



EUROPEAN CENTRAL BANK

EUROSYSTEM

Monetary policy tightening in the euro area

Economics Seminar Series

Kemmy Business School,
University of Limerick

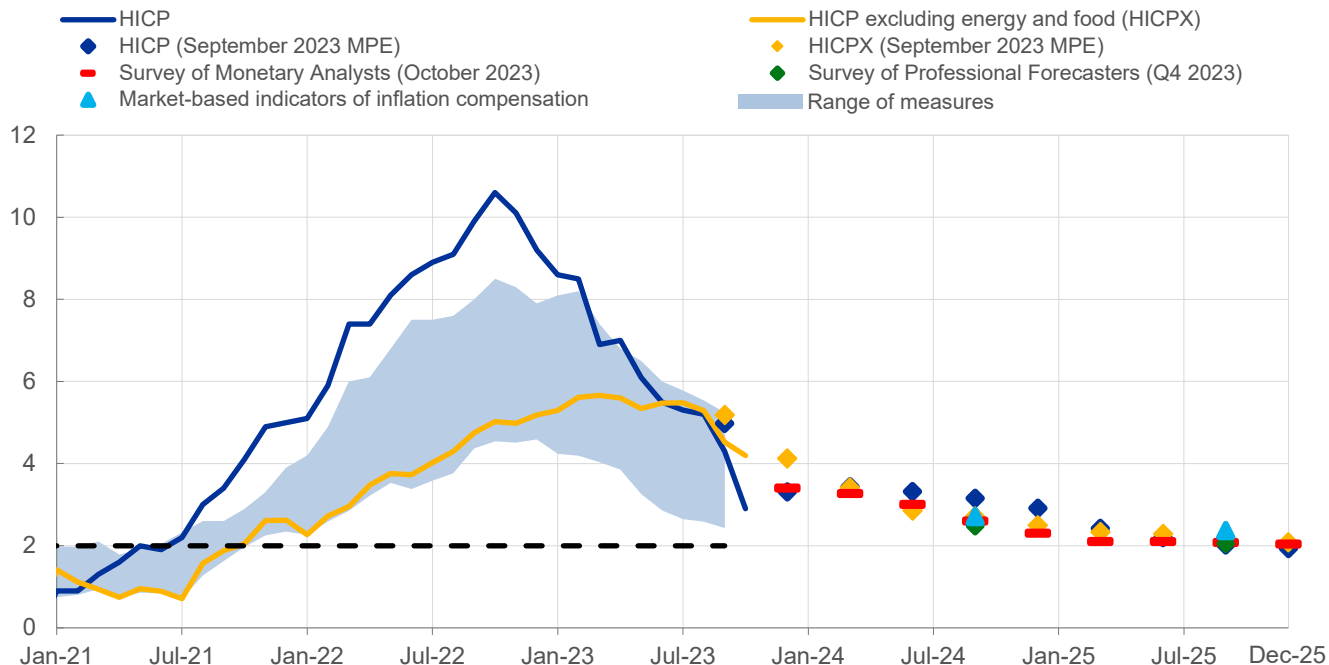
2 November 2023



Philip R. Lane
Member of the Executive Board

Headline inflation, measures of underlying inflation, and inflation projections and expectations

(annual percentage changes)



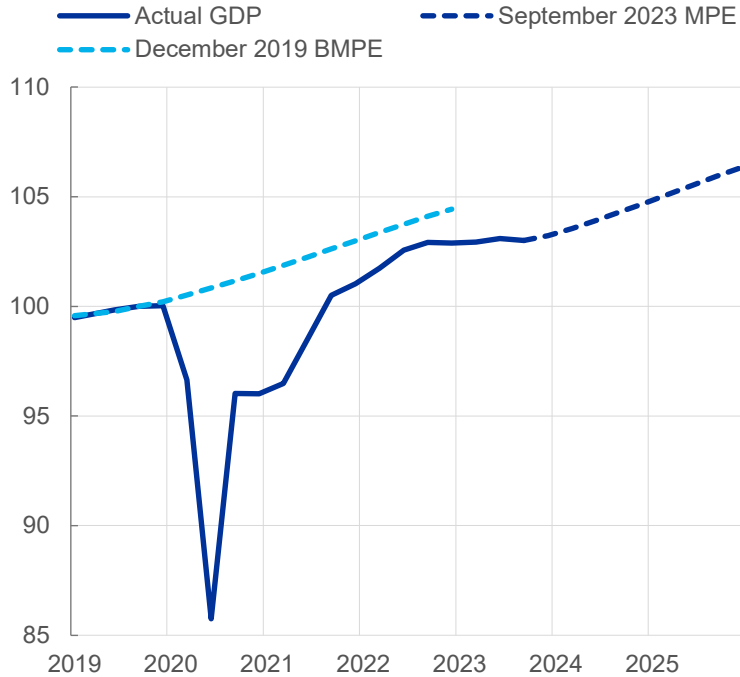
Sources: Eurostat, ECB staff calculations and September 2023 ECB staff Macroeconomic Projection Exercise (MPE).

Notes: The measures in the range of underlying indicators include HICPX, HICP excluding energy and unprocessed food, HICPXX, Persistent and Common Component of Inflation (PCCI), PCCI excluding energy, Supercore, domestic inflation, trimmed mean 10%, trimmed mean 30% and weighted median. The latest observations are for October 2023 for HICP, HICPX (flash release) and September 2023 for the rest. Market based indicators of inflation compensation are based on inflation-linked swap data as of 30 October 2023. The cut-off date for technical assumptions in the September 2023 MPE was 22 August 2023 and the macroeconomic projections for the euro area were finalised on 30 August 2023.

Activity and unemployment

Real GDP

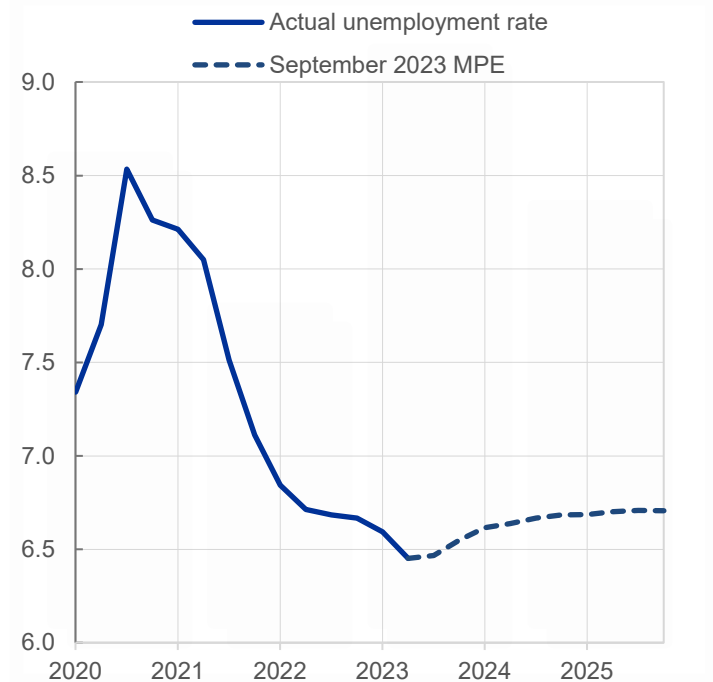
(index: Q4 2019 = 100)



Sources: Eurostat, September 2023 MPE and December 2019 Eurosystem staff Broad Macroeconomic Projection Exercise (BMPE).

Unemployment rate

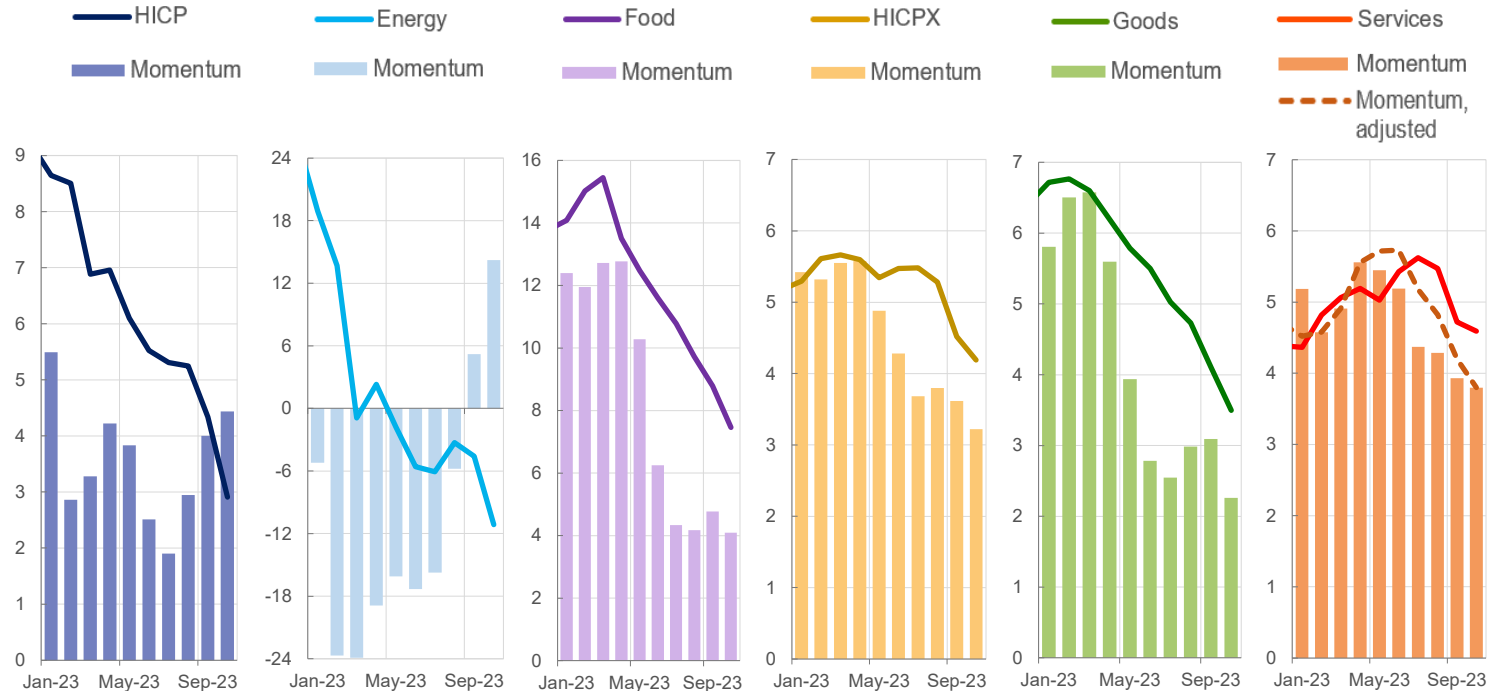
(percentage)



Source: Eurostat, September 2023 MPE

Note: The latest observation is for the second quarter of 2023.

Inflation momentum for HICP and components (annual percentage change; annualised three-month-on-three-month percentage change)

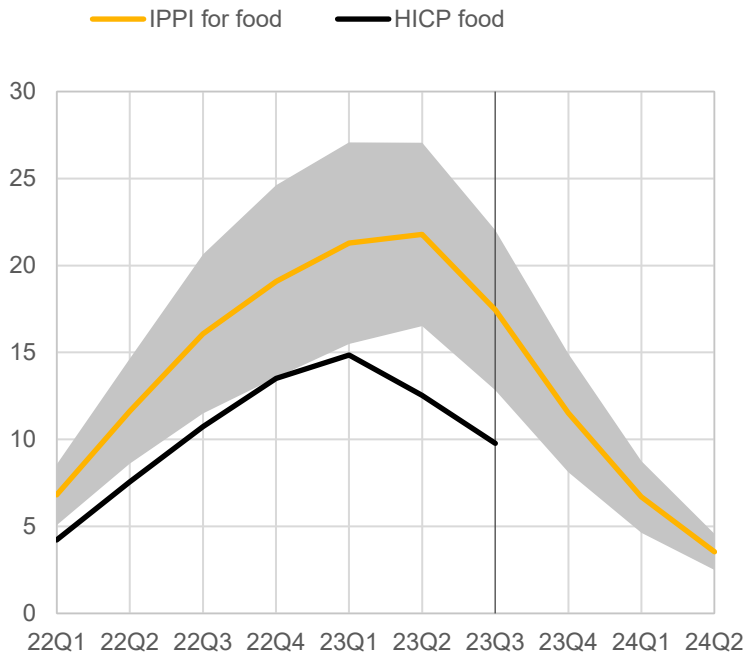


Sources: Eurostat and ECB calculations.

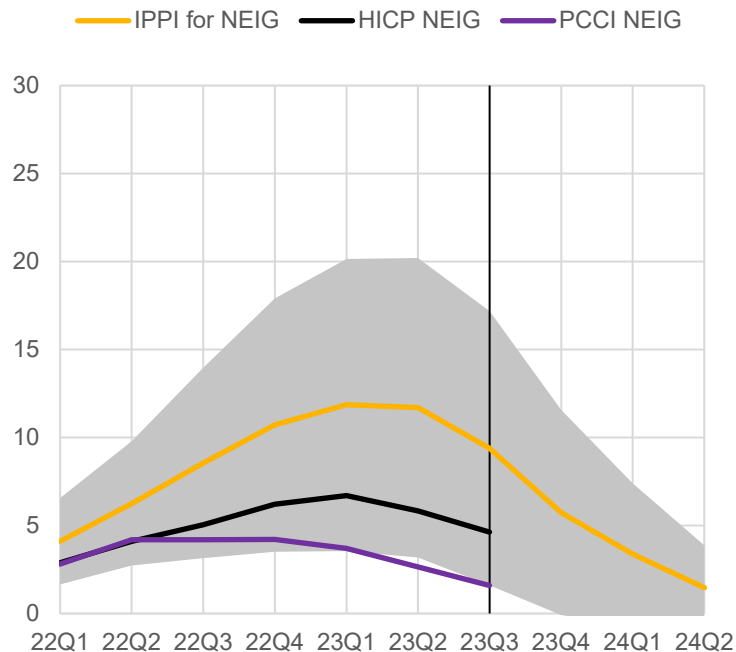
Notes: Momentum is defined as the annualised three-month-on-three-month percentage change of seasonally adjusted data. HICPX: HICP excluding energy and food; goods inflation is for non-energy industrial goods. The adjusted momentum series for services excludes the effects of the 9 euro ticket and 49 euro ticket which were introduced in Germany in June 2022 and May 2023 respectively. The latest observations are for October 2023 (flash estimate).

Pipeline pressures for food and NEIG inflation

IPPI for food inflation (annual percentage change)



IPPI and underlying inflation for goods inflation (annual percentage change)



Sources: Eurostat and ECB calculations.

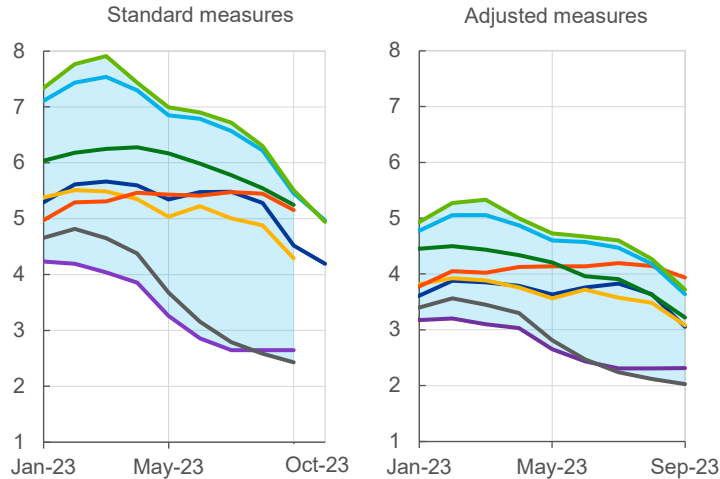
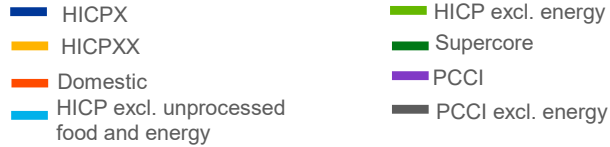
Notes: IPPI stands for indicator of producer price pressures. The shaded area shows the 95% confidence interval. The yellow line refers to IPPI for food (Producer price index to August 2023). The latest observation is for the third quarter of 2023.

Sources: Eurostat and ECB calculations.

Notes: IPPI stands for indicator of producer price pressures. The shaded area shows the 95% confidence interval. The yellow line refers to IPPI for non-energy industrial goods (NEIG) (Producer price index to August 2023). The latest observations are for the third quarter of 2023.

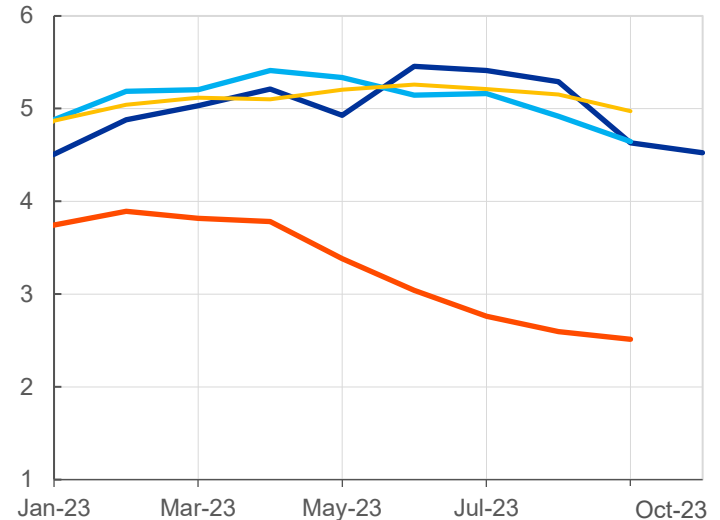
Measures of underlying inflation

Measures of underlying inflation (annual percentage change)



Measures of underlying services inflation (annual percentage change)

(annual percentage change)



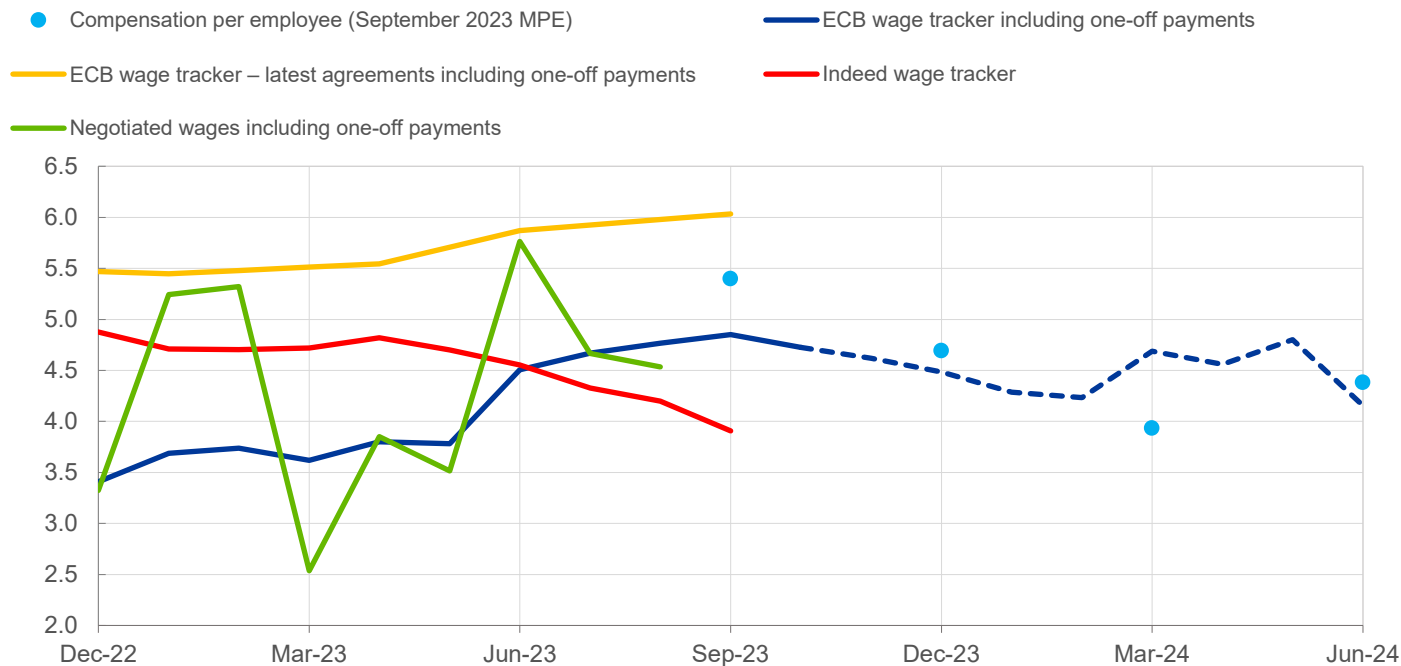
Sources: Eurostat and ECB calculations.

Notes: The adjusted measures exclude energy and supply bottleneck shocks using a large structural vector autoregression identified with zero and sign restrictions (see Bañbura, Bobeica, and Martínez-Hernández, "What drives core inflation? The role of supply shocks" 2023 (forthcoming)). Measures included: HICPX, HICPXX, HICP excluding energy, HICP excluding unprocessed food and energy, domestic inflation, Supercore, PCCI and PCCI excluding energy. The latest observations are for October 2023 (flash estimate) for HICPX, HICP excluding energy and HICP excluding unprocessed food and energy (standard measures) and September 2023 for the rest.

Sources: Eurostat and ECB calculations.

Note: The latest observations are for October 2023 (flash estimate) for services and September 2023 for the rest.

Wage trackers (annual percentage change)



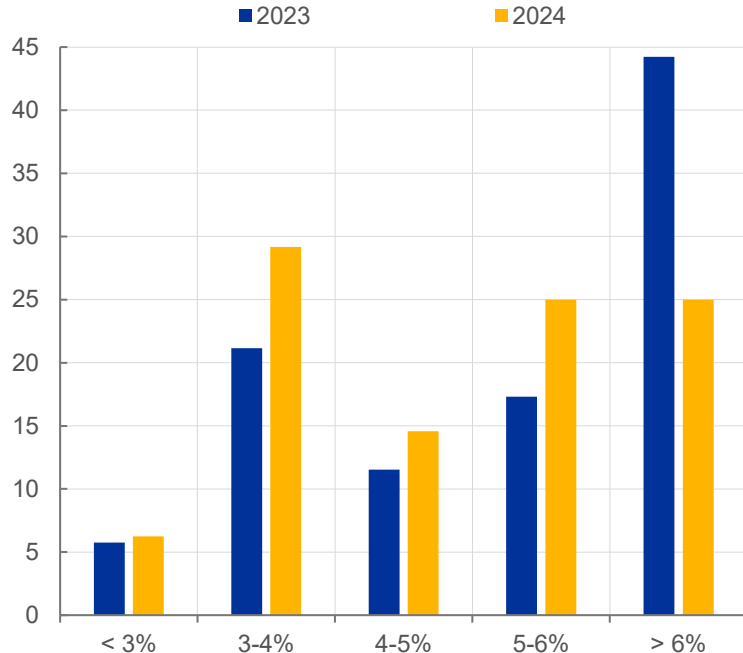
Sources: ECB calculations based on micro data on wage agreements provided by Bundesbank, Banco de España, the Dutch employer association (AWVN), Oesterreichische Nationalbank, Bank of Greece, Banca d'Italia and Banque de France.

Notes: ECB and Indeed trackers based on Germany, Spain, France, Italy, and the Netherlands (plus Ireland for Indeed tracker). The ECB wage tracker is weighted by the country share in compensation of employees. The ECB wage tracker of latest agreements uses the number of workers covered by new agreements. The latest observations are for August 2023 for negotiated wages, September 2023 for Indeed wage tracker, October 2023 for ECB wage tracker and the third quarter of 2023 for the ECB wage tracker of latest agreements.

Corporate Telephone Survey results for wages and profit margins

CTS: wage expectations for 2023 and 2024

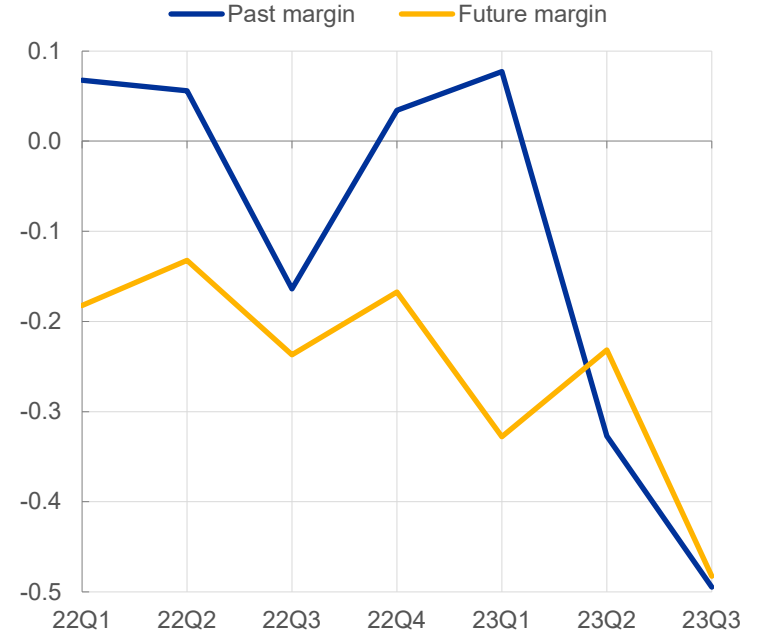
(percentage)



Source: October 2023 Corporate Telephone Survey (CTS).

CTS: implied profit margins

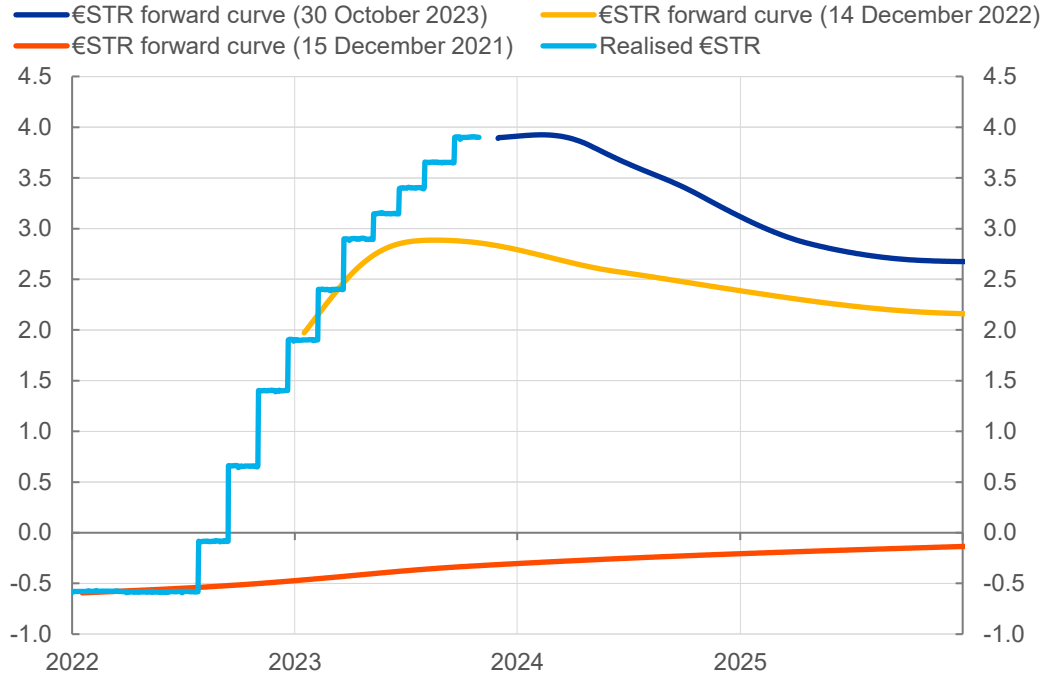
(average of CTS scores)



Source: October 2023 Corporate Telephone Survey (CTS).

Notes: The score is calculated as the difference between the selling price score and a simple average of the input cost and wage scores. While past and future selling and input price scores refer to developments in the previous and next quarters, past and future wage scores refer to developments in the previous and next year. The latest observations are for the third quarter of 2023.

€STR forward curve (percentages per annum)

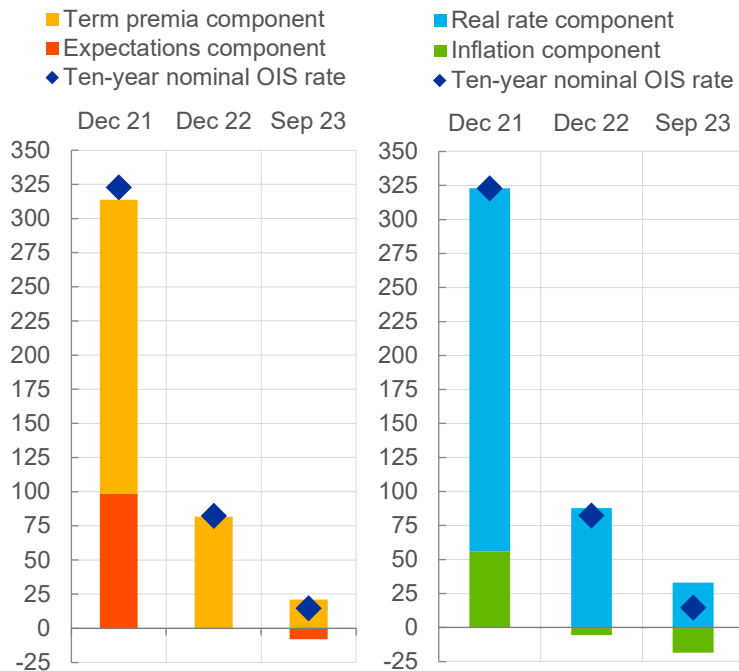


Sources: Bloomberg and ECB calculations.

Note: The latest observation is for 30 October 2023 for realised €STR.

Decomposition of changes in the ten-year nominal OIS rate since previous GovCs

(basis points)

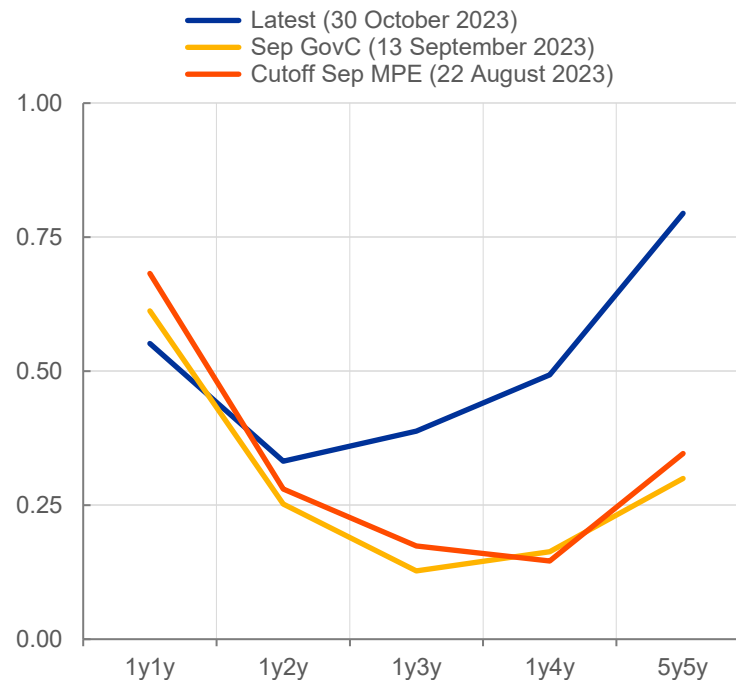


Sources: Refinitiv and ECB calculations.

Notes: The decomposition of the ten-year spot OIS rate into expected rates and term premium is based on an affine term structure model fitted to the euro area OIS curve. The estimation method follows Joslin, Singleton and Zhu (2011). The euro area real rate is calculated by subtracting the inflation-linked swap rate from the nominal OIS rate. Differences between decompositions (bars) and observed changes (diamonds) reflect model residuals. The latest observations are for 30 October 2023.

Term structure of real forward rates

(percentage)

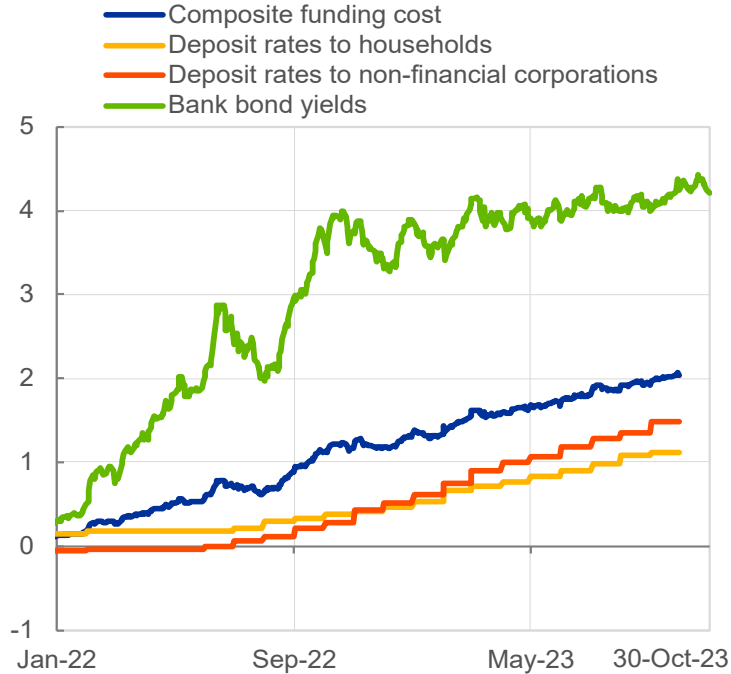


Sources: Bloomberg, Refinitiv, ECB calculations.

Notes: The euro area real forward rates are calculated by subtracting the inflation-linked swap forward rates from the nominal OIS forward rates for each maturity. The latest observations are for 30 October 2023.

Bank funding costs

Bank funding costs (percentage per annum)

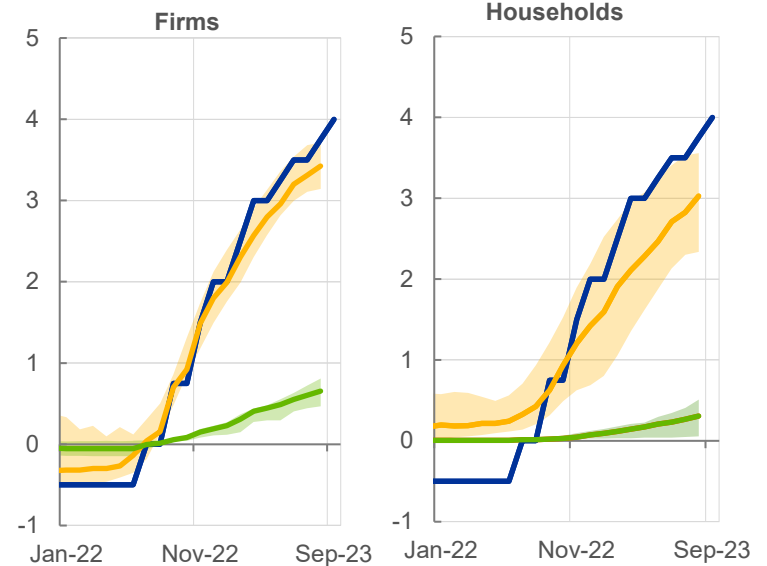


Sources: ECB (BSI, MIR), IHS Markit iBoxx and ECB calculations.

Notes: Daily bank bond yields. Monthly deposit rates on new business volumes weighted by outstanding amounts. Composite funding cost calculated as a weighted average of the cost of deposits and market debt funding, with the respective outstanding amounts on bank balance sheets used as weights. The latest observations are for 30 October 2023 for bond yields and September 2023 for the other series.

Policy and deposit rates (percentage per annum)

ECB policy rate Time deposits Overnight deposits



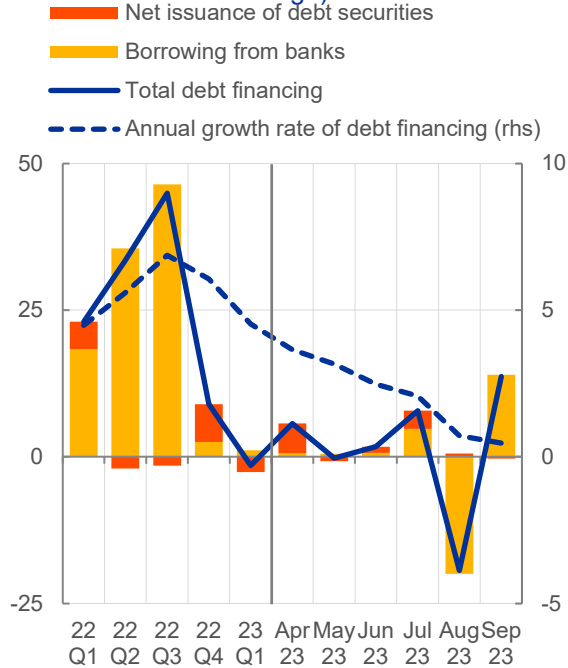
Sources: ECB (MIR, FM) and ECB calculations.

Notes: Time deposits refer to deposits with agreed maturity of up to two years. Shaded areas show ranges across countries; the ECB policy rate is the deposit facility rate. The latest observations are for August 2023 for deposit rates and September 2023 for the ECB policy rate.

Firm debt financing, credit standards and loan demand

Net debt financing flows of firms

(lhs: average monthly flows over the respective period in EUR billions; rhs: annual percentage change)

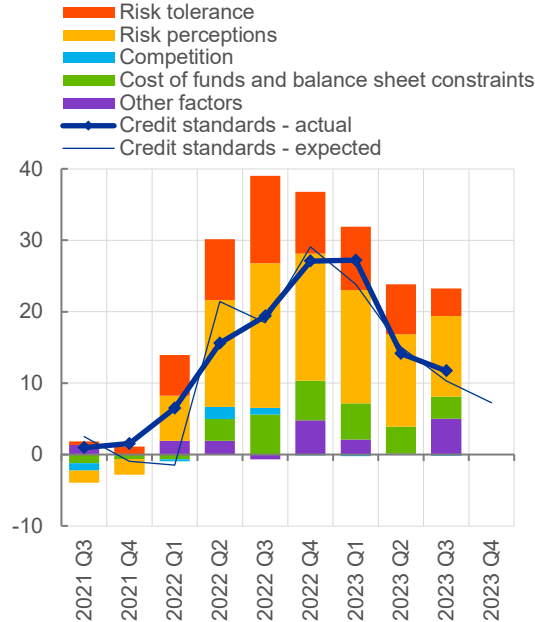


Sources: ECB (BSI, CSEC) and ECB calculations.

Notes: The seasonal adjustment for the net issuance of debt securities is not official. MFI loans are adjusted for sales, securitisation and cash pooling. The latest observations are for September 2023.

Changes in credit standards for loans to firms and contributing factors

(net percentage)

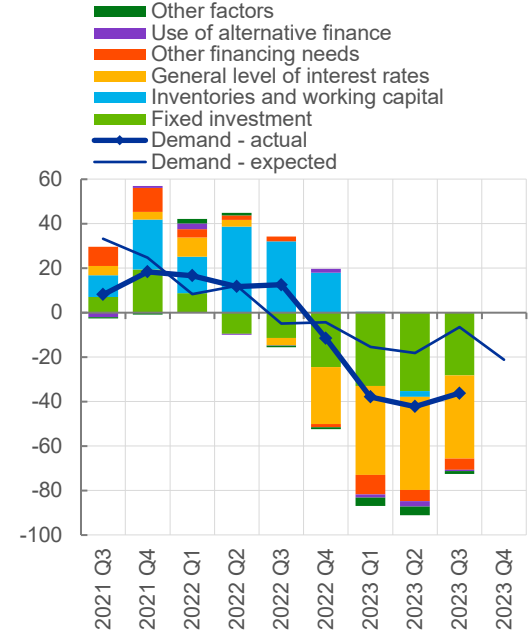


Source: ECB (BLS).

Notes: "Other factors" refer to further factors which were mentioned by banks as having contributed to changes in credit standards. The latest observations are for the third quarter of 2023.

Changes in demand for loans to firms and contributing factors

(net percentage)



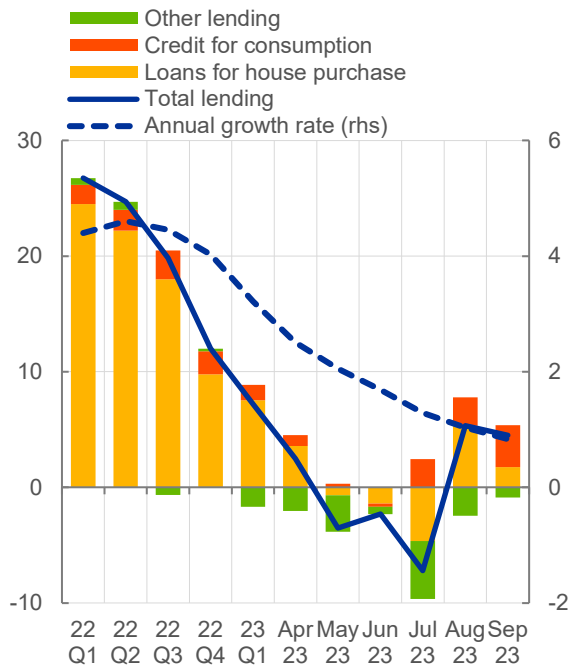
Source: ECB (BLS).

Notes: "Other financing needs" as unweighted average of "M&A and corporate restructuring" and "debt refinancing/restructuring and renegotiation"; "Use of alternative finance" as unweighted average of "internal financing", "loans from other banks", "loans from non-banks", "issuance/redemption of debt securities" and "issuance/redemption of equity". The latest observations are for the third quarter of 2023.

Households loans, credit standards and loan demand

Bank loans to households

(lhs: average monthly flows in EUR billions;
rhs: annual percentage change)

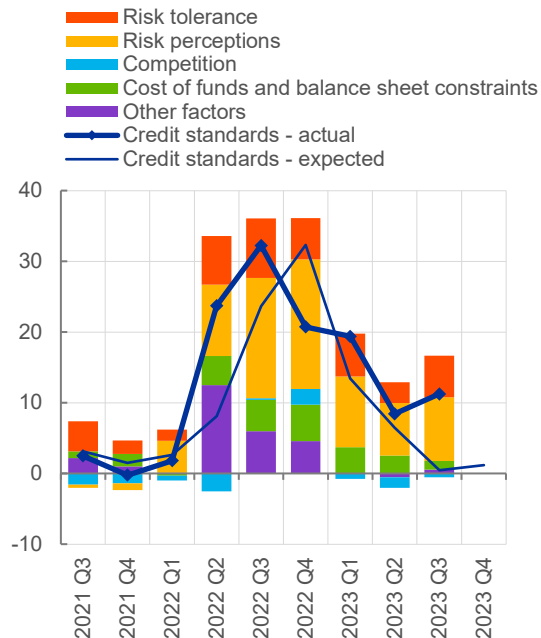


Sources: ECB (BSI) and ECB calculations.

Notes: MFI loans are adjusted for sales and securitisation. The latest observations are for September 2023.

Changes in credit standards for loans to households and contributing factors

(net percentage)

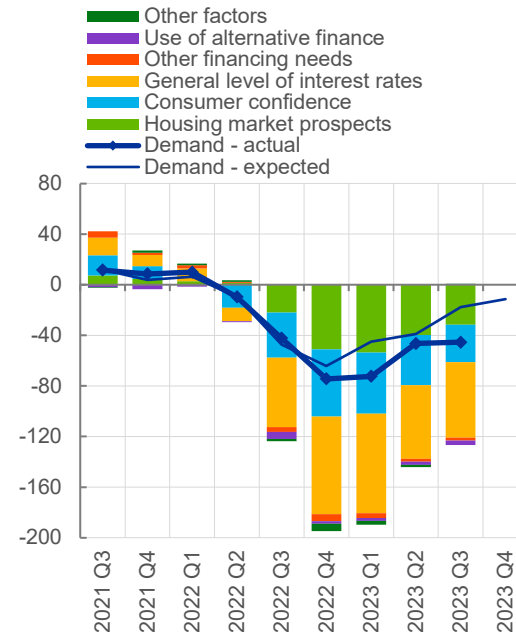


Source: ECB (BLS).

Notes: "Other factors" refer to further factors which were mentioned by banks as having contributed to changes in credit standards. The latest observations are for the third quarter of 2023.

Changes in demand for loans to households and contributing factors

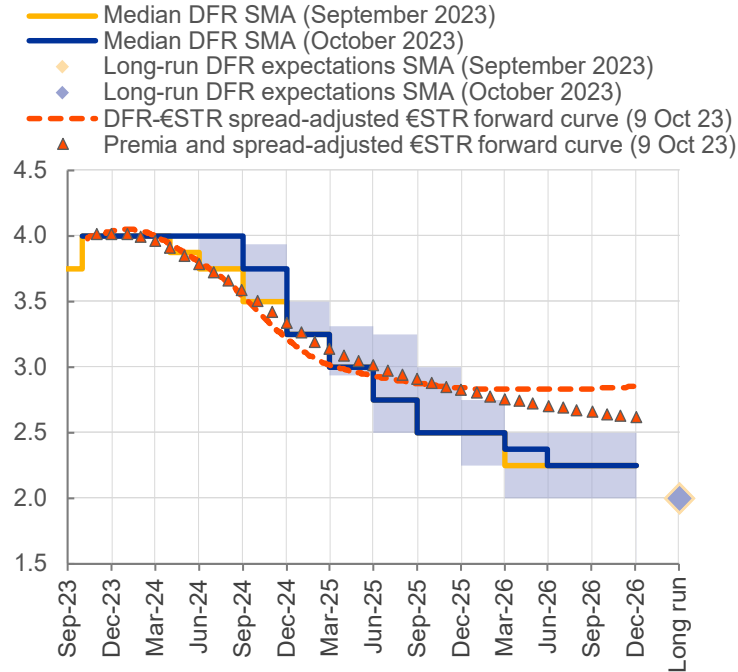
(net percentage)



Source: ECB (BLS).

Notes: "Other financing needs" as unweighted average of "M&A and corporate restructuring" and "debt refinancing/restructuring and renegotiation"; "Use of alternative finance" as unweighted average of "internal financing", "loans from other banks", "loans from non-banks", "issuance/redemption of debt securities" and "issuance/redemption of equity". The latest observations are for the third quarter of 2023.

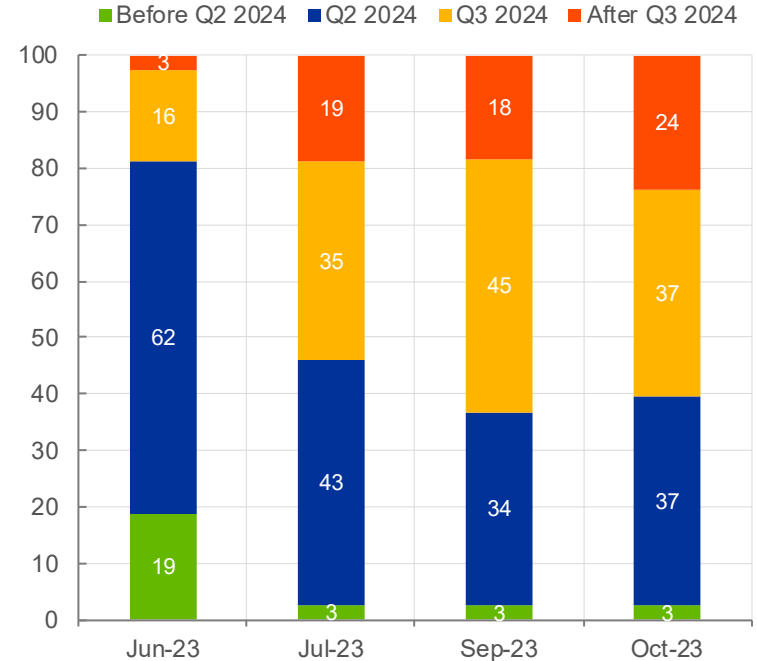
Median DFR expectations (percentage per annum)



Sources: Survey of Monetary Analysts (SMA), Bloomberg and ECB calculations.

Note: The premia and spread-adjusted €STR forward curve (red triangles) refers to the plain €STR forward curve adjusted for term premia and the spread between the DFR and €STR on 9 October 2023, which was 10 basis points.

Expected date of the first rate cut (percentage of respondents)



Source: SMA.