



EUROPEAN CENTRAL BANK

EUROSYSTEM

The euro area outlook

Seminar at the Economic
and Social Research
Institute, Dublin

20 December 2023



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December 2023 Eurosystem staff projections: assumptions

	December 2023				Revisions vs. September 2023		
	2023	2024	2025	2026	2023	2024	2025
Oil price (level in USD)	84.0	80.1	76.5	73.6	1.6	-2.1	-1.7
Oil price (level in euro)	77.8	73.9	70.6	67.9	2.4	-1.2	-0.8
Natural gas price (EUR/MWh)	41.5	47.4	44.2	36.9	-3.2	-12.6	-6.9
Wholesale electricity price (EUR/MWh)	105.0	116.5	110.8	97.7	-8.8	-18.3	-10.1
Effective exchange rate (index 1999Q1=100)	121.9	123.5	123.5	123.5	-0.9	-1.1	-1.1
USD per EUR (level)	1.08	1.08	1.08	1.08	-0.69	-0.88	-0.88
3-month interest rate (% p.a.)	3.4	3.6	2.8	2.7	0.0	-0.1	-0.3
10-year bond yield (% p.a.)	3.2	3.2	3.3	3.5	0.0	-0.1	0.0
Stock price (level)	451	455	458	459	-0.7	-0.9	-1.3

Note: Revisions are expressed as percentages for levels and percentage points for interest rates and bond yields.

December 2023 Eurosystem staff projections: baseline

	December 2023 (annual percentage changes)				Revisions vs. September 2023 (percentage points)		
	2023	2024	2025	2026	2023	2024	2025
HICP	5.4	2.7	2.1	1.9	-0.2	-0.5	0.0
HICP excl. energy and food	5.0	2.7	2.3	2.1	-0.1	-0.2	0.1
Compensation per employee	5.3	4.6	3.8	3.3	0.0	0.3	0.0
Unit labour costs	6.1	4.1	2.6	2.0	0.3	0.6	0.2
Real GDP	0.6	0.8	1.5	1.5	-0.1	-0.2	0.0
Private consumption	0.5	1.4	1.6	1.4	0.2	-0.2	0.0
Government consumption	0.1	1.1	1.3	1.2	0.2	0.0	-0.1
Total investment	1.3	0.4	1.8	2.1	-0.4	0.8	0.4
Unemployment rate (% of labour force)	6.5	6.6	6.5	6.4	0.0	-0.1	-0.2

	December 2023 (Q4-on-Q4 percentage changes)				Revisions vs. September 2023 (percentage points)		
	23Q4	24Q4	25Q4	26Q4	23Q4	24Q4	25Q4
HICP	2.8	2.6	2.0	1.9	-0.5	-0.3	0.1
HICP excl. energy and food	3.8	2.7	2.1	2.1	-0.3	0.2	0.0
Compensation per employee	4.7	4.6	3.5	3.1	0.0	0.1	0.4
Unit labour costs	5.5	3.6	2.3	1.9	0.5	0.4	0.5
Real GDP	0.3	1.3	1.5	1.5	-0.2	-0.1	0.0
Private consumption	0.6	1.8	1.4	1.4	0.1	-0.1	0.0
Government consumption	-0.3	1.9	1.0	1.3	0.1	0.4	-0.3
Total investment	1.2	0.4	2.2	2.0	-0.3	1.2	-0.1
Unemployment rate (% of labour force)	6.5	6.6	6.5	6.3	0.0	-0.1	-0.2

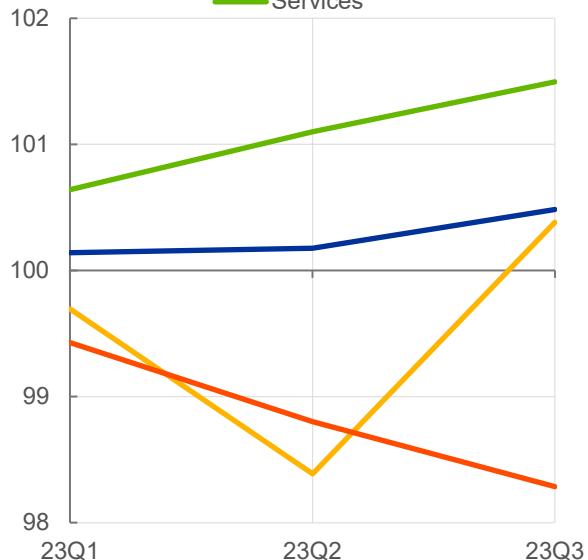
Note: Revisions calculated based on rounded figures.

Private consumption

Goods and services consumption

(index: 2019 = 100)

- Total
- Durables
- Non-durables
- Services



Sources: Eurostat, DG-ECFIN and ECB calculations.

Notes: The country coverage for the figures in Q3 2023 is 95%.

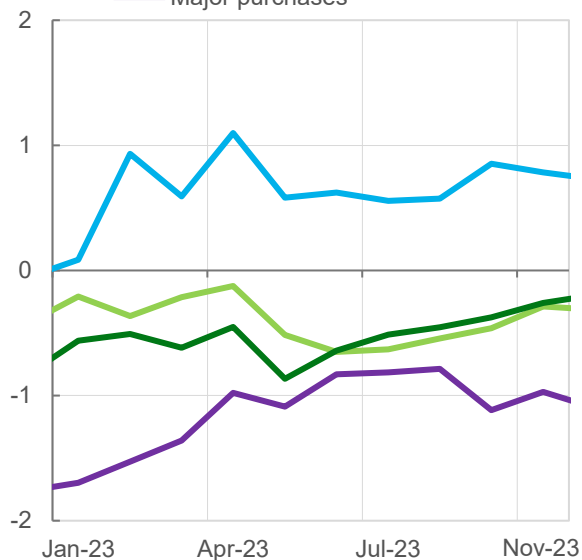
Non-durable goods include semi-durable ones.

Latest observation: Q3 2023.

Demand expectations

(standardised percentage balances)

- Contact-intensive services
- Services
- Retail trade
- Major purchases



Sources: Eurostat, DG-ECFIN and ECB calculations.

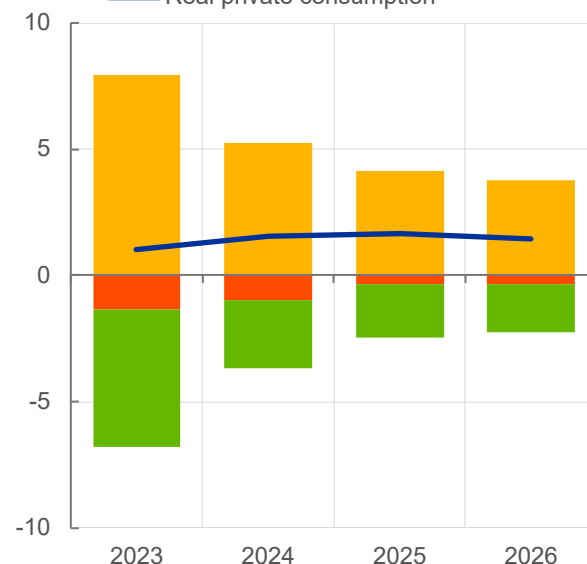
Notes: Data are standardised over pre-COVID period. The chart shows demand expectations of firms over next 3 months.

Latest observation: November 2023.

Outlook for private consumption

(annual percentage changes, percentage point contributions)

- Consumer prices
- Savings
- Disposable income
- Real private consumption



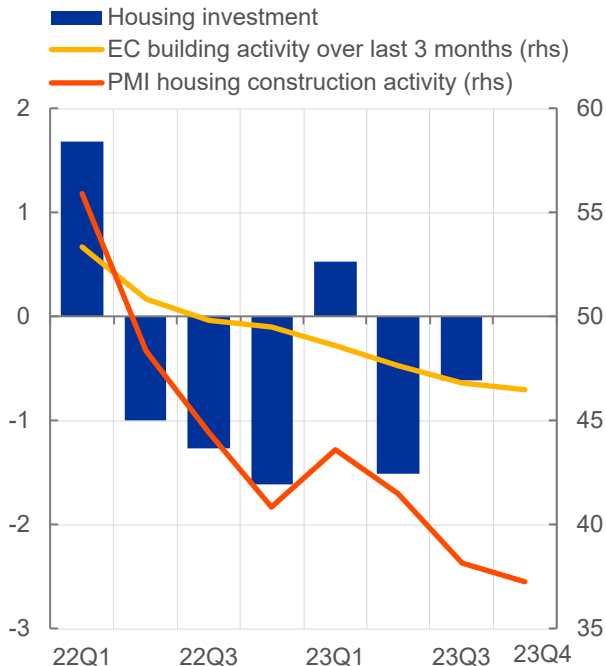
Source: December 2023 Eurosystem staff projections.

Note: Consumer prices refer to the HICP inflation.

Investment

Housing investment

(quarter-on-quarter percentage changes, quarterly average of diffusion index)



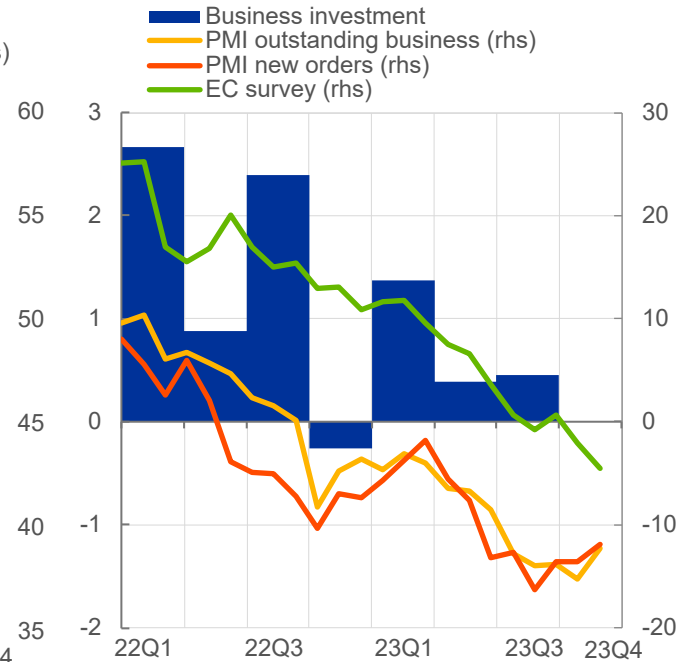
Sources: Eurostat, S&P Global and DG-ECFIN.

Note: The European Commission (EC) indicator is standardised and rescaled to have the same mean and standard deviation as the Purchasing Managers Index (PMI).

Latest observations: Q3 2023 for housing investment; November 2023 for PMI and EC.

Business investment

(quarter-on-quarter percentage changes, deviation from mean)



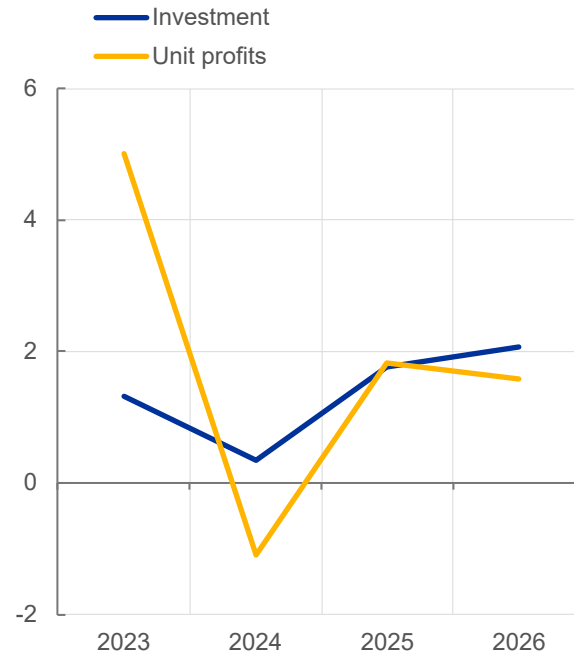
Sources: Eurostat, S&P Global and DG-ECFIN.

Notes: Business investment excludes Irish intellectual property products (IPP). The European Commission (EC) series is the industrial confidence indicator for capital goods.

Latest observations: Q3 2023 for investment; November 2023 for PMI and EC.

Outlook for investment and unit profits

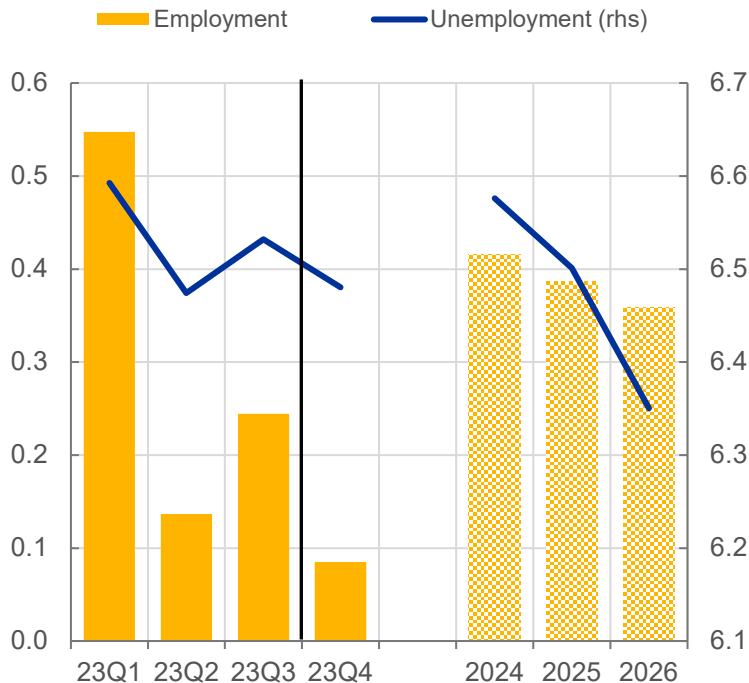
(annual percentage changes)



Source: December 2023 Eurosystem staff projections.

Employment and unemployment rate

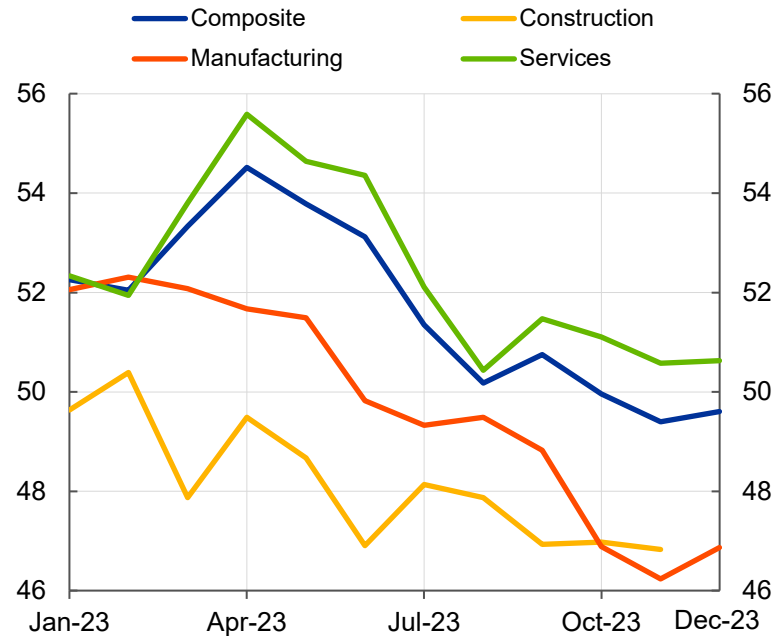
(quarter-on-quarter percentage changes, percentages of the labour force)



Sources: Eurostat, December 2023 Eurosystem staff projections and ECB calculations.
 Note: Solid bars are quarterly data (and projections for Q4 2023), shaded bars are annual projections.
 Latest observations: Q3 2023 for employment and October 2023 for unemployment rate.
 The vertical line indicates the beginning of the projections.

PMI employment

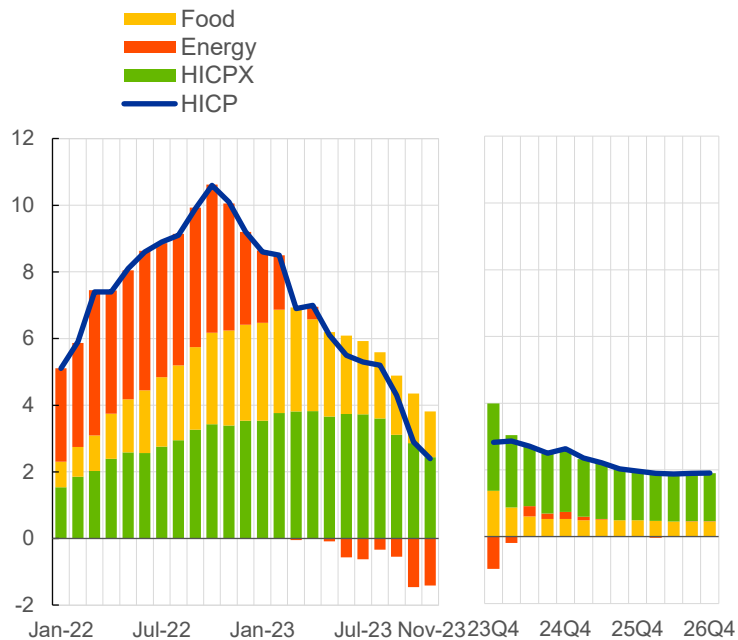
(diffusion index)



Source: S&P Global.
 Latest observation: December 2023 for composite, manufacturing and services, and November 2023 for construction.

HICP inflation and components

(annual percentage changes, percentage point contributions)

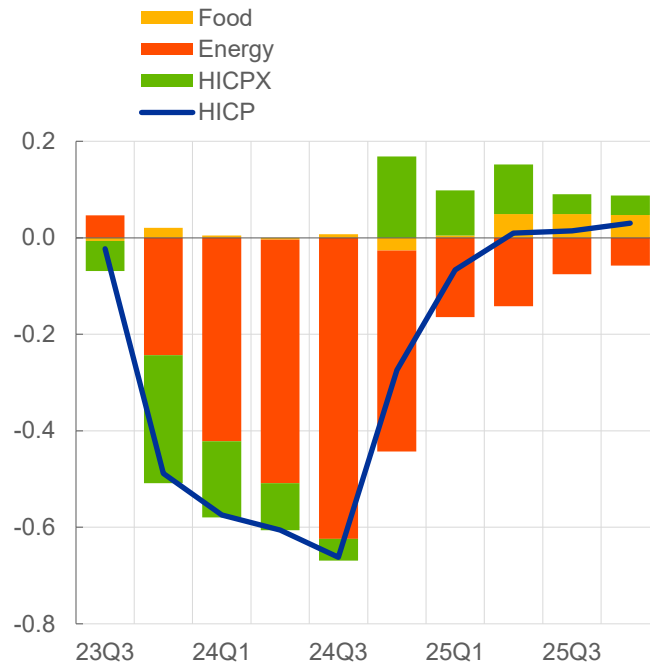


Sources: Eurostat, December 2023 Eurosystem staff projections and ECB calculations.

Notes: The cut-off date for technical assumptions was 23 November 2023. The macroeconomic projections for the euro area were finalised on 30 November 2023. The HICP estimate for November 2023 was included in the projections.

HICP inflation and components: revisions compared to September

(percentage points)



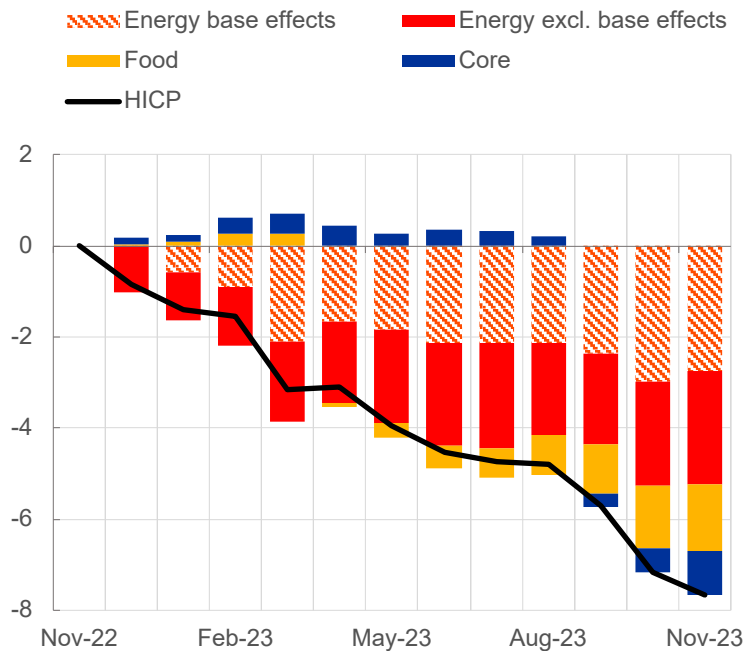
Sources: Eurostat, December 2023 Eurosystem staff projections and September 2023 ECB staff projections.

Notes: The cut-off date for technical assumptions was 23 November 2023. The macroeconomic projections for the euro area were finalised on 30 November 2023. The HICP flash estimate for November 2023 was included in the projections.

Headline inflation and inflation momentum

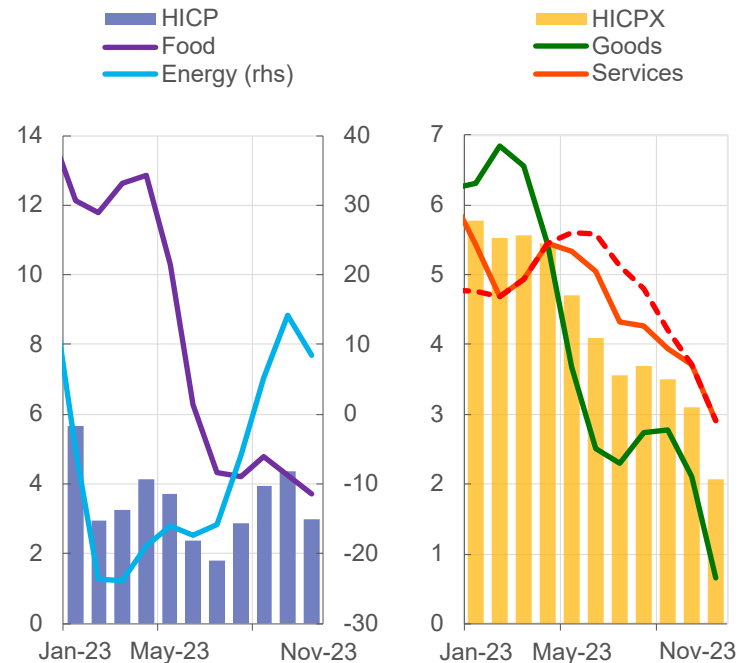
Headline inflation vis-à-vis Nov 2022

(percentage points)



Inflation momentum for HICP and sub-components

(annualised 3-month-on-3-month percentage changes)



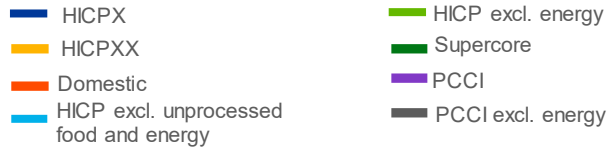
Sources: Eurostat and ECB calculations.
Latest observation: November 2023.

Sources: Eurostat and ECB calculations.
Notes: Based on seasonally adjusted data. The broken red line corresponds to services adjusted for the effects of the €9 and €49 tickets introduced in Germany in June 2022 and May 2023, respectively.

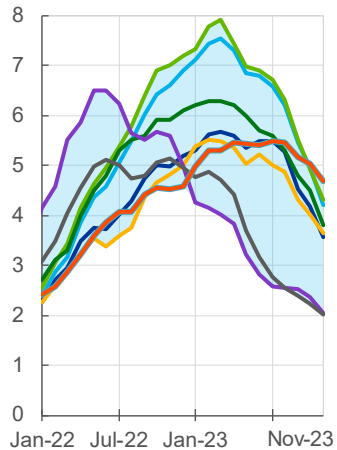
Measures of underlying inflation and impact of monetary policy

Measures of underlying inflation

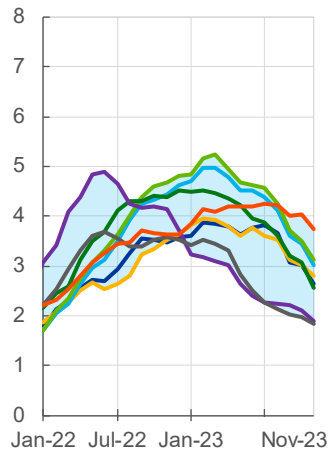
(annual percentage changes)



Standard measures

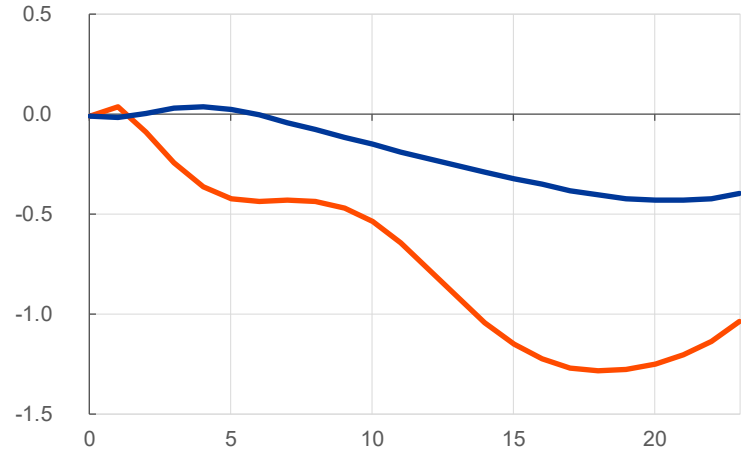
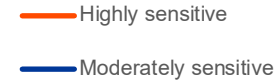


Adjusted measures



Impulse responses to monetary policy shocks by sensitivity of HICPX items

(cumulative percentage changes)



Sources: Eurostat and ECB calculations.

Notes: The 'adjusted' measures abstract from energy and supply-bottleneck shocks using a large SVAR, see Bańbura, M., Bobeica, E. and Martínez-Hernández, C. (2023), "[What drives core inflation? The role of supply shocks](#)", *Working Paper Series*, No 2875, ECB.

Latest observations: November 2023.

Sources: ECB calculations.

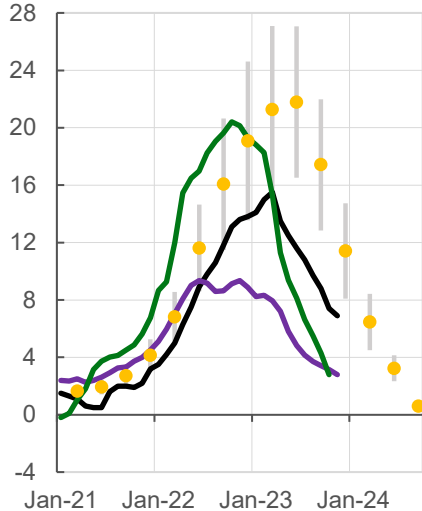
Notes: Impulse responses across highly sensitive and moderately sensitive items are a weighted average based on the monetary policy responsiveness of the 73 HICPX items to a 25 bp (tightening) shock, after controlling for lags of the dependent variable, money market rates, industrial production, a stock market index, producer prices, oil prices and the nominal effective exchange rate. Items are classified according to their individual responsiveness relative to the median across all items with a significant (negative) response. Impulse responses are based on smooth local projections (as in Barnichon and Brownlees, 2019) using the proxy for monetary policy shocks by Jarocinski and Karadi (2020). Estimation sample spans from 1999 up to September 2023. The x-axis shows months after the shock.

Food, goods and services inflation

Food

(annual percentage changes)

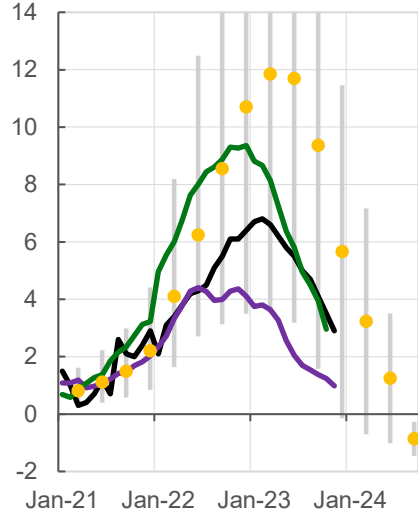
- HICP food
- PCCI food
- PPI food
- IPPI for food (Oct 23)



Goods

(annual percentage changes)

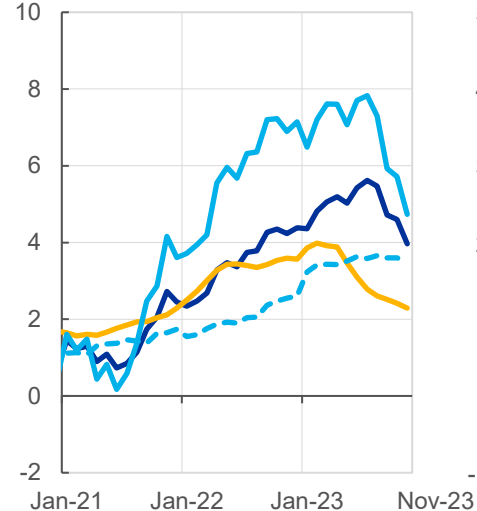
- HICP NEIG
- PCCI NEIG
- PPI non-food consumer goods
- IPPI for NEIG (Oct 23)



Services

(annual percentage changes)

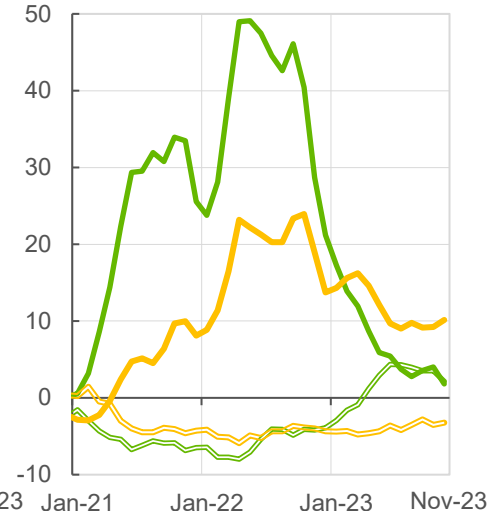
- Services
- PCCI services
- Contact-intensive services
- Not contact-intensive services



Selling price expectations

(share of firms expecting lower/higher prices, deviation from pre-COVID average)

- Lower (manufacturing)
- Higher (manufacturing)
- Lower (services)
- Higher (services)



Sources: Eurostat, DG-ECFIN and ECB calculations.

Notes: IPPI stands for indicator of producer price pressures, see the box entitled "[Indicators for producer price pressures in consumer goods inflation](#)", *Economic Bulletin*, Issue 3, ECB, 2023

[Rubene \(2023\)](#); the grey bars show the 95% confidence interval. Contact-intensive services refer to wholesale and retail trade, transport, accommodation and food services. Not contact-intensive services cover information and communication, financial and insurance activities, real estate, professional and administrative activities. Three months ahead selling price expectations data are seasonally adjusted and expressed as average deviation from pre-pandemic levels.

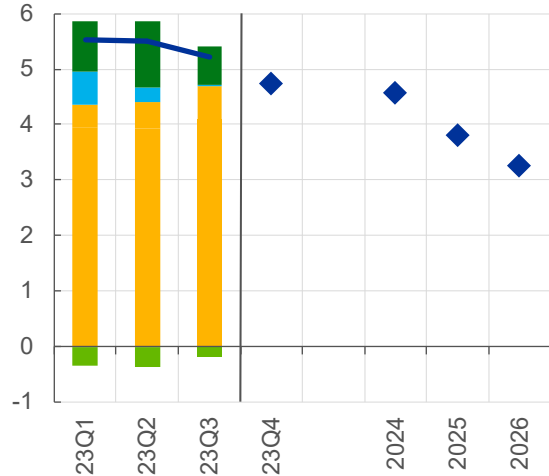
Latest observations: November 2023 for HICP, Services, PCCI and selling price expectations; October 2023 for the rest.

Outlook for wages and the GDP deflator

Compensation per employee

(annual percentage changes, pp contributions)

- Wage drift - other factors
- Wage drift - impact of average hours worked
- Social security contributions
- Negotiated wages growth
- Compensation per employee growth



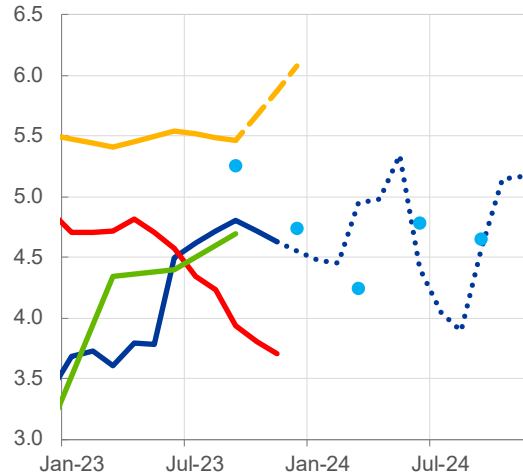
Sources: Eurostat, ECB, December 2023 Eurosystem staff projections and ECB calculations.

Notes: Diamonds show the December 2023 Eurosystem staff projections for compensation per employee growth. Latest observation: Q3 2023.

Wage tracker

(annual percentage changes)

- CPE December 2023 BMPE
- ECB wage tracker incl. one-offs
- ECB wage tracker - latest agreements incl. one-offs
- Indeed wage tracker
- Negotiated wages including one-off payments

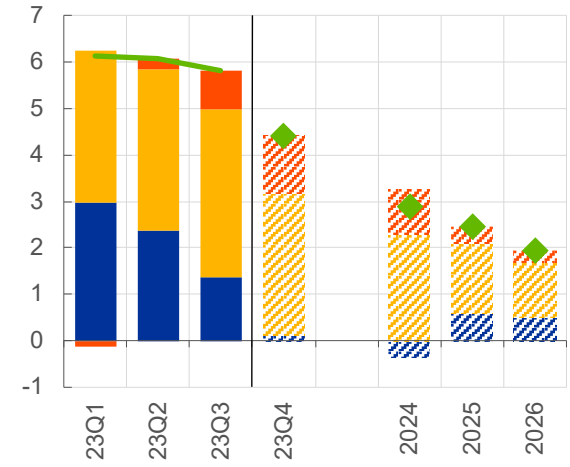


Sources: Eurostat, ECB, ECB wage tracker calculated based on micro data on wage agreements provided by Deutsche Bundesbank, Banco de España, the Dutch employer association (AWVN), Oesterreichische Nationalbank, Bank of Greece, Banca d'Italia and Banque de France. Notes: For the ECB wage tracker the EA aggregate is based on DE, FR, IT, ES, NL, GR and AT. ECB wage tracker indicates average wage growth in all active collective bargaining agreements. The indicator of the latest wage agreements shows the wage growth implied by agreements reached in a quarter for 12 months ahead. One-off payments in the ECB wage tracker are smoothed over a period of 12 months. Indeed tracker measures wage growth in online job ads – the euro area indicator is based on data for DE, FR, IT, ES, NL, IE. The value for the series of latest agreements in 2023 Q4 is preliminary as not all data is available yet. Latest observations: Q3 2023 for negotiated wages; November 2023 for Indeed and ECB wage tracker; Q4 2023 for latest agreements.

GDP deflator

(annual percentage changes, pp contributions)

- Unit profits
- Unit labour costs
- Unit net taxes
- GDP deflator

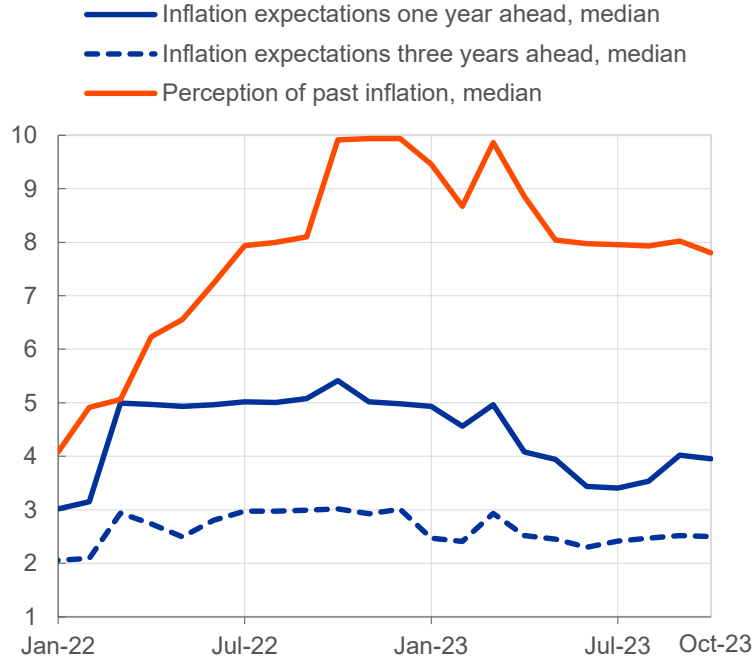


Sources: Eurostat, December 2023 Eurosystem staff projections and ECB calculations.

Notes: Unit taxes reflect taxes minus subsidies. When the contribution of subsidies on products is larger than the contribution of indirect taxes, the unit tax contribution turns negative. Latest observation: Q3 2023.

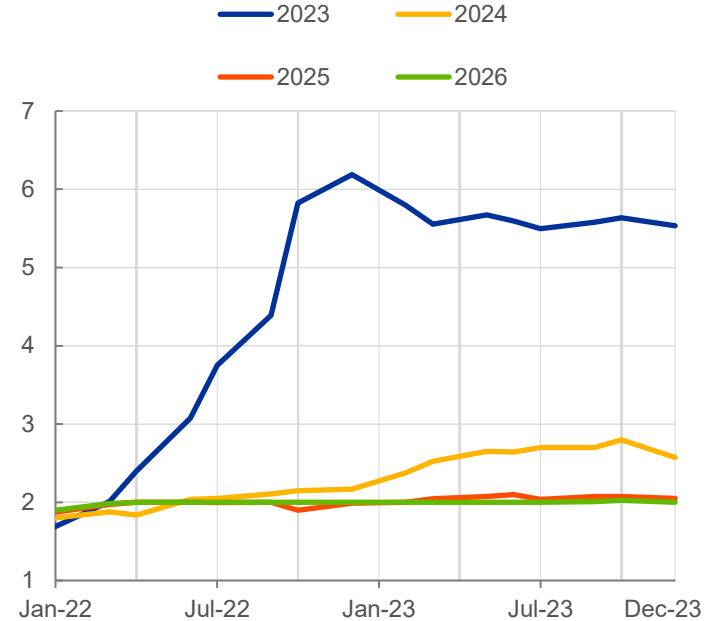
Inflation expectations

Consumer inflation expectations (annual percentage changes)



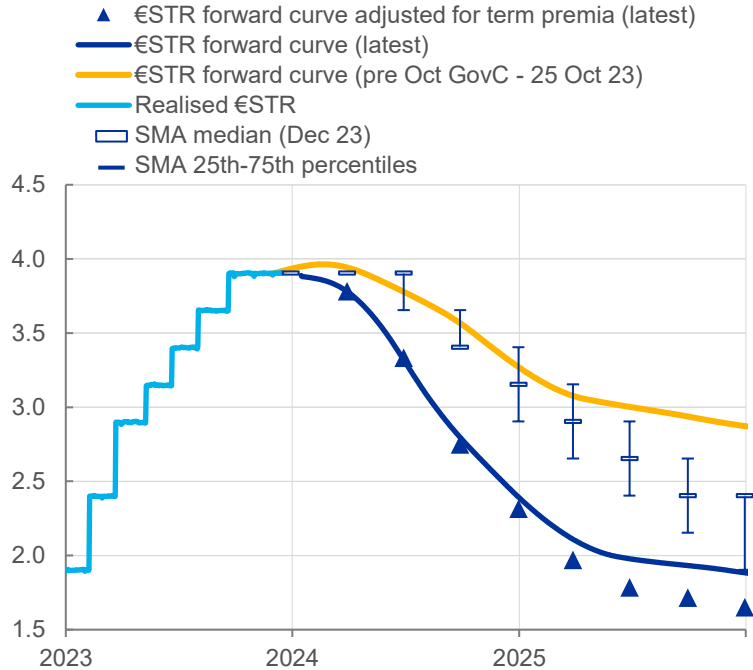
Source: ECB CES.
Latest observation: October 2023.

SMA inflation expectations (annual percentage changes)



Source: ECB SMA.
Note: The chart shows the median values.
Latest observation: December 2023.

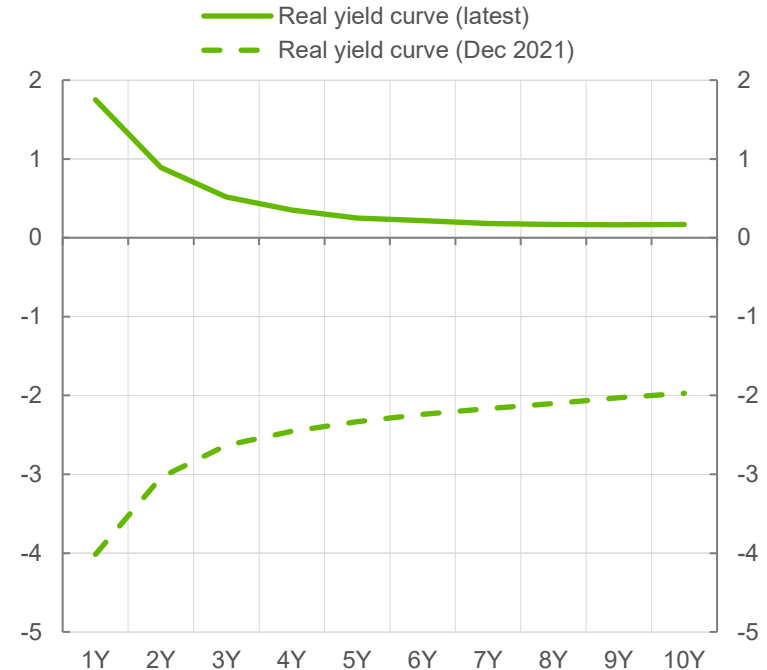
€STR forward curve and survey expectations on the DFR (percentages per annum)



Sources: Refinitiv, Bloomberg, and ECB calculations.

Notes: The bars depict the median of responses to the December SMA on expectations of future deposit facility rates. Surveys are adjusted for an €STR vs. DFR spread. Model estimates are based on three variations of Joslin, Singleton and Zhu (2011): an affine term structure model without survey information on interest rate expectations, and an affine and a lower bound term structure model, both incorporating survey information on interest rates expectations.
Latest observation: 15 December 2023.

Real yield curve (percentages per annum)



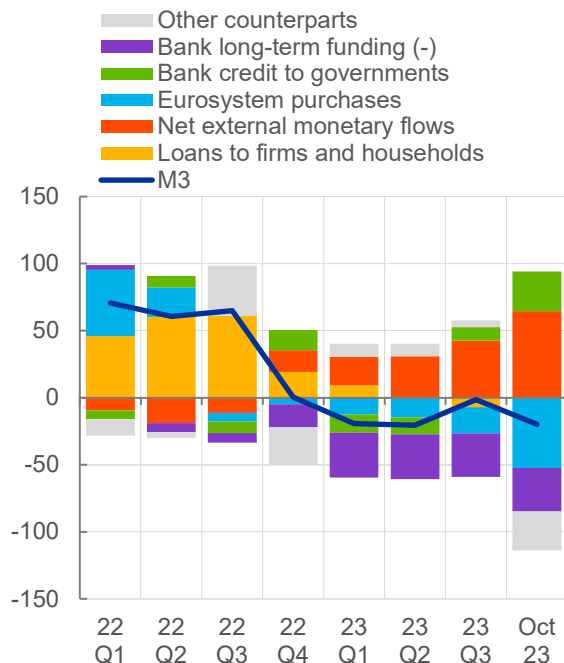
Sources: Bloomberg, Refinitiv and ECB calculations.

Notes: The real yield curve is computed as the difference between OIS and ILS rates at each maturity. The curve for December 2021 refers to 31 December 2021.
Latest observations: 15 December 2023.

Money and credit to firms and households

Sources of money creation

(average monthly flows, EUR billions)



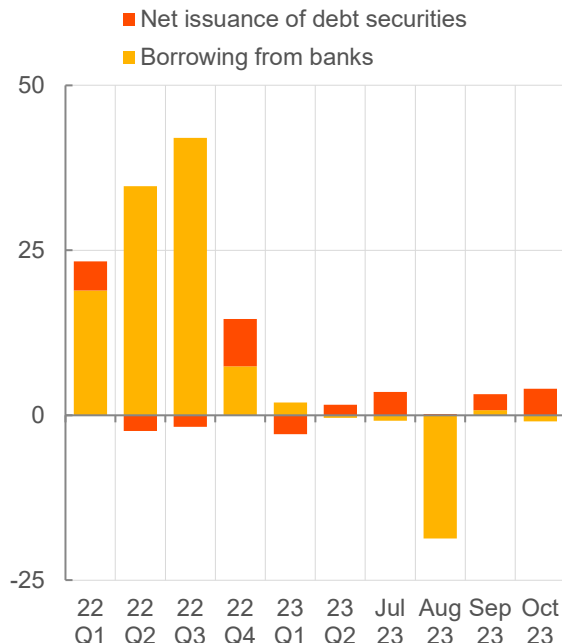
Sources: ECB (BSI) and ECB calculations.

Note: Figures for M3 are adjusted for the operational incident in TARGET2 which inflated the September 2022 figures for OFI deposits and loans, reversing them in October and November 2022.

Latest observations: October 2023.

Net debt financing flows of euro area firms

(average monthly flows, EUR billions)



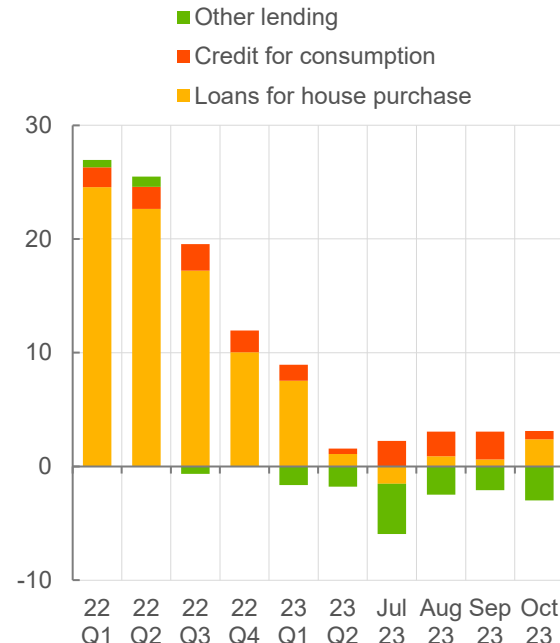
Sources: ECB (BSI and CSEC) and ECB calculations.

Notes: MFI loans are adjusted for sales and securitisation. The seasonal adjustment for the net issuance of debt securities is not official.

Latest observation: October 2023.

Bank loans to households by purpose

(average monthly flows, EUR billions)



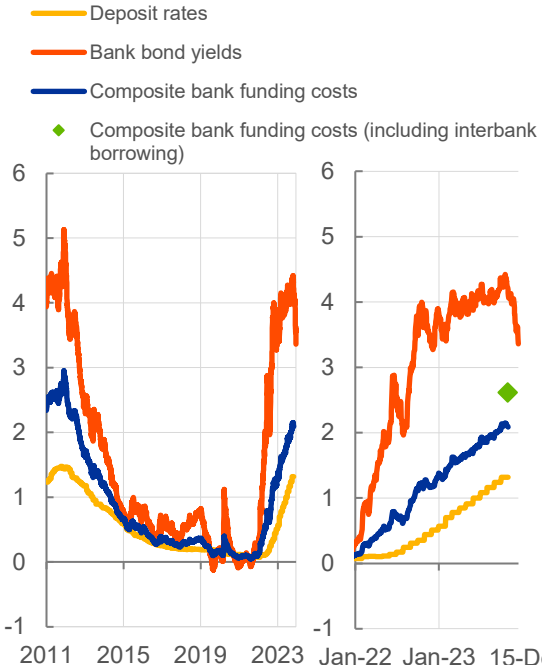
Sources: ECB (BSI and CSEC) and ECB calculations.

Notes: MFI loans are adjusted for sales and securitisation. For the breakdown items of loans to households, this adjustment is indirectly treated for seasonality, with the difference between the sum of breakdowns and the total attributed to loans for house purchase.

Latest observation: October 2023.

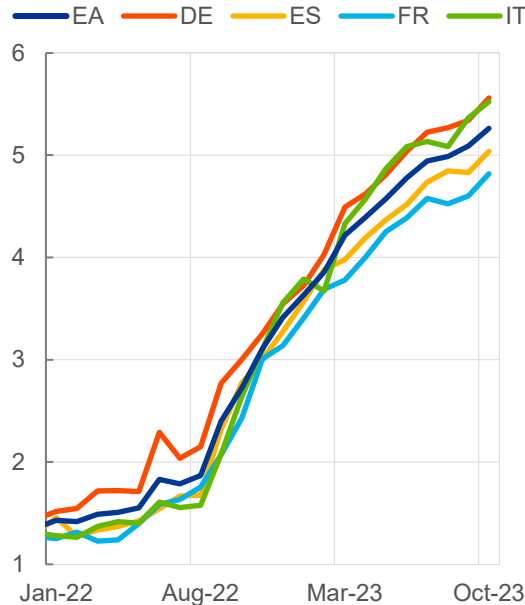
Bank funding cost and cost of bank borrowing

Composite bank funding costs (percentages per annum)



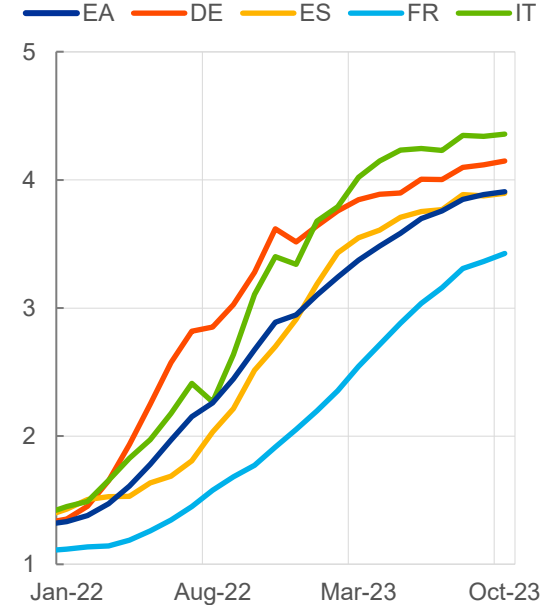
Sources: ECB (BSI, MIR, MMSR), IHS Markit iBoxx and ECB calculations.
 Notes: Daily bank bond yields. Funding costs are the average of the costs of deposits and bank bonds weighted by outstanding amounts. Cost of deposits are new business deposit rates for non-financial private sector. Interbank money market borrowing is the weighted average of secured transactions (before July 2016; proxied by the GC pooling rate). Money market rates are smoothed for end-of month effects.
 Latest observation: October 2023 for monthly data; 15 December 2023 for daily data.

Cost of borrowing for firms (percentages per annum)



Source: ECB (MIR).
 Note: The indicator for the total cost of 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: October 2023.

Cost of borrowing for households for house purchase (percentages per annum)

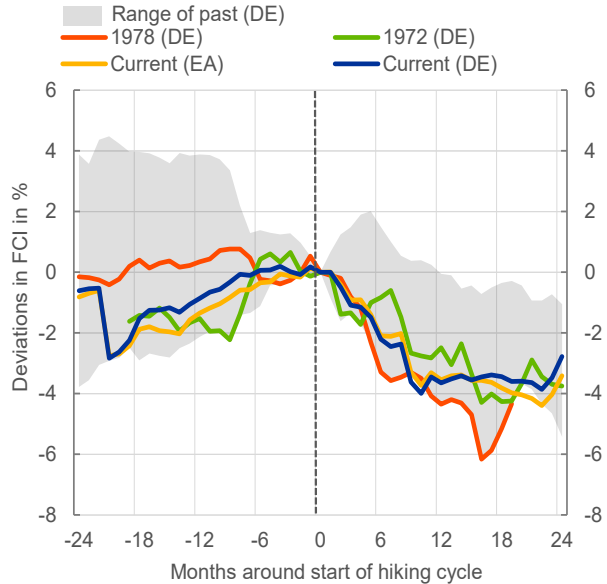


Source: ECB (MIR).
 Note: The indicator for the total cost of borrowing for households for house purchase is calculated by aggregating short-term and long-term rates using a 24-month moving average of new business volumes.
 Latest observation: October 2023.

Monetary policy transmission

Tightening of financial conditions across hiking cycles

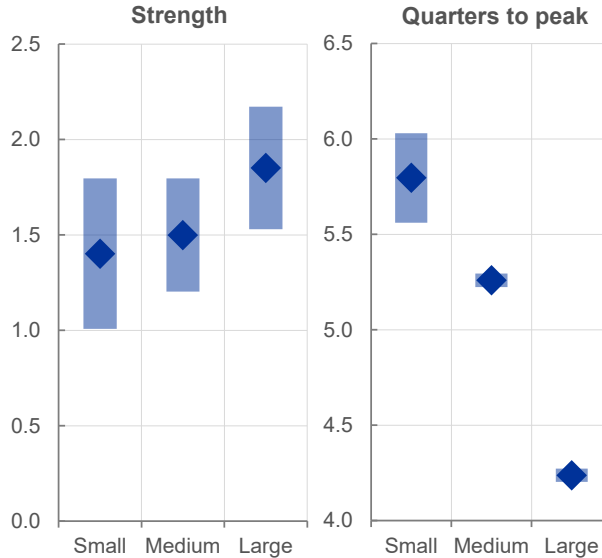
(percentages per annum)



Sources: Refinitiv, Bloomberg and ECB calculations.
 Notes: The historical cycles are based on German data, i.e., DE interbank 1Y, BUND 10Y yield, the DAX equity index and DM/USD exchange rate until 1999, thereafter the euro NEER-42 exchange rate. Hiking cycles start in the month immediately preceding the first hike, i.e. August 1972, November 1978, June 1988, October 1999, November 2005, and December 2021.
 Latest observation: December 2023 (monthly data).

Non-linearity in monetary policy transmission

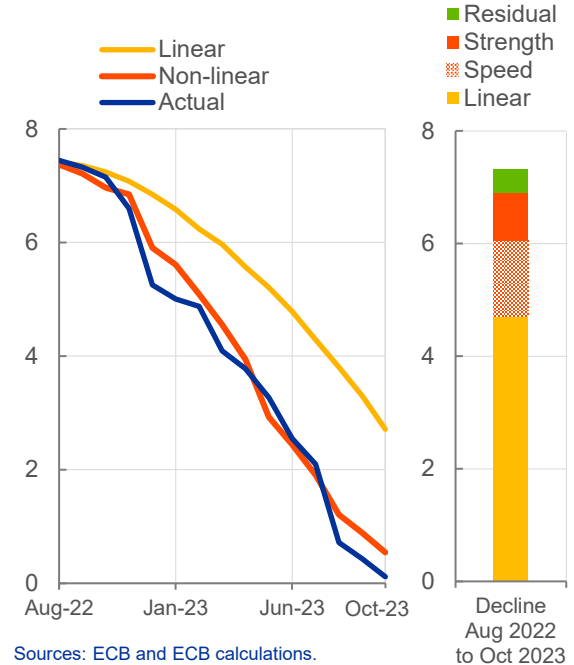
(left panel: semi-elasticity of credit growth, percentage points; right panel: quarters)



Sources: ECB (MNA, LFSI, STS, BSI) and ECB calculations.
 Notes: The shaded region represent the 95% confidence interval. The chart shows estimates of the strength and speed of monetary policy on credit for small, medium and large shocks. Strength is defined as the semi-elasticity of credit growth at the horizon where it peaks.
 Latest observation: October 2023.

Credit growth through the lens of non-linearity

(left panel: annual credit growth; right panel: changes in annual credit growth)



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