



EUROPEAN CENTRAL BANK

EUROSYSTEM

The economic outlook and monetary policy

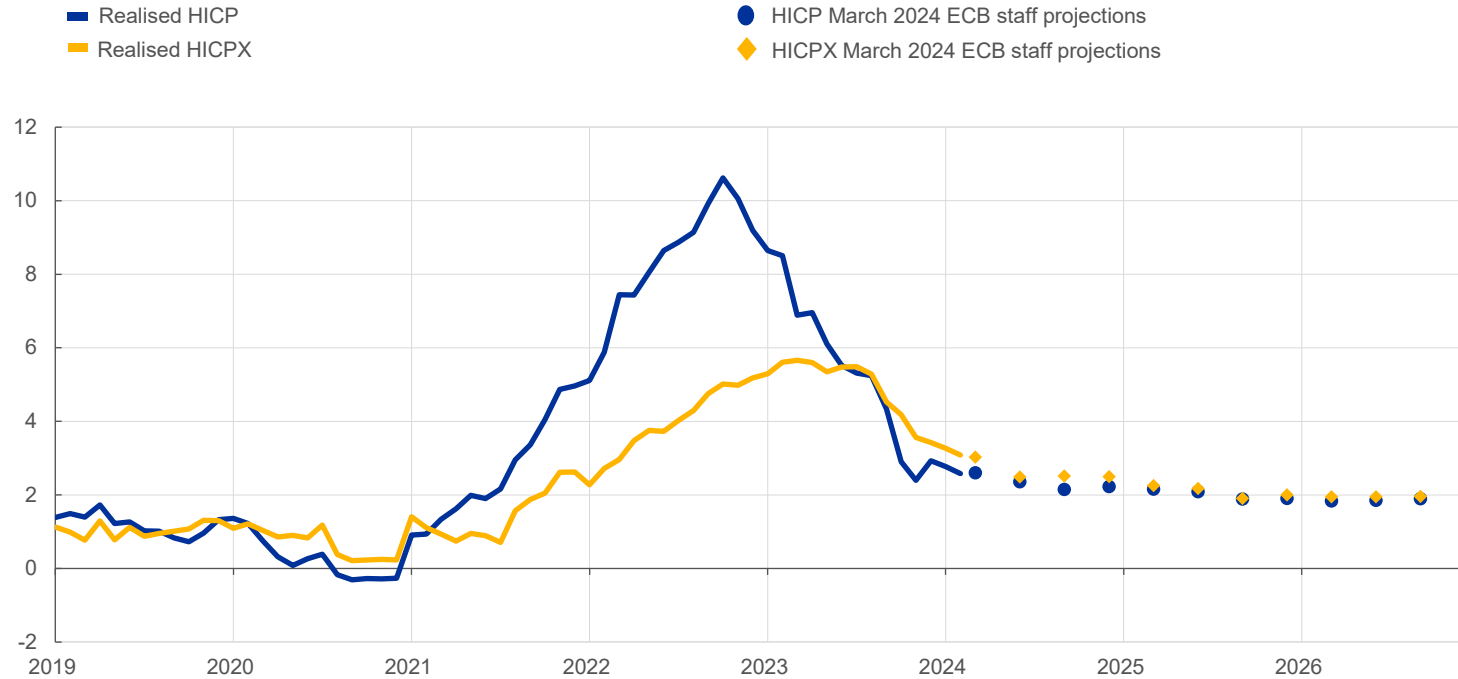
Seminar at Imperial College
Business School, London

15 March 2024

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Member of the Executive Board



Headline inflation, core inflation and ECB staff projections (annual percentage changes)

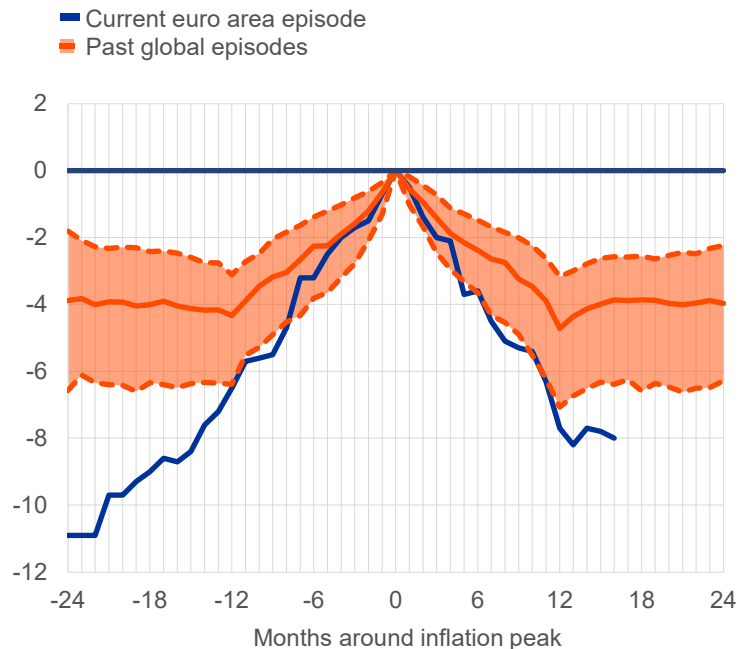


Sources: Eurostat and ECB staff macroeconomic projections.

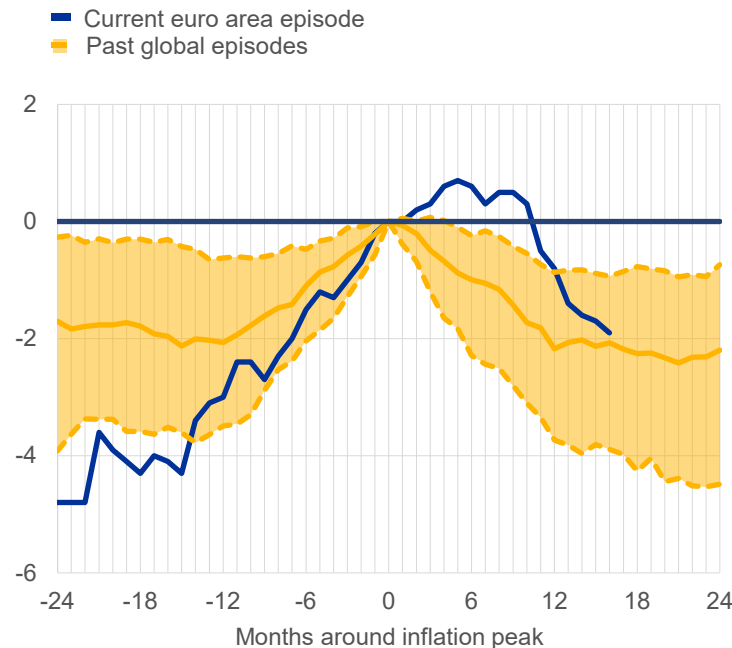
Notes: Harmonised Index of Consumer Prices (HICP) refers to headline inflation and HICPX to HICP excluding food and energy. Realised HICP and HICPX are at a monthly frequency, and HICP and HICPX projections are at a quarterly frequency. Latest observations: February 2024 (flash) for realised HICP and HICPX.

Historical comparison of inflation episodes in the euro area – headline and core

Headline
(percentage points)



Core
(percentage points)

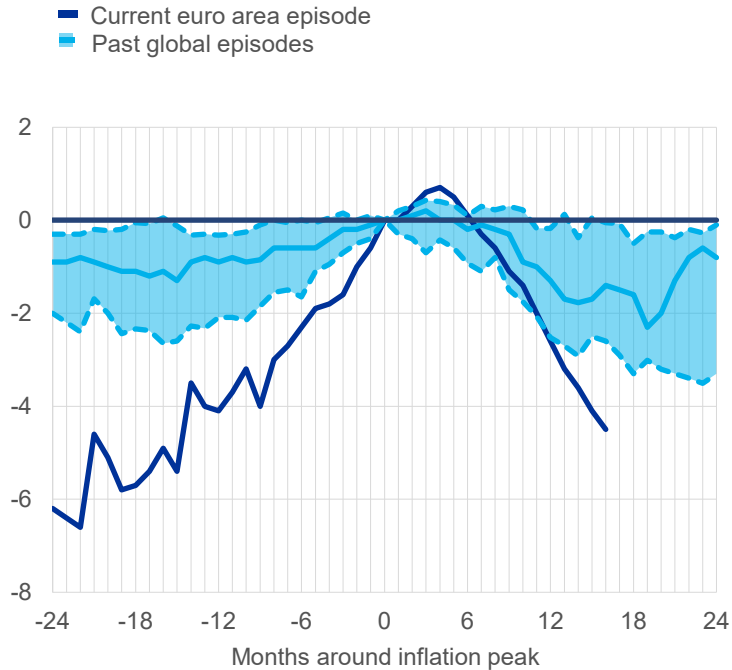


Sources: BIS, Eurostat and ECB calculations.

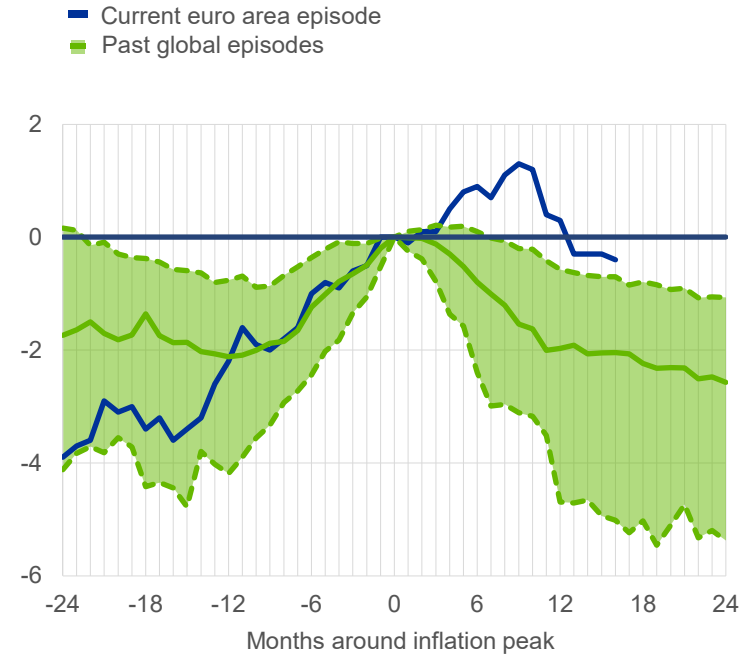
Notes: The shaded areas and the orange and yellow lines represent, respectively, the interquartile range and the median of national headline and core inflation series relative to their peaks during disinflation episodes before 2022 across a panel of 30 advanced economies (AEs) and 28 emerging market economies (EMEs). Month = 0 is when the headline inflation value was at its highest during that particular episode. The dark blue line represents the latest developments in headline and core inflation for the euro area, relative to the October 2022 peak. Latest observations: February 2024 (flash).

Historical comparison of inflation episodes in the euro area - goods and services

Goods
(percentage points)



Services
(percentage points)



Sources: Bank for International Settlements (BIS), Eurostat and ECB calculations.

Notes: The shaded areas and the blue and green lines represent, respectively, the interquartile range and the median of national non-energy industrial goods and services inflation series relative to their peaks during disinflation episodes before 2022. Non-energy industrial goods inflation refers to a panel of all euro area countries, while services inflation refers to a panel of 30 AEs and 28 EMEs. Month = 0 is when the headline inflation value is at the highest during that particular episode. The dark blue line represents the latest developments in non-energy industrial goods and services inflation for the euro area, relative to the October 2022 peak. Latest observations: February 2024 (flash).

Technical assumptions

	March 2024 ECB staff projections				Revisions vs December 2023 Eurosystem staff projections			
	2023	2024	2025	2026	2023	2024	2025	2026
Oil price (level in USD)	83.7	79.7	74.9	72.2	-0.3	-0.5	-2.2	-1.9
Oil price (level in EUR)	77.5	73.7	69.3	66.8	-0.4	-0.2	-1.8	-1.6
Natural gas price (EUR/MWh)	40.6	30.0	32.1	29.5	-2.2	-36.7	-27.4	-19.9
Wholesale electricity price (EUR/MWh)	102.9	74.4	78.3	71.3	-2.0	-36.2	-29.4	-27.1
Effective exchange rate (index 1999 Q1 = 100)	121.8	123.1	123.1	123.1	0.0	-0.3	-0.4	-0.4
USD per EUR (level)	1.08	1.08	1.08	1.08	0.06	-0.26	-0.33	-0.33
3-month interest rate (% p.a.)	3.43	3.43	2.45	2.35	-0.01	-0.17	-0.39	-0.34
10-year bond yield (% p.a.)	3.10	2.93	3.02	3.15	-0.05	-0.31	-0.30	-0.30
Stock prices (levels)	452	484	487	485	0.4	6.5	6.3	5.7

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

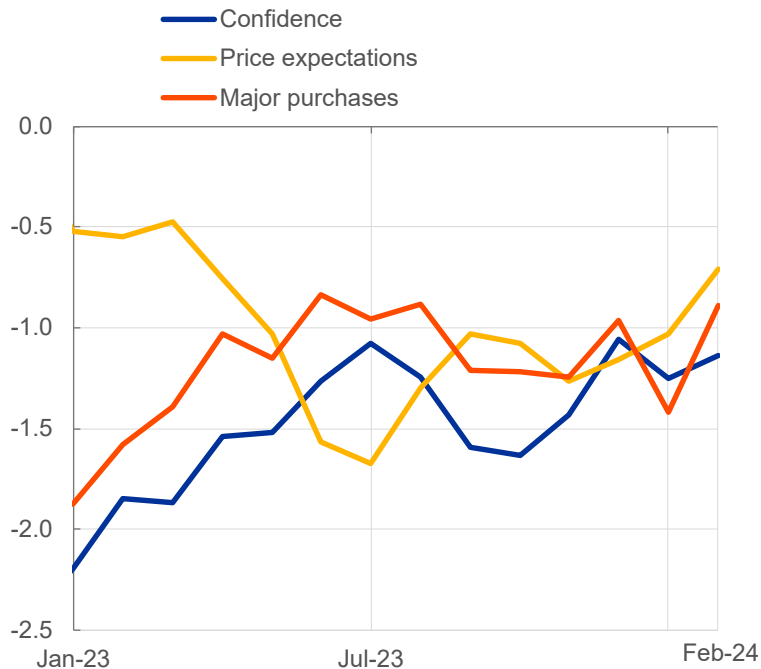
March 2024 ECB staff projections: key macroeconomic variables

	March 2024 ECB staff projections (annual percentage change)				Revisions vs Dec. 2023 Eurosystem staff projections (percentage points)			
	2023	2024	2025	2026	2023	2024	2025	2026
HICP	5.4	2.3	2.0	1.9	0.0	-0.4	-0.1	0.0
HICP excluding energy and food	4.9	2.6	2.1	2.0	-0.1	-0.1	-0.2	-0.1
Compensation per employee	5.3	4.5	3.6	3.0	0.0	-0.1	-0.2	-0.3
Unit labour costs	6.2	4.4	2.3	1.7	0.1	0.3	-0.3	-0.3
Real GDP	0.5	0.6	1.5	1.6	-0.1	-0.2	0.0	0.1
Private consumption	0.5	1.2	1.6	1.5	0.0	-0.2	0.0	0.1
Government consumption	0.2	1.3	1.4	1.2	0.1	0.2	0.1	0.0
Total investment	0.8	-0.6	1.6	2.3	-0.5	-1.0	-0.2	0.2
Unemployment rate (% of labour force)	6.5	6.7	6.6	6.6	0.0	0.1	0.1	0.2
	March 2024 ECB staff projections (Q4 on Q4 percentage change)				Revisions vs Dec. 2023 Eurosystem staff projections (percentage points)			
	23Q4	24Q4	25Q4	26Q4	23Q4	24Q4	25Q4	26Q4
HICP	2.7	2.2	1.9	1.9	-0.1	-0.4	-0.1	0.0
HICP excl. energy and food	3.7	2.5	2.0	2.0	-0.1	-0.2	-0.1	-0.1
Compensation per employee	4.8	4.4	3.3	2.9	0.1	-0.2	-0.2	-0.2
Unit labour costs	5.8	3.5	2.0	1.7	0.3	-0.1	-0.3	-0.2
Real GDP	0.2	1.1	1.7	1.5	-0.1	-0.2	0.2	0.0
Private consumption	0.6	1.5	1.6	1.4	0.0	-0.3	0.2	0.0
Government consumption	0.2	1.8	1.1	1.2	0.5	-0.1	0.1	-0.1
Total investment	-0.1	-0.2	2.4	2.0	-1.3	-0.6	0.2	0.0
Unemployment rate (% of labour force)	6.5	6.7	6.6	6.6	0.0	0.1	0.1	0.3

Note: Revisions calculated based on rounded figures.

Consumer confidence

(standardised percentage balances)

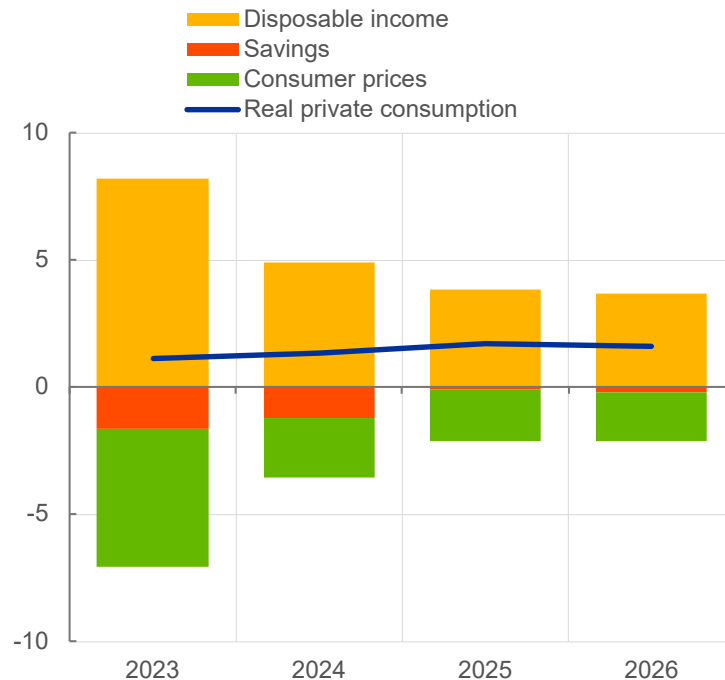


Sources: DG-ECFIN (European Commission) and ECB calculations.

Notes: Series are standardised over the pre-pandemic period. Price expectations and major purchases refer to the next 12 months. Latest observation: February 2024.

Outlook for private consumption

(annual percentage changes and percentage point contributions)

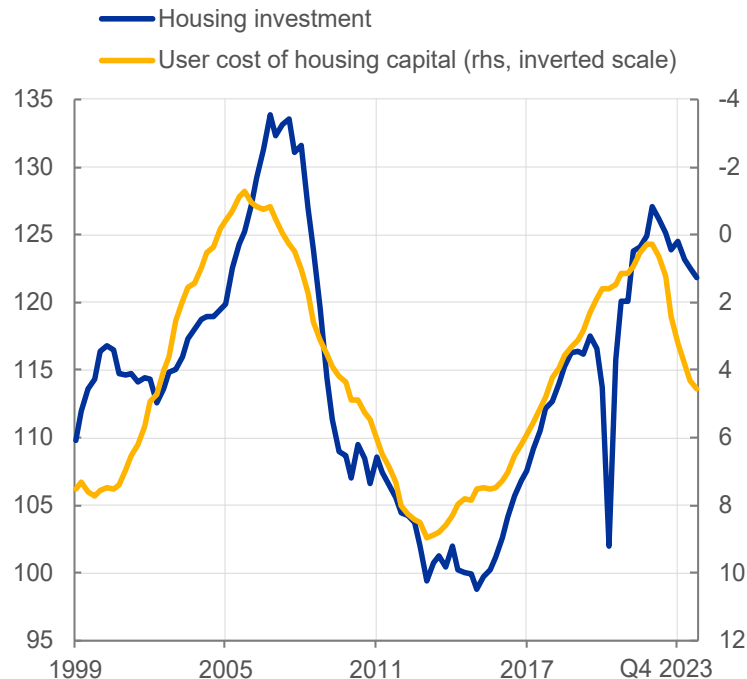


Sources: March 2024 ECB staff projections.

Note: Consumer prices refer to the HICP inflation.

Housing investment and user cost of capital

(index: 2015 = 100, percentage per annum)



Sources: Eurostat, Housing Taxation Database, ECB and ECB calculations.

Notes: The user cost of housing capital measures the annual user cost of services for owner-occupied housing in relation to the value of the house.

Latest observation: Q4 2023.

Expected household debt service-to-income ratio

(index: 2015 = 100)



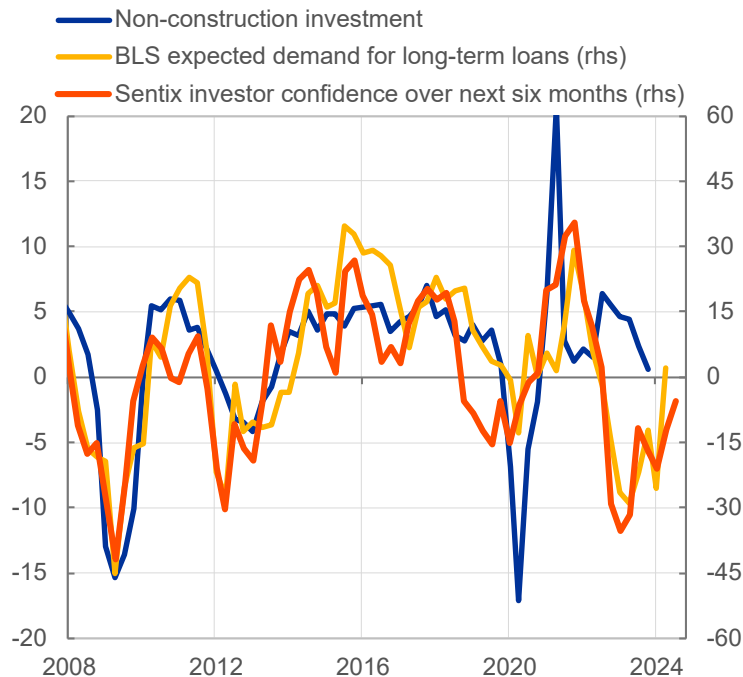
Sources: Eurostat, ECB and ECB calculations.

Notes: The index reflects the mortgage payment of a prospective buyer for a 25-year mortgage with an 80% loan-to-value ratio at current new business rates.

Latest observation: Q3 2023.

Non-construction investment, sentiment and expected long-term loan demand

(lhs: annual percentage changes, rhs: net balances)

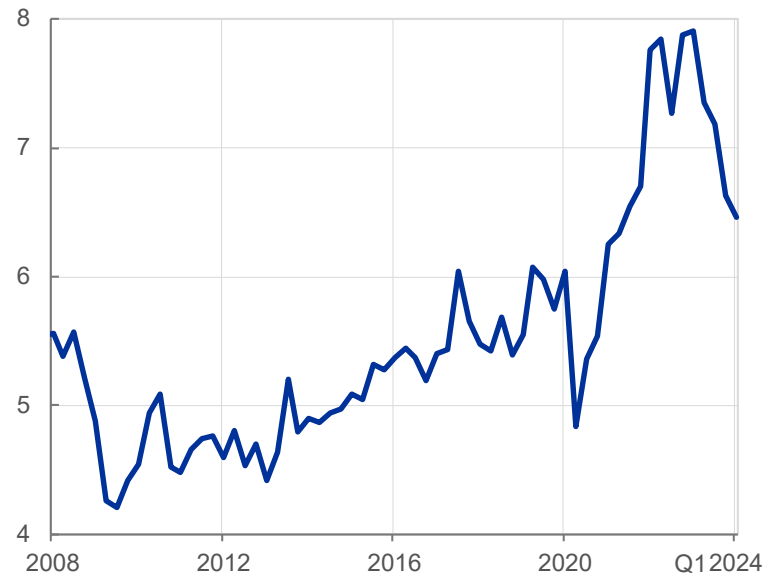


Sources: Eurostat, Bank Lending Survey (BLS), Sentix and ECB calculations.

Notes: Non-construction investment excludes IE and NL IPP (intellectual property products). BLS expected demand is for long-term loans in the next three months, lagged one quarter. Sentix investor confidence is lagged two quarters. Latest observations: Non-construction investment: Q4 2023; BLS: Q1 2024; Sentix: March 2024.

Production assured by current order books in the capital goods sector

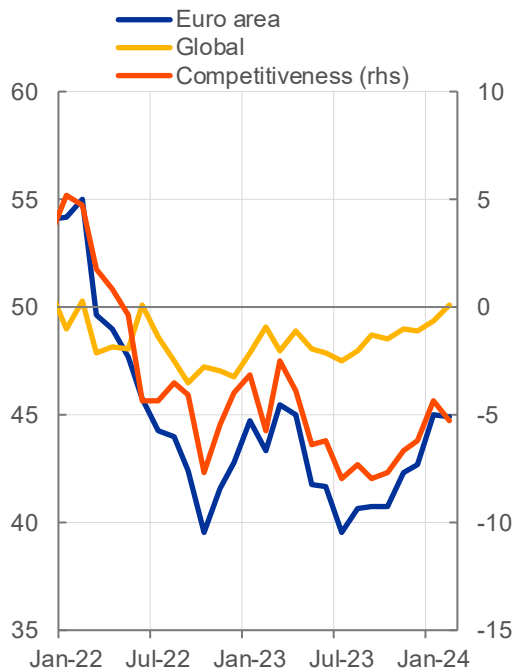
(months)



Source: DG-ECFIN (European Commission).

Note: Latest observation: Q1 2024.

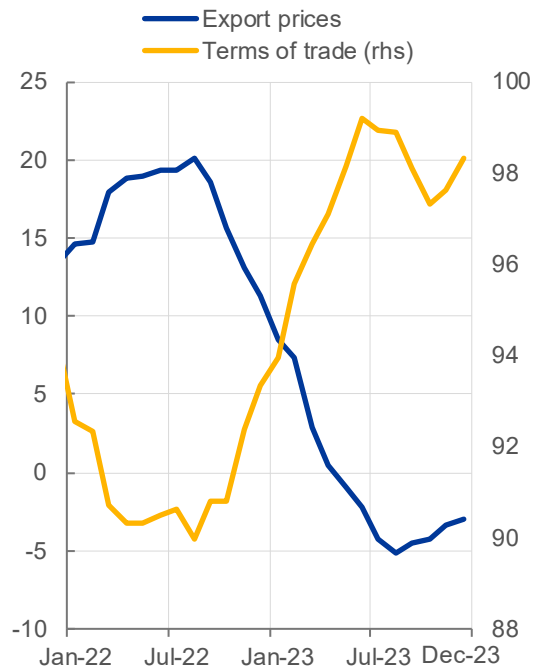
New export orders (diffusion index)



Sources: S&P Global and ECB calculations.

Notes: Purchasing Managers' Index (PMI) new manufacturing export orders. Percentage of respondents reporting "higher" plus half of the percentage reporting "the same". Competitiveness is the difference between euro area and global new orders. Latest observation: February 2024.

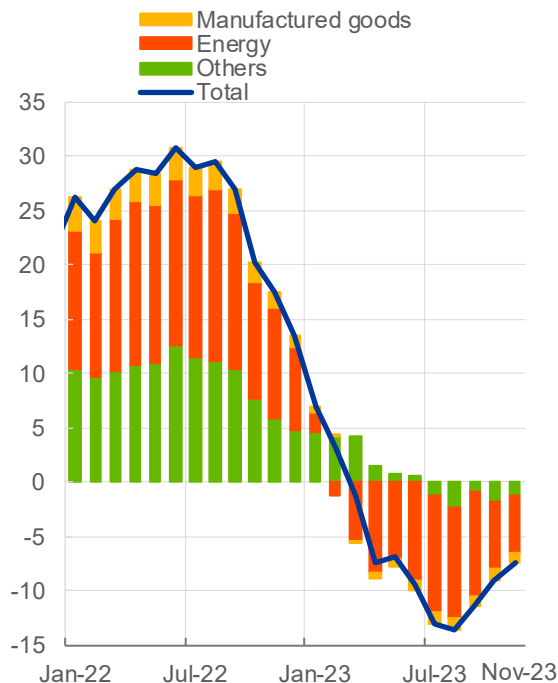
Export prices and terms of trade (annual percentage changes, ratio)



Sources: Eurostat and ECB calculations.

Notes: Export prices and terms of trade for goods. Latest observation: December 2023.

Import prices (annual percentage changes and percentage point contributions)



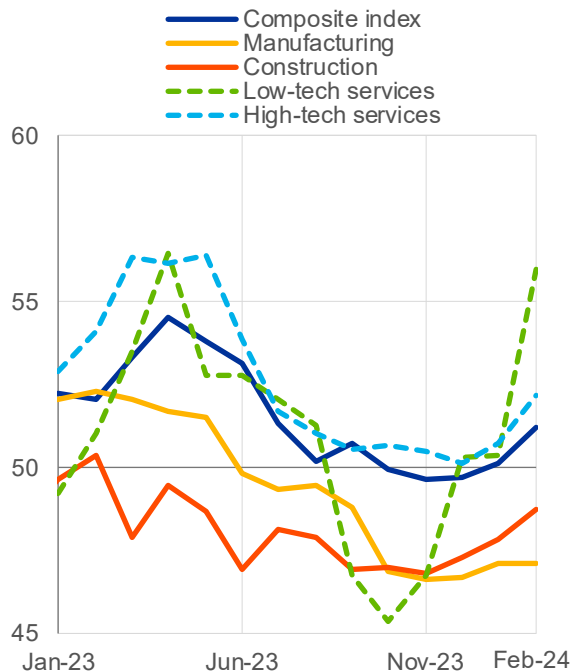
Sources: Eurostat and ECB calculations.

Notes: Import prices are shown for goods only. Weights are computed using the values due to data availability. Latest observation: November 2023.

PMI and labour demand

PMI employment

(diffusion index)

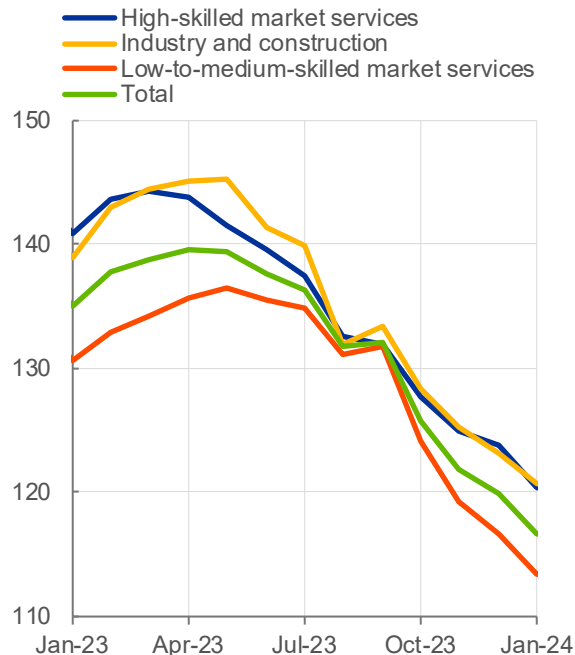


Source: S&P Global.

Notes: A value of 50 implies no job creation compared with the previous month. Low-tech services are hospitality and transportation. High-tech services are financial, computer and professional services. Retail services are not included in the PMI. Latest observation: February 2024.

Indeed job postings

(index: H2 2019 = 100)

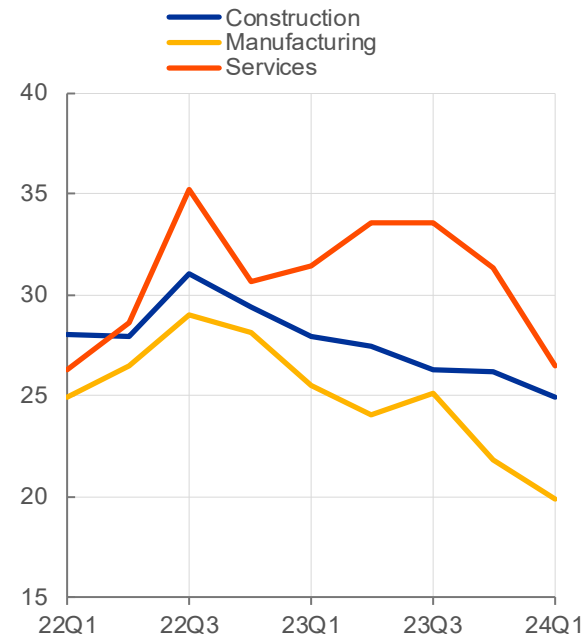


Source: Indeed.

Note: Latest observation: January 2024.

Labour as factor limiting production

(percentages)



Source: DG-ECFIN (European Commission).

Notes: The series is based on the PMI survey question: "What main factors are currently limiting your production?". The data are reported quarterly for manufacturing and services, monthly for construction. Latest observation: Q1 2024.

Euro area fiscal projections

	March 2024 ECB staff projections								Revisions since December 2023 Eurosystem staff projections			
	(percentage of GDP)								(percentage points)			
	2019	2020	2021	2022	2023	2024	2025	2026	2023	2024	2025	2026
General government budget balance	-0.6	-7.1	-5.2	-3.6	-3.2	-2.9	-2.8	-2.8	-0.1	-0.1	-0.1	-0.2
Structural budget balance¹⁾	-1.0	-4.9	-3.8	-3.5	-3.2	-2.6	-2.6	-2.7	0.0	0.1	0.1	0.0
Fiscal stance (adjusted for NGEU grants)²⁾	-0.4	-4.2	0.6	0.5	0.3	0.7	0.1	0.0	-0.1	0.0	0.0	-0.1
General government gross debt	84.1	97.2	94.7	90.9	88.3	88.5	88.5	88.6	-0.4	0.2	0.4	0.6

Sources: ECB March 2024 and ESCB December 2023 macroeconomic projections

Notes: Data are available for downloading from the Macroeconomic Projection Database on the ECB website.

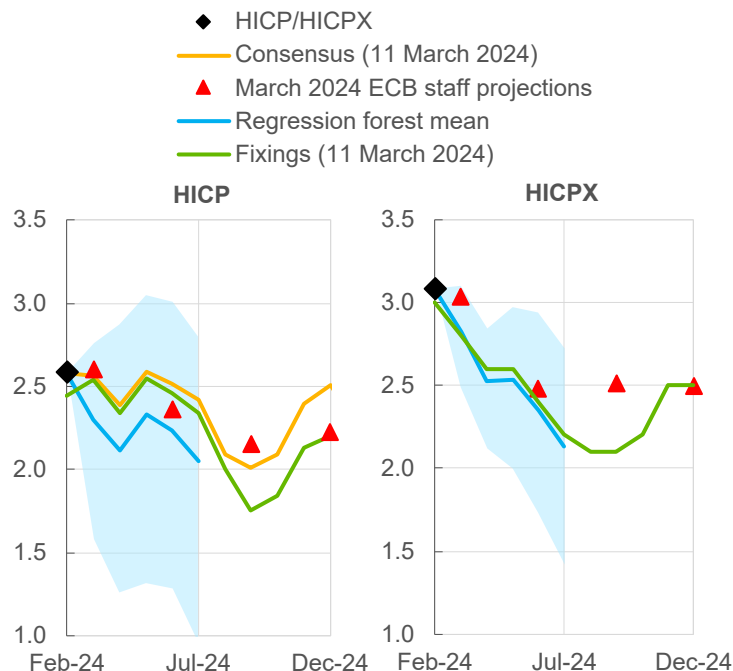
1) Calculated as the government balance net of transitory effects of the economic cycle and measures classified under the European System of Central Banks definition as temporary.

2) The fiscal policy stance is measured as the change in the cyclically adjusted primary balance net of government support to the financial sector. The figures shown are also adjusted for expected grants under the Next Generation EU (NGEU) programme on the revenue side. A negative figure implies a loosening of the fiscal stance. NGEU is the EU's €800 billion temporary recovery instrument to support the economic recovery from the coronavirus pandemic and build a greener, more digital and more resilient future.

Short-term forecasts and measures of underlying inflation

Short-term forecasts for HICP and HICPX

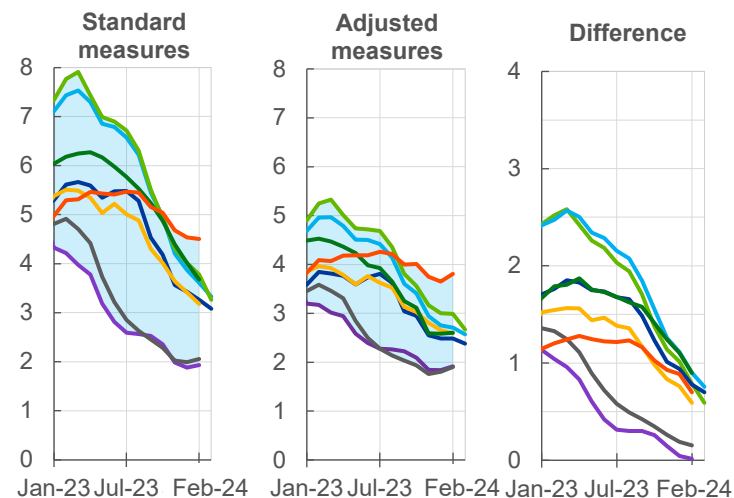
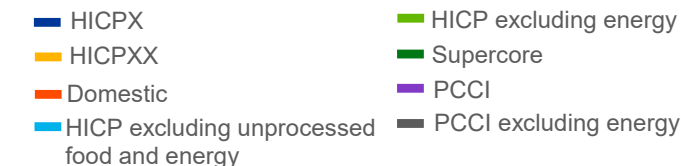
(annual percentage changes)



Sources: Eurostat, March 2024 ECB staff short-term inflation outlook, Consensus Economics, Bloomberg and ECB calculations. Notes: The cut-off date for the latest mechanical update and regression forest is 1 March 2024, and for fixings is 11 March 2024. Consensus Economics data were collected on 11 March. The quantile regression forest estimates are from Lenza, Moutachaker and Paredes (2023). The HICP fixings are observed market prices, whereas the HICPX fixings are estimated based on the model in Grønlund, Jørgensen and Schupp (2024). Latest actual observation: February 2024 (flash).

Measures of underlying inflation

(annual percentage changes)

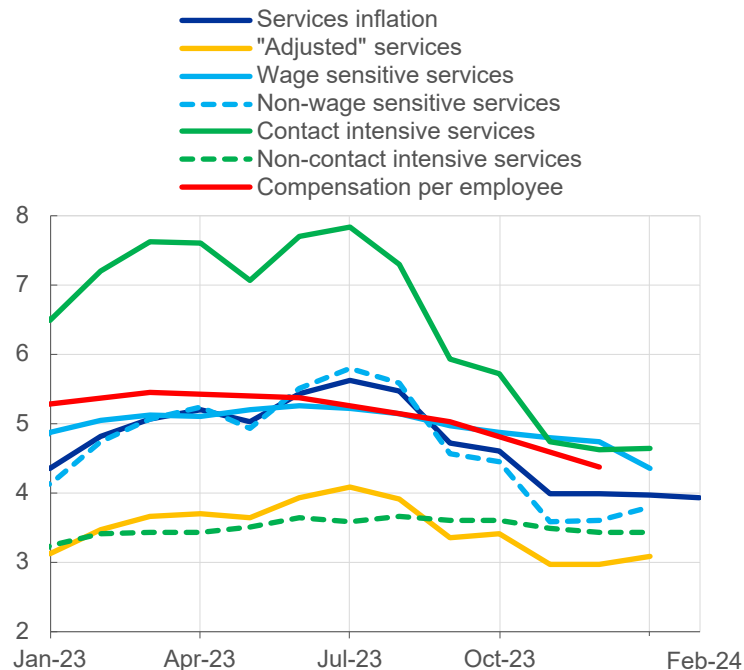


Sources: Eurostat and ECB calculations.

Notes: PCCI refers to the Persistent and Common Component of Inflation. The “adjusted” measures abstract from energy and supply-bottleneck shocks using a large SVAR, see Bańbura, Bobeica and Martínez-Hernández (2023), “What drives core inflation? The role of supply shocks”, *Working Paper Series*, No 2875, ECB. Latest observations: February 2024 (flash) for HICPX, HICP excluding energy and HICP excluding unprocessed food and energy, and January 2024 for the rest.

Drivers of services inflation

(annual percentage changes)

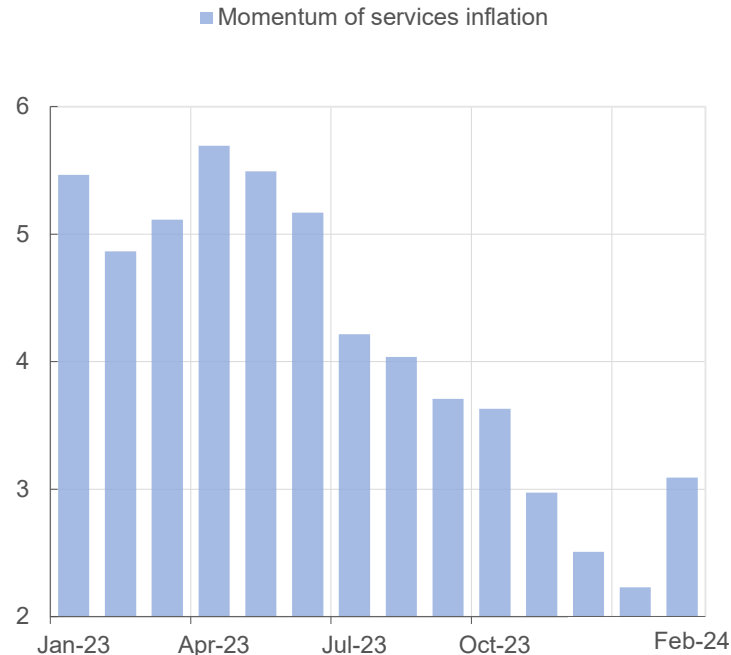


Sources: Eurostat and ECB calculations.

Notes: "Adjusted" services refers to services inflation adjusted for energy and supply bottleneck shocks. Compensation per employee is for the services sector. Latest observations: Q4 2023 for compensation per employee, February 2024 (flash) for services inflation and January 2024 for the rest.

Momentum of services inflation

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



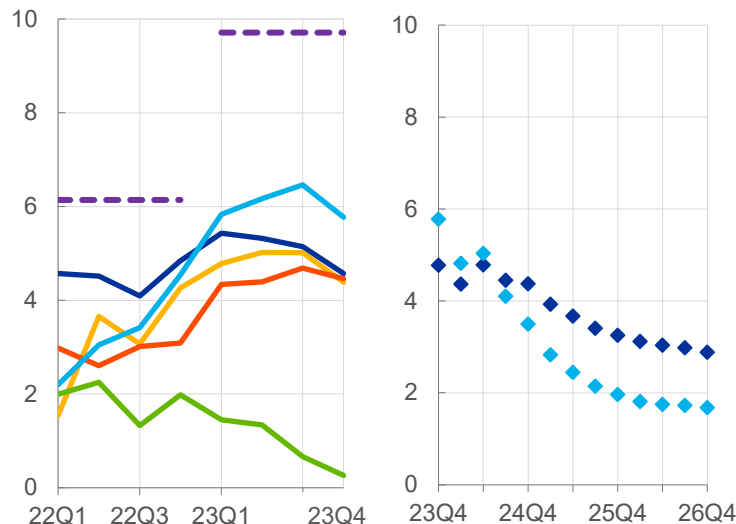
Sources: Eurostat and ECB calculations.

Notes: Calculated using seasonally adjusted data. Latest observation: February 2024 (flash).

Labour cost indicators and projections

(annual percentage changes and percentage point contributions)

- Compensation per employee
- Compensation per hour
- Negotiated wages
- Unit labour costs
- Wage drift
- Compensation per employee March 2024 ECB staff projections
- Unit labour costs March 2024 ECB staff projections



Sources: Eurostat, ECB, ECB calculations and March 2024 ECB staff projections.

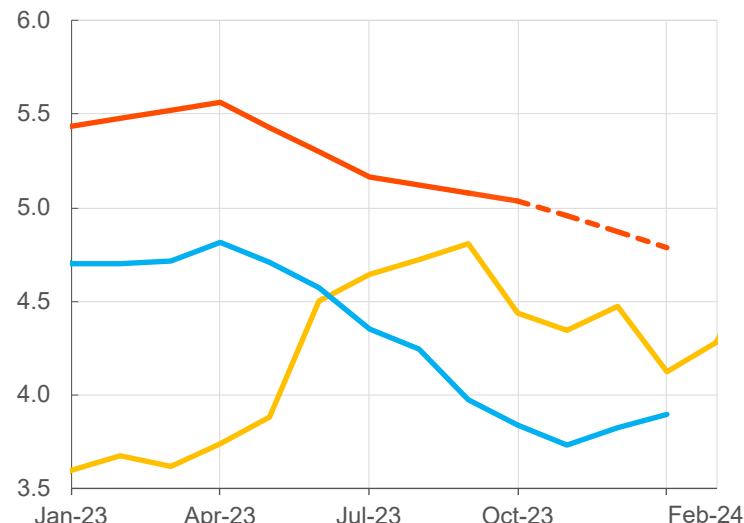
Notes: Minimum wage growth is for the euro area excluding Italy, Austria and Finland.

Latest observations: Q4 2023.

Wage trackers

(annual percentage changes)

- Wage tracker including one-offs
- Wage tracker – average of latest agreements including one-offs
- Indeed wage tracker

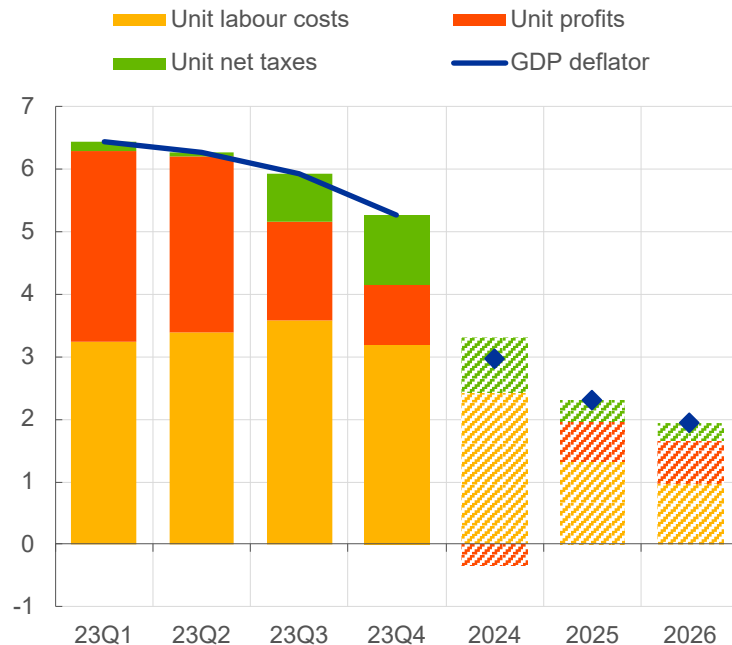


Sources: Calculated based on micro data on wage agreements provided by the Deutsche Bundesbank, Banco de España, Dutch employers' association (AWVN), Oesterreichische Nationalbank, Bank of Greece, Banca d'Italia and Banque de France. Notes: Euro area aggregate based on DE, FR, IT, ES, NL, AT and GR as of February 2024. The indicator of latest agreements reflects wage growth in the agreements reached in a certain quarter for the 12 months after an agreement. One-off payments are spread over 12 months from the agreed disbursement date – smoothing the impact of one-off payments on wage growth. Data on the latest agreements for February 2024 and Q1 2024 are preliminary as not all collective agreements reached in Q1 2024 are available yet. Latest observations: February 2024 for the ECB wage tracker including one-offs, January 2024 for the rest.

Domestic cost and price pressures

GDP deflator – unit profit perspective

(annual percentage changes and percentage point contributions)

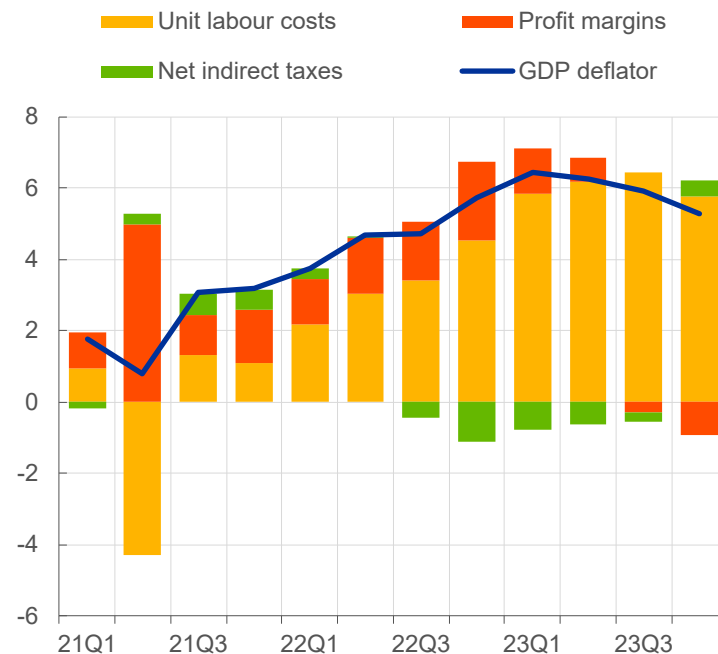


Sources: Eurostat and ECB calculations.

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. Shaded areas refer to the March 2024 ECB staff projections. Latest observation: Q4 2023.

GDP deflator – profit margin perspective

(annual percentage changes)



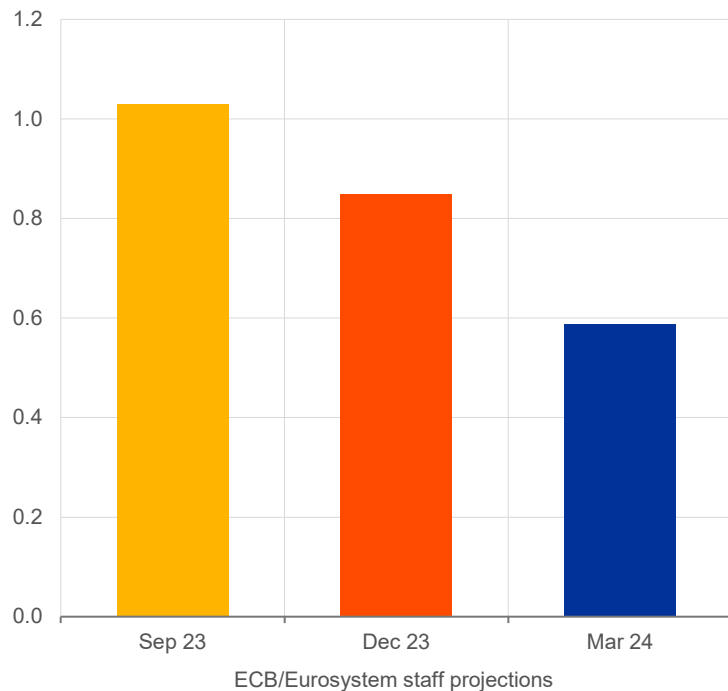
Sources: Eurostat and ECB calculations.

Notes: Profit margins are defined as the ratio between the GDP deflator at factor cost and unit labour costs. Latest observation: Q4 2023.

Evolution of Eurosystem and ECB staff projections for 2024

Real GDP growth in 2024

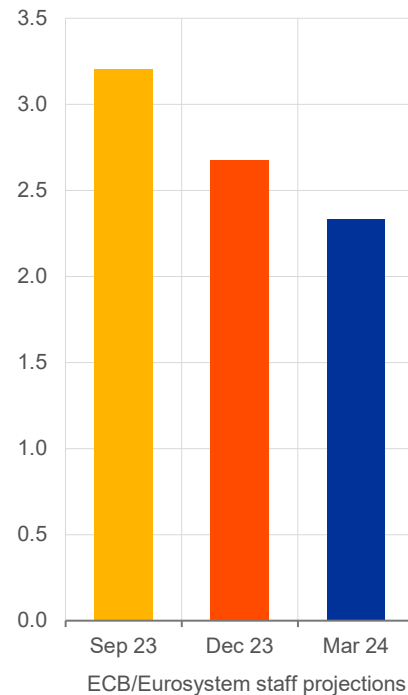
(annual percentage changes)



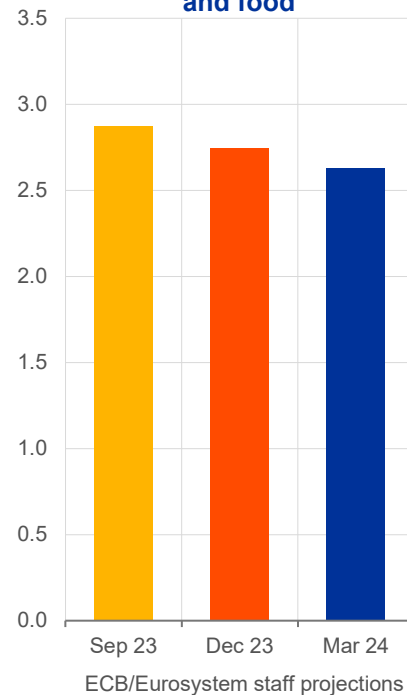
Inflation in 2024

(annual percentage changes)

Headline HICP



HICP excl. energy and food

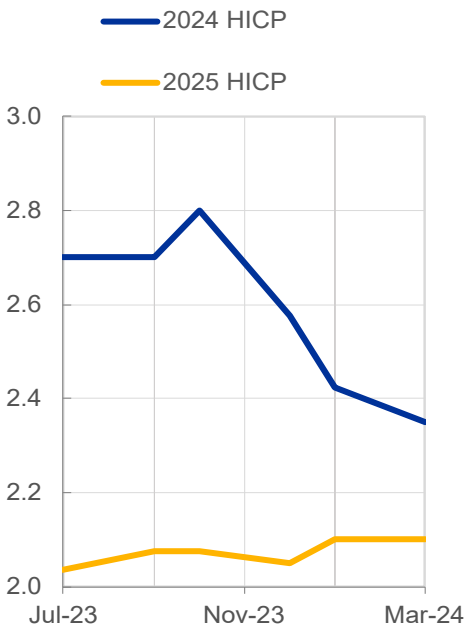


Source: ECB and Eurosystem staff projections.

Inflation expectations

SMA inflation expectations for 2024 and 2025

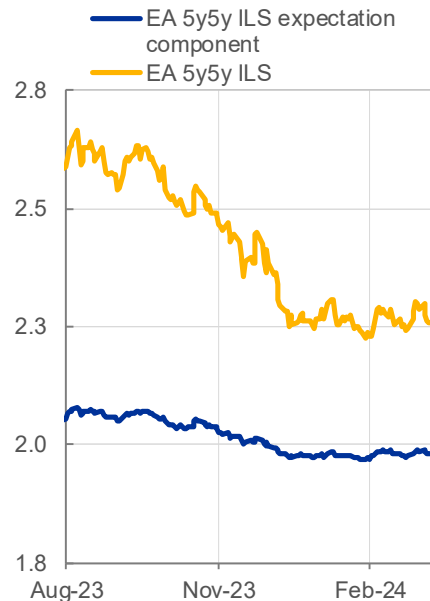
(annual percentage changes)



Source: SMA.
Note: The chart displays the evolution of SMA expectations for 2024 and 2025 over survey rounds.

Decomposition of 5-year on-5-year inflation-linked swap (ILS) rate

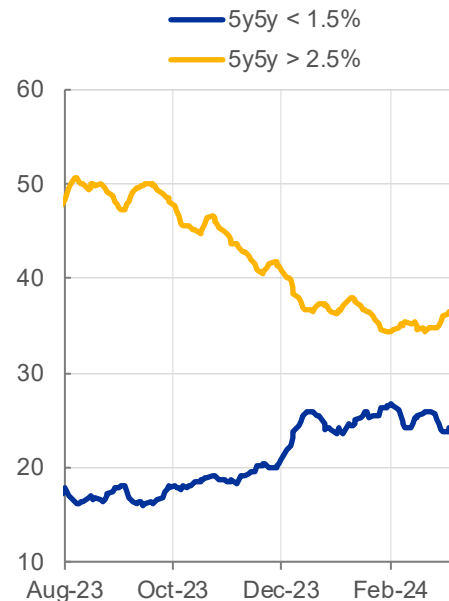
(annual percentage changes)



Sources: Bloomberg and ECB calculations. Notes: Premia-adjusted forward ILS rates are average estimates from two affine term structure models as in Joslin, Singleton and Zhu (2011) applied to ILS rates non-adjusted for the indexing lag; see Burban et al. (2022), *Economic Bulletin*, Issue 8 (2021) Box 4, ECB. Inflation compensation rates refer to a linear interpolation between fixings and forward ILS rates. Latest observation: 8 March 2024.

Option-implied probabilities of inflation outcomes

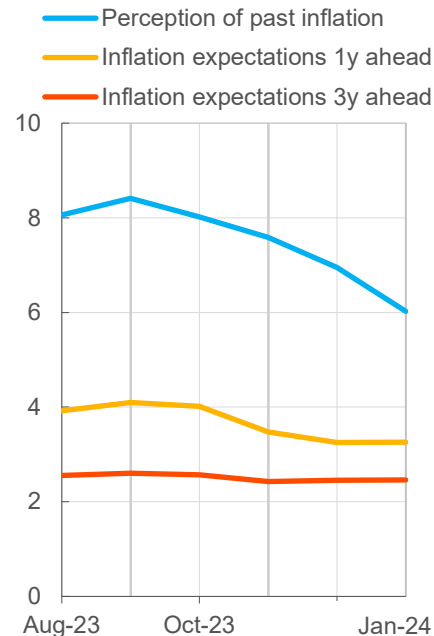
(percent)



Sources: Refinitiv, Bloomberg and ECB calculations. Notes: 5-days moving average risk-neutral probabilities of inflation implied by five-year and ten-year zero-coupon inflation options. The depicted probabilities are risk-neutral probabilities affected by risk premia and should therefore not be interpreted as "real world" (or physical) probabilities. Latest observation: 8 March 2024.

ECB Consumer Expectations Survey

(annual percentage changes)

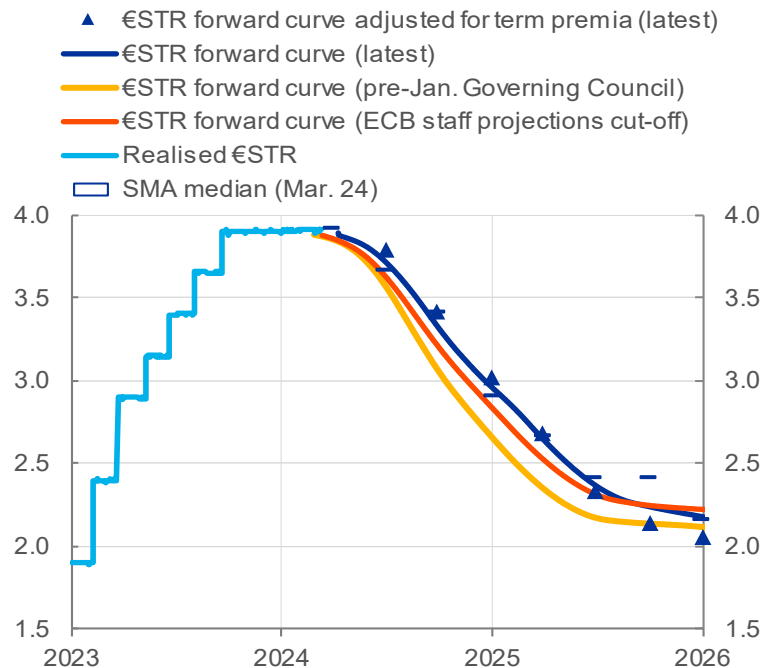


Sources: Eurostat and ECB Consumer Expectations Survey (CES). Latest observation: January 2024.

Nominal risk-free rates and the real yield curve

€STR forward curve and survey expectations on the deposit facility rate

(percentages per annum)

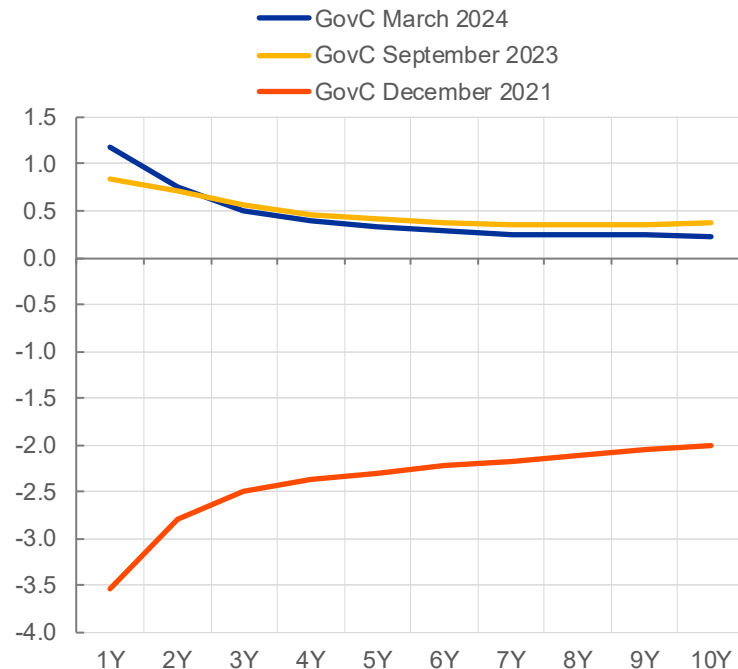


Sources: Refinitiv, Bloomberg and ECB calculations.

Notes: The bars depict the median of responses to the March SMA survey on expectations of future deposit facility rates. Surveys are adjusted for an €STR vs Discount Facility Rate (DFR) spread. Model estimates are based on two affine term structure models, one with and one without survey information on interest rate expectations (both variations of Joslin, Singleton and Zhu (2011)), and a lower bound term structure model following Geiger and Schupp (2018) incorporating survey information on interest rate expectations. The cut-off date for the ECB staff projections is 9 February 2024. Latest observation: 8 March 2024.

Euro area real yield curve

(percentages per annum)

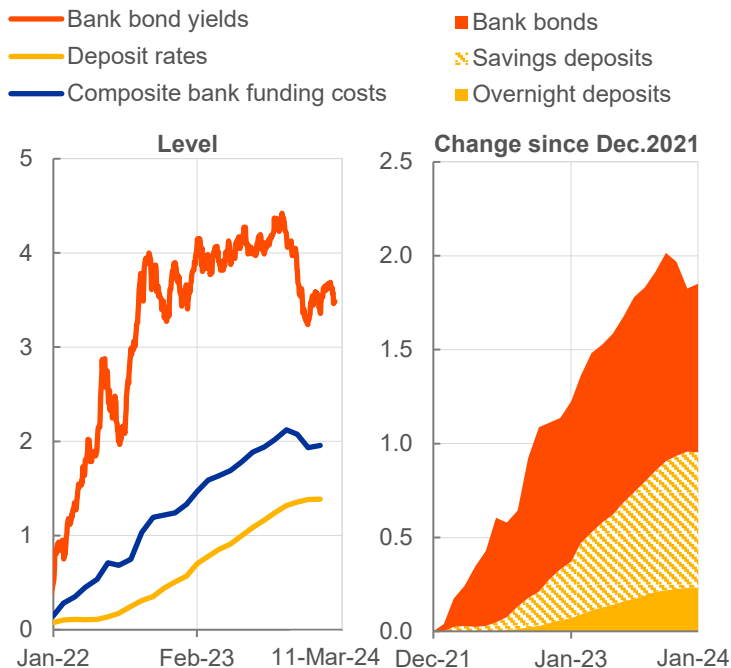


Sources: Bloomberg, Refinitiv and ECB calculations.

Notes: The curves refer to the day before the December 2021 Governing Council meeting (14 December 2021), and to the days after the September 2023 and March 2024 Governing Council meetings (15 September 2023, 8 March 2024). Latest observation: 8 March 2024.

Bank funding cost

(percentages per annum, percentages points per annum)



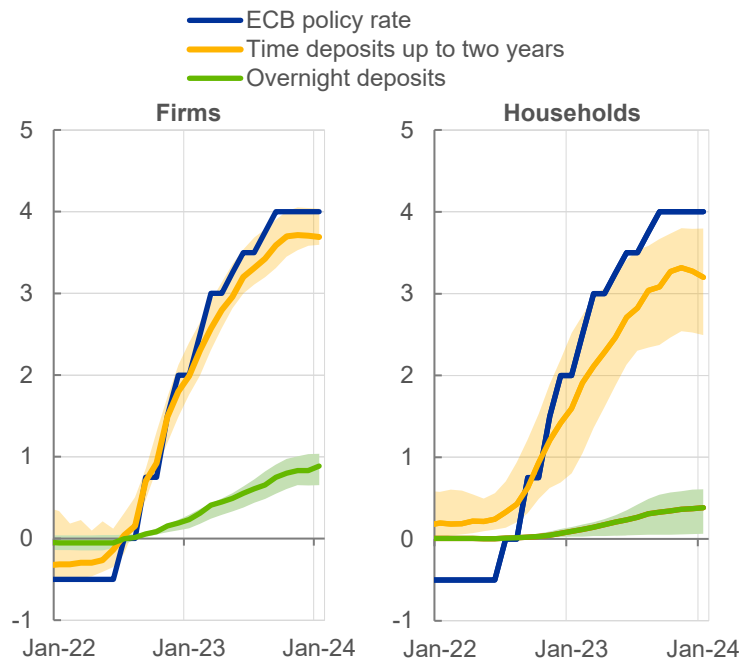
Sources: ECB (BSI, MIR), IHS Markit iBoxx and ECB calculations.

Notes: Daily bank bond yield data and monthly deposit rates on new business volumes weighted by outstanding amounts. Composite funding costs are a weighted average of deposit rates and average monthly bond yields, with outstanding amounts as weights. The chart on the right shows the contributions of the components to the change in the composite bank funding cost between December 2021 and January 2024.

Latest observations: 11 March 2024 for bond yields, January 2024 for other series.

Deposit pass-through in the euro area

(percentages per annum)



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

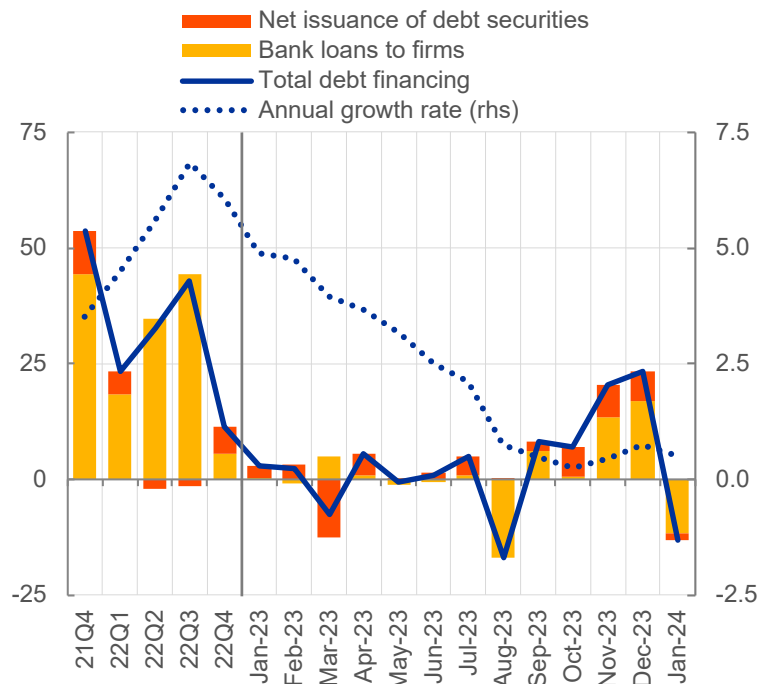
Notes: Time deposits with an agreed maturity of up to two years are a component of M3 deposits.

Latest observation: January 2024.

Firm debt financing and borrowing costs

Net debt financing flows of euro area firms

(average monthly flows over the respective period in EUR billions, annual percentage changes)

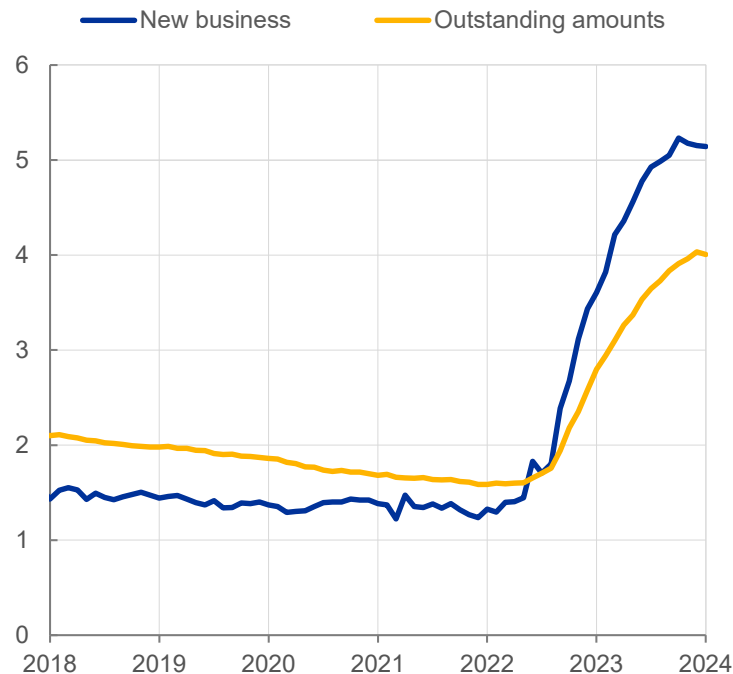


Sources: ECB (BSI, CSEC) and ECB calculations.

Notes: The net issuance of debt securities is seasonally adjusted internally. Bank loans are adjusted for sales, securitisation and cash pooling. Latest observation: January 2024.

Cost of borrowing for firms

(percentages per annum)



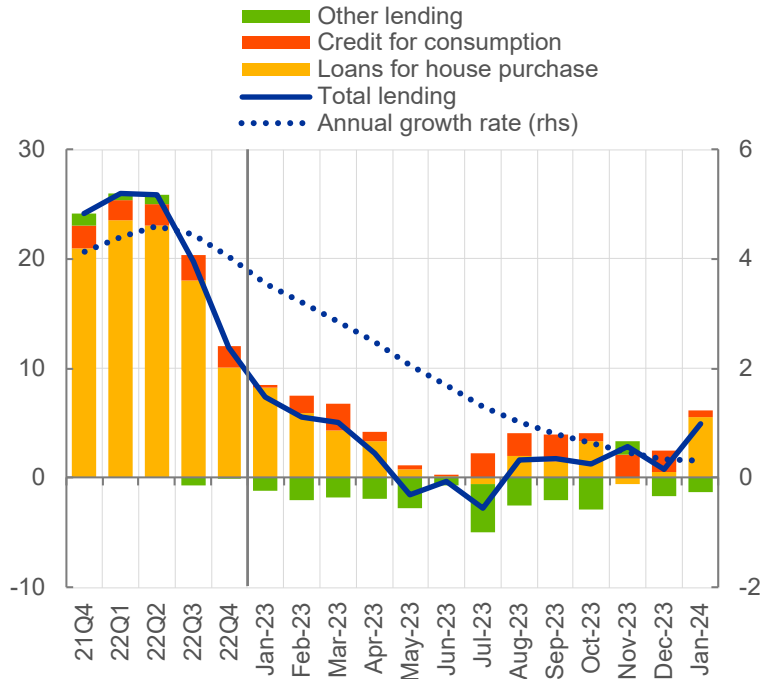
Sources: ECB (MIR) and ECB calculations.

Latest observation: January 2024.

Household loans and borrowing costs

Bank loans to households

(average monthly flows over the respective period in EUR billions, annual percentage changes)

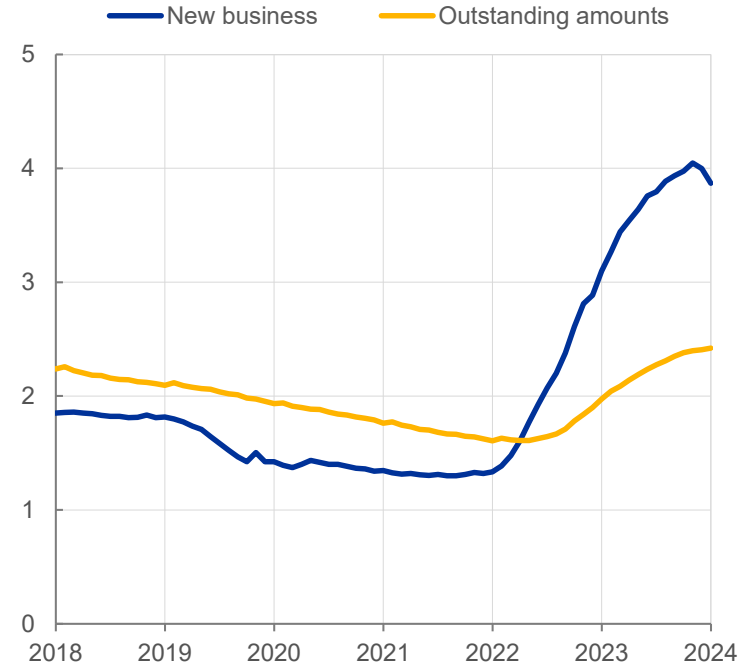


Sources: ECB (BSI) and ECB calculations.

Notes: Bank loans are adjusted for sales and securitisation. Latest observation: January 2024.

Cost of borrowing for households for house purchase

(percentages per annum)



Sources: ECB (MIR) and ECB calculations.

Latest observation: January 2024.