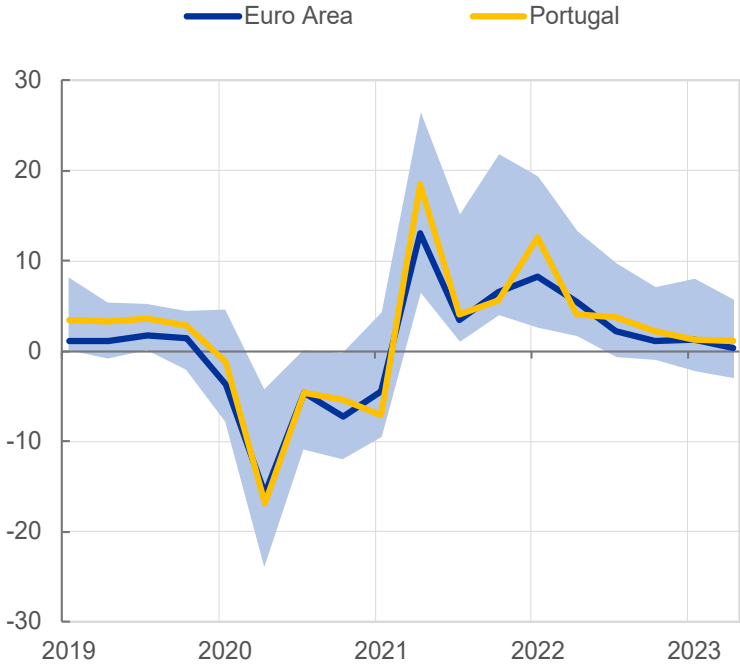
# Portugal: Real consumption growth similar to EA average despite stronger transmission

### Interest payables as share of gross disposable income (percentages)



Source: Eurostat and ECB calculations.  
Notes: The blue area shows interest payables as a share of gross disposable income as a range across euro area countries (excluding the Netherlands).  
Latest observation is 2023 Q2 for EA and the range and 2022 for Portugal, as only annual data is available for Portugal.

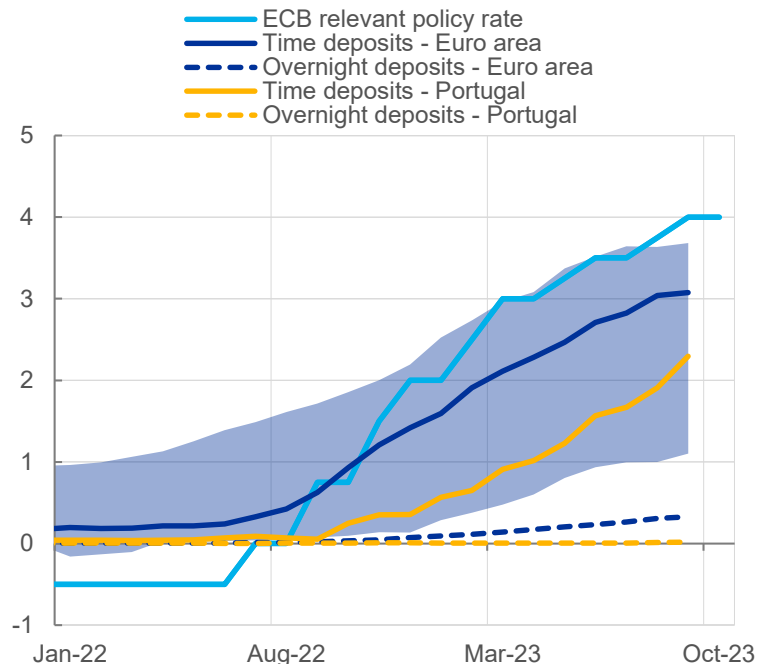
### Real consumption (y-o-y growth rate)



Sources: Eurostat and ECB calculations.  
Notes: The blue area shows the y-o-y growth rate range across all euro area countries.  
Latest observation: 2023 Q2.

# Portugal: Lower deposit rate pass-through with households shifting to savings certificates

## ECB policy rate and household deposit rate pass-through (percentages per annum)

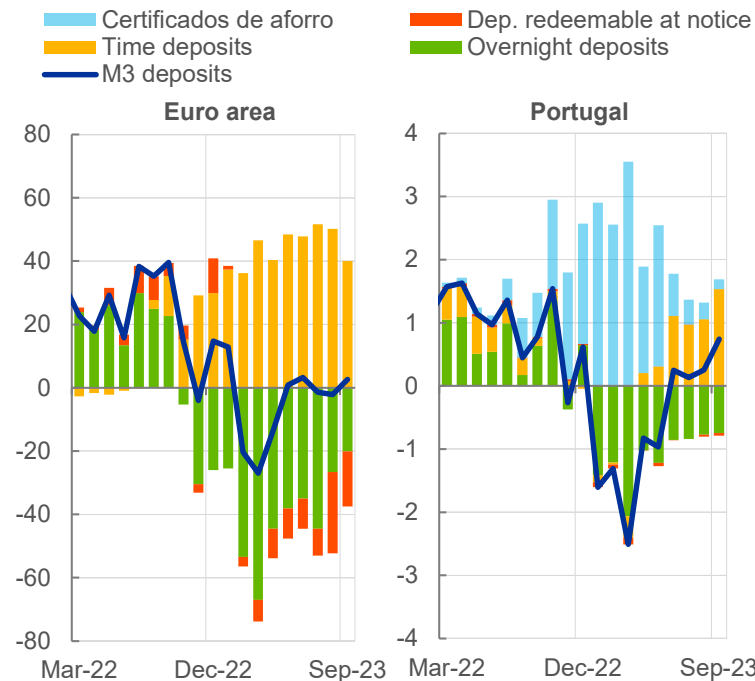


Sources: ECB (MIR, FM) and ECB calculations.

Notes: Time deposits are those of maturity of up to 2 years. The shaded area represents the country range for time deposits.

Latest observation: October 2023 for the policy rate, September 2023 for deposit rates.

## Household deposit volumes (SA monthly flows in EUR bn)



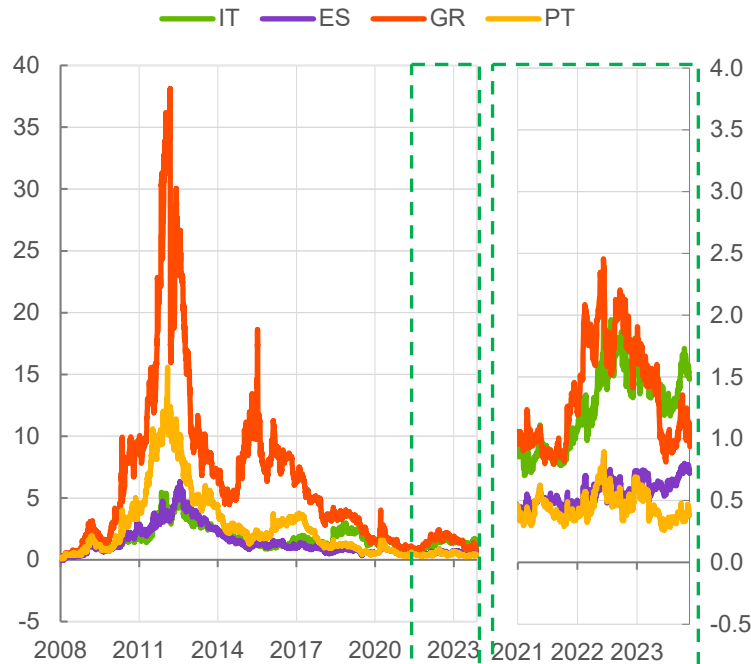
Sources: ECB (BSI), Banco de Portugal and ECB calculations.

Notes: Time deposits are those of maturity of up to 2 years. Deposits redeemable at notice are those of maturity of up to 3 months. The seasonal adjustment of the data for Portugal is not official. "Certificados de aforro" are "deposit-like" non-tradable debt instruments issued by the Portuguese government and are not included in M3 deposits. Latest observation: September 2023.

# Portugal: Sovereign spreads low and resilient as fiscal outlook is favourable

## 10-year sovereign to OIS spread

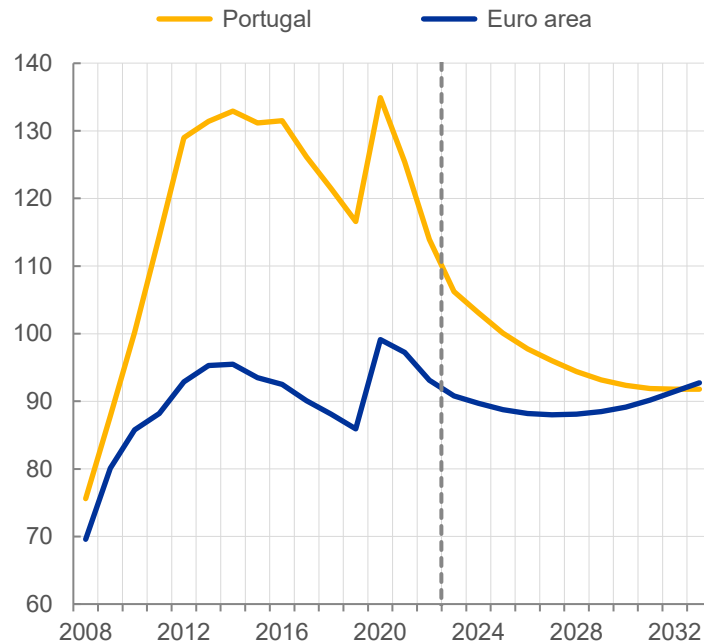
(percentages per annum)



Sources: Bloomberg, Refinitiv and ECB calculations.  
Latest observation: 17 November 2023.

## Government debt

(% of GDP)



Sources: European Commission, Spring 2023.  
Note: European Commission's debt outlook based on the Spring 2023 Economic Forecast and a no-fiscal-policy change assumption beyond the two-year forecast horizon.  
Latest observation: 2022.

**Thank you very much for your attention!**