EUROPEAN CENTRAL BANK

EUROSYSTEM

Some like it hotter: the conditions for a cyclical recovery in euro area productivity

Contribution to the Centre for European Reform's annual economics conference on "A European path to higher economic growth"

15 November 2024

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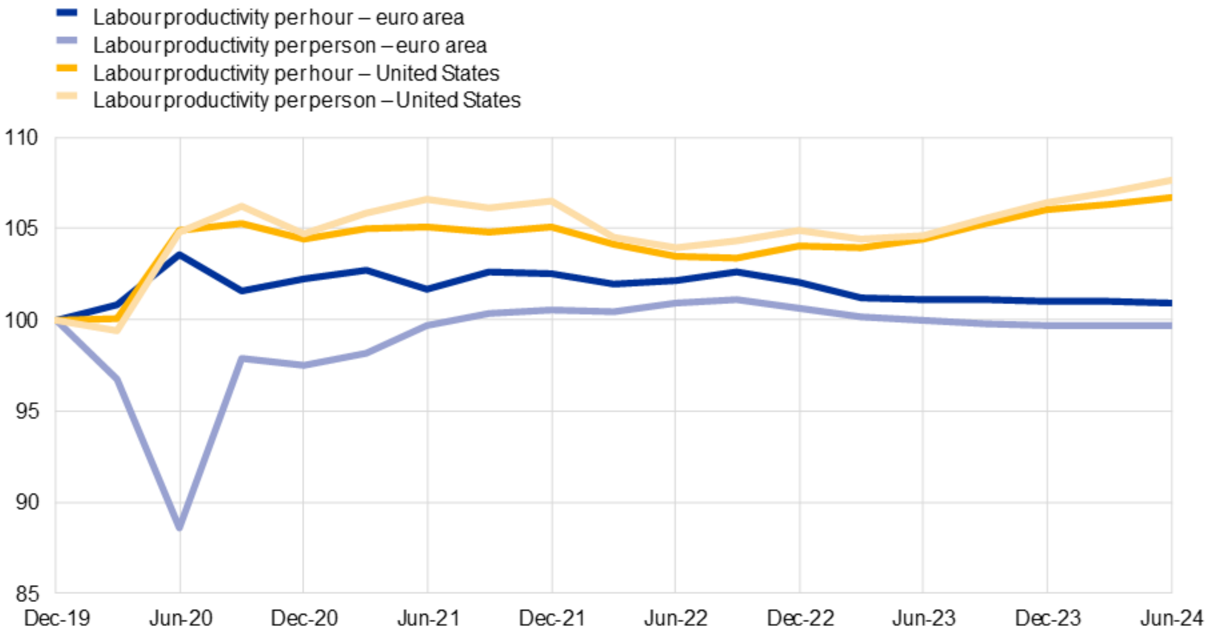
Member of the Executive Board

Chart 1

Labour productivity in the euro area and the United States

(index: Q4 2019 = 100)

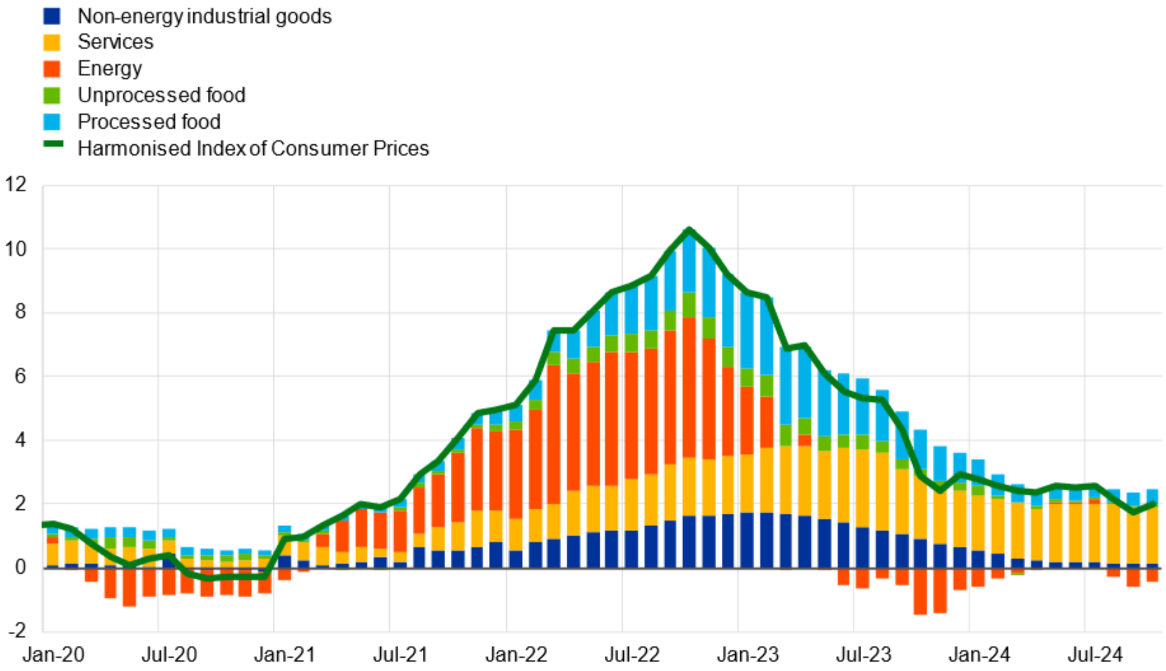


Sources: Eurostat, Bureau of Economic Analysis and Bureau of Labour Statistics.
Note: The latest observations are for the second quarter of 2024.

Chart 2

Contribution of components to euro area headline inflation

(annual percentage changes and percentage point contributions)

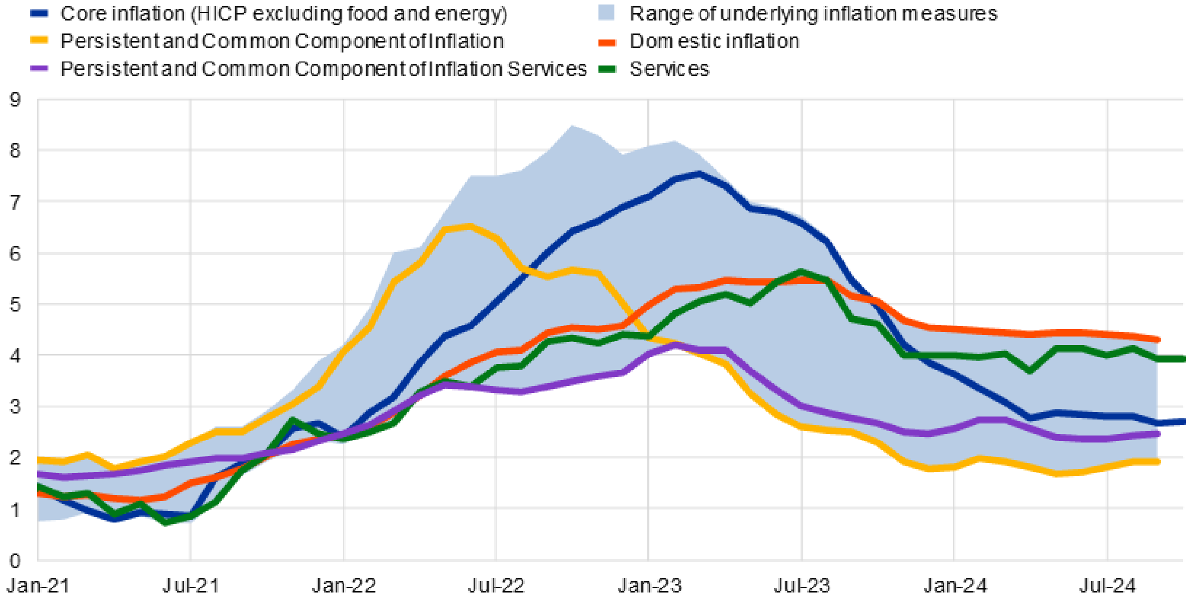


Sources: Eurostat and ECB staff calculations.
Note: The latest observations are for October 2024 (flash estimate).

Chart 3

Indicators of underlying inflation in the euro area

(annual percentage changes; PCCI, PCCI services: three-month moving average of annualised month-on-month growth rates)



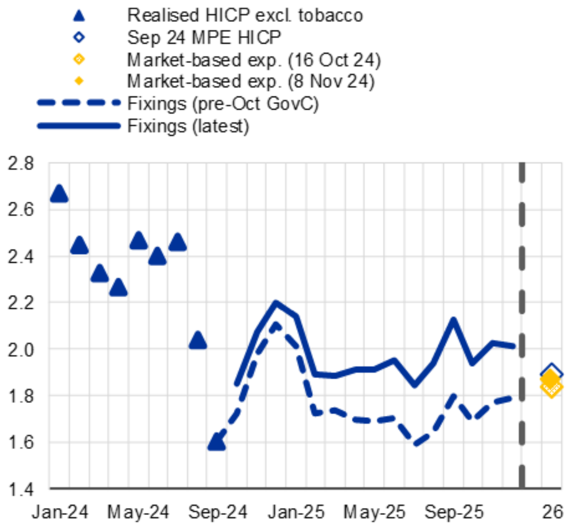
Sources: Eurostat and ECB staff calculations.
Notes: The latest observations are for October 2024 (flash estimate) for core and services inflation and for September 2024 for the other data. The range of underlying inflation measures includes those shown on the chart, as well as HICP excluding unprocessed food and energy, HICPXX, HICP excluding energy, trimmed mean (10%), trimmed mean (30%), weighted median, Supercore and PCCI excluding energy.

Chart 4

Market-based inflation expectations

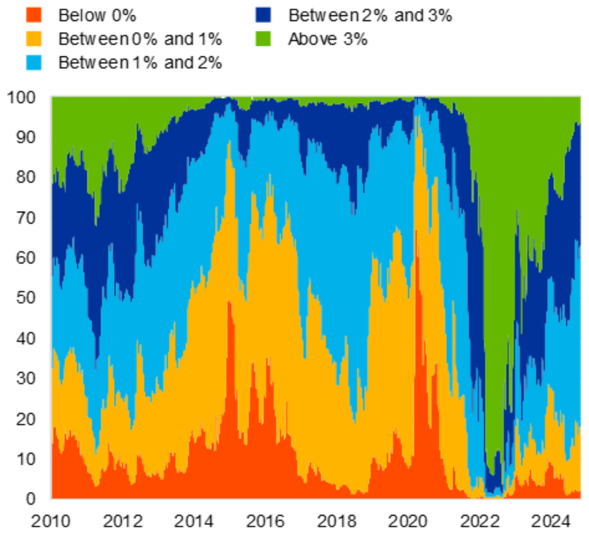
a) Projected euro area inflation path during 2024, 2025 and for calendar year 2026

(percentages per annum)



b) Option-implied risk-neutral distribution of average inflation over the next five years

(percentages)

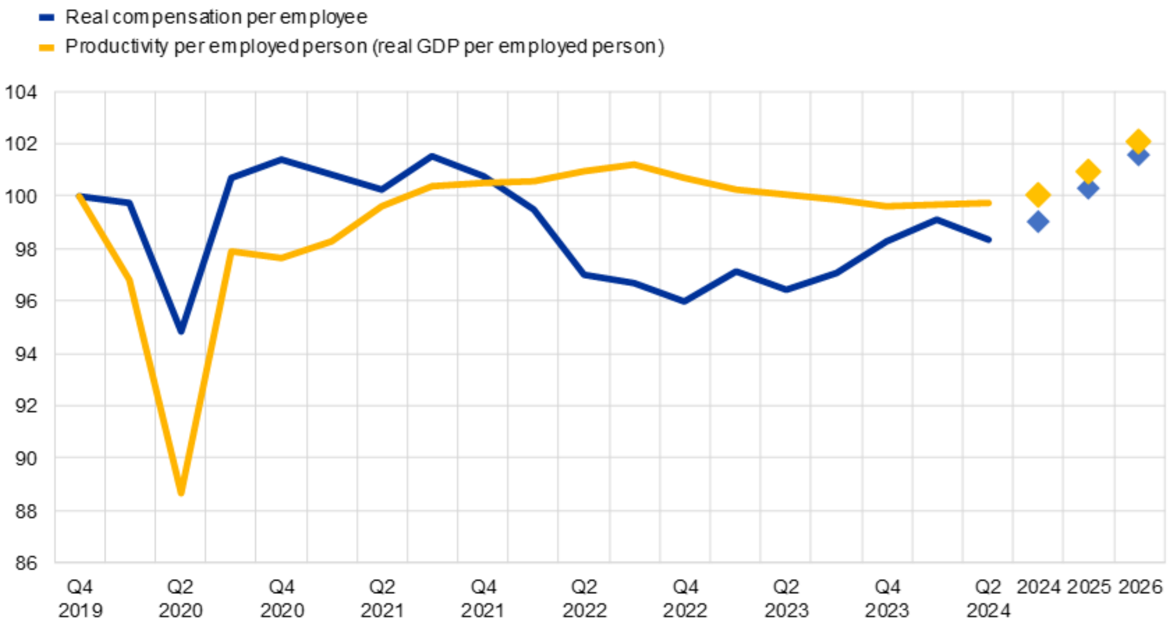


Sources: Panel a): Bloomberg, LSEG and ECB calculations; panel b): Bloomberg, Refinitiv and ECB calculations.
Notes: Panel a): monthly inflation paths from inflation fixing contracts, for HICP excluding tobacco. Calendar year forecasts from the (Broad) Macroeconomic Projection Exercise ((B)MPE) and the average inflation expectation components from three term structure models: 1) JSZ; 2) JSZ with bias-correction (see Burban et. Al (2021) for both); and 3) Grønlund, Jørgensen and Schupp (2024). The cut-off date for the (B)MPE is 16 August 2024. Panel b): risk-neutral probabilities implied by two-year zero-coupon inflation options, smoothed over five business days. The depicted probabilities are risk-neutral probabilities affected by risk premia and should therefore not be interpreted as "real world" (or physical) probabilities. The latest observations are for 8 November 2024.

Chart 5

Real wages and productivity in the euro area

(index: Q4 2019 = 100)

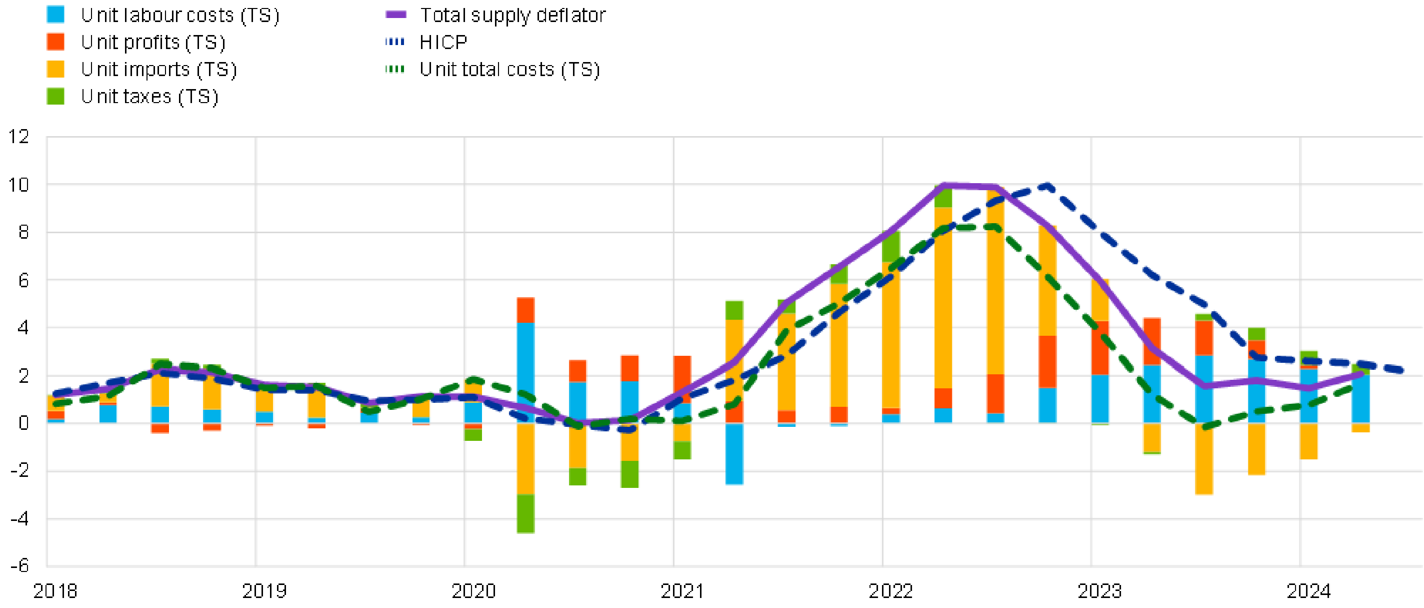


Sources: Eurostat, September 2024 macroeconomic projections and ECB staff calculations.
Notes: Real compensation per employee is constructed by dividing nominal compensation per employee by HICP. The macroeconomic projections for the euro area were finalised on 29 August 2024. The latest observations are for the second quarter of 2024.

Chart 6

Total supply deflator

(annual percentage changes and percentage point contributions)

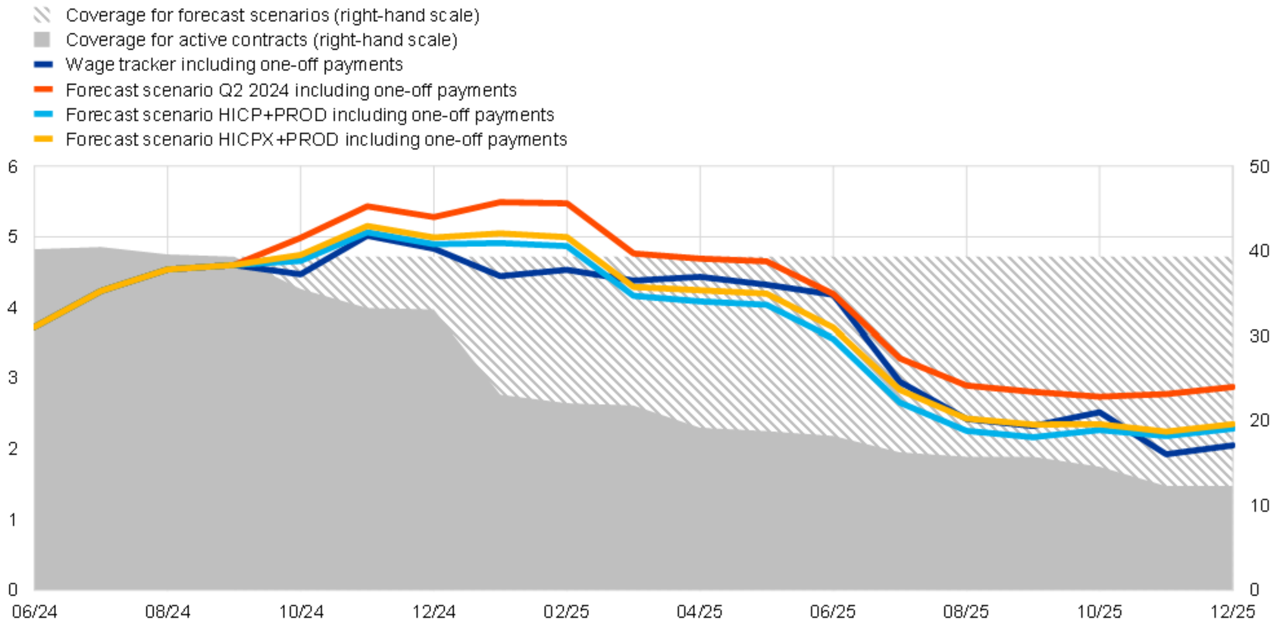


Sources: Eurostat and ECB staff calculations.
Notes: Total supply deflator based on GDP at market prices and imports. The latest observations are for the third quarter of 2024 for HICP and the second quarter of 2024 for the other data.

Chart 7

Forward-looking scenarios – euro area wage tracker

(left-hand scale: annual percentage changes; right-hand scale: percentages)



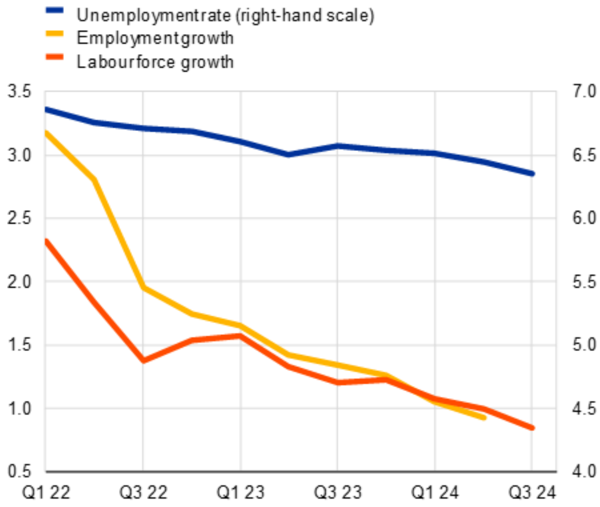
Sources: ECB staff calculations based on the ECB wage tracker database.
Notes: The forecast scenarios take sectors with contracts expiring after the current date and assume that new contracts are concluded with a structural wage increase per year based on a full pass-through of projected (September 2024 ECB staff macroeconomic projections for the euro area) HICP or HICPX inflation and productivity growth (scenarios HICP+PROD and HICPX+PROD), or at the same rate of wage increase observed for contracts signed in the second quarter of 2024 (forecast scenario Q2 2024). The forward-looking tracker only considers active agreements. All scenarios include one-off payments smoothed over 12 months.

Chart 8

Labour market dynamics

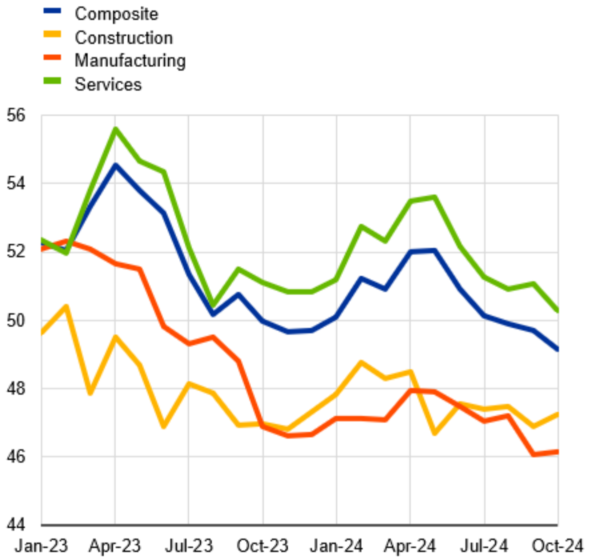
a) Employment growth, labour force growth and the unemployment rate

(left-hand scale: year-on-year percentage changes; right-hand scale: percentage points)



b) PMI employment

(diffusion indices)

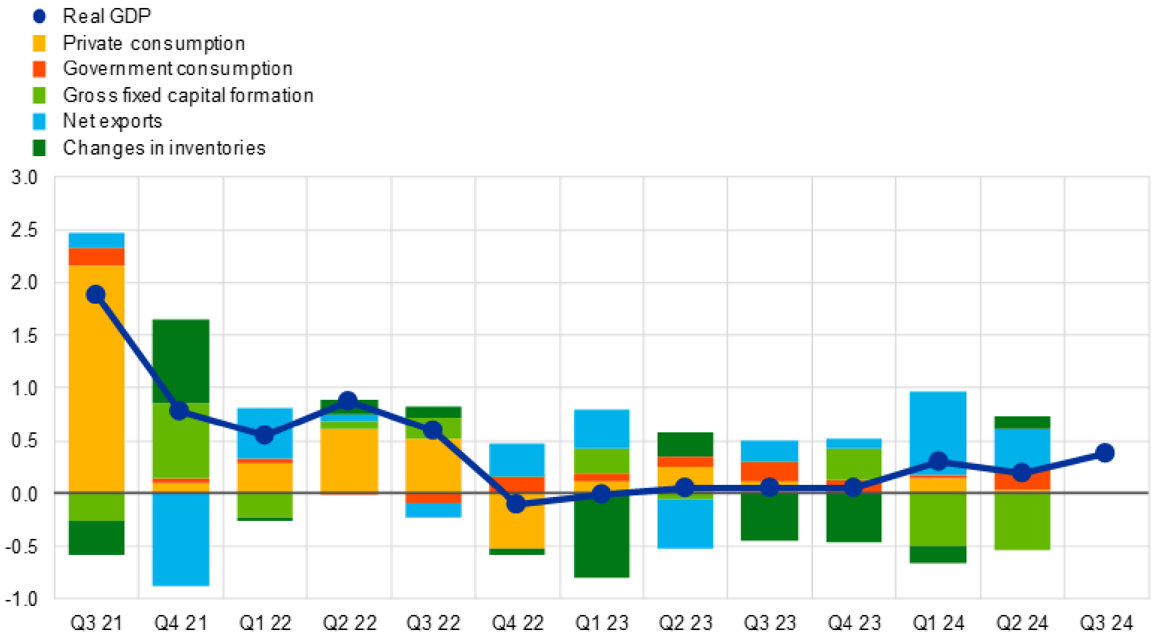


Sources: Panel a): Eurostat; panel b): S&P Global.
Notes: Panel a): employment growth is based on national accounts data. Labour force growth and the unemployment rate are based on Labour Force Survey data. Panel b): a PMI value of 50 indicates the neutral threshold between expansionary territory (>50) and contractionary territory (<50). The latest observations are for the third quarter of 2024 (panel a) and October 2024 (panel b).

Chart 9

Real GDP growth in the euro area and its components

(quarter-on-quarter percentage change and percentage point contributions)



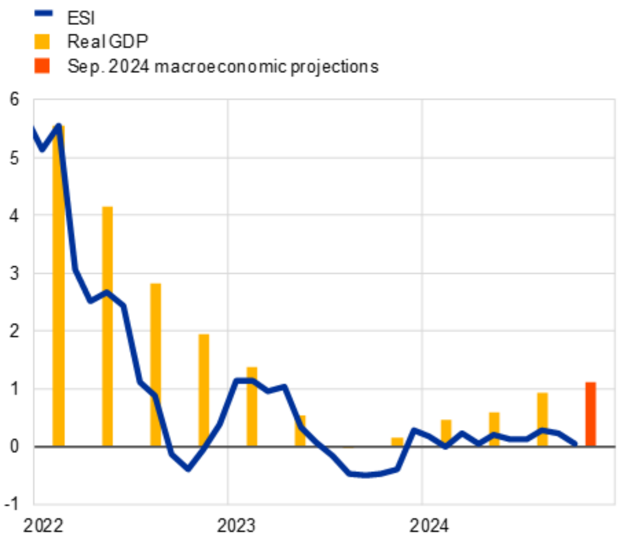
Sources: Eurostat and ECB staff calculations.
Notes: The latest observations for real GDP are for the third quarter of 2024 and for the second quarter of 2024 for the other data.

Chart 10

GDP and economic sentiment indicators

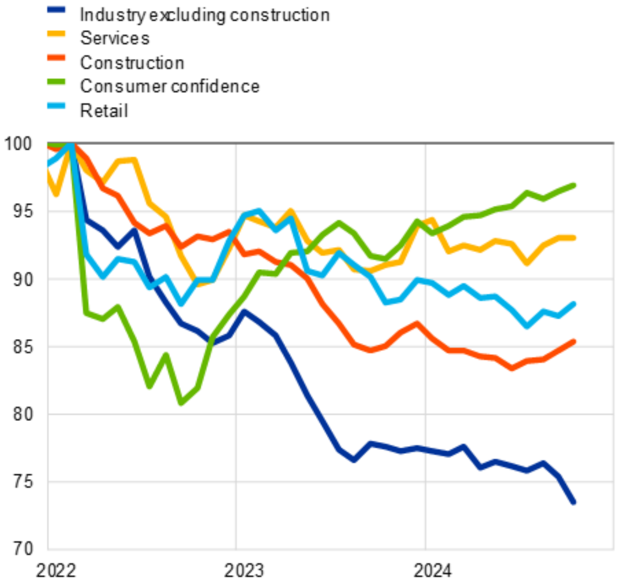
a) GDP and the economic sentiment indicator (ESI)

(year-on-year percentage change; standardised index)



b) Confidence across sectors

(percentage balances; index: February 2022 = 100)



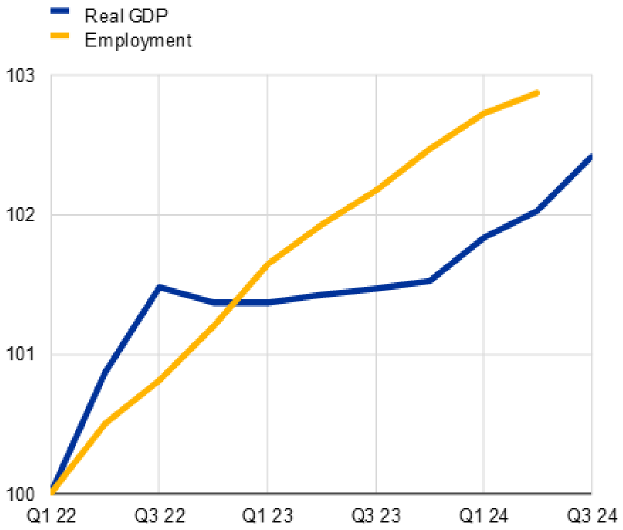
Sources: European Commission, Eurostat and ECB staff calculations.
Notes: The economic sentiment indicator (ESI) is a weighted average of the balances of replies to selected questions addressed to firms in five sectors covered by the EU Business and Consumer Surveys, as well as to consumers. It is normalised using the mean and standard deviation of GDP growth since 1998. The ESI balances are constructed as the difference between the percentages of respondents giving positive and negative replies. Data are seasonally adjusted.

Chart 11

Employment, real GDP and productivity growth in the euro area

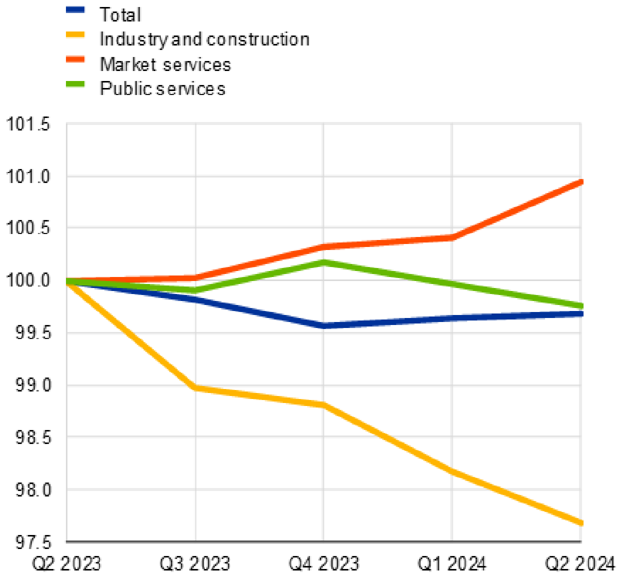
a) Real GDP and employment

(index: Q1 2022 = 100)



b) Productivity developments by sector

(index: Q1 2022 = 100)



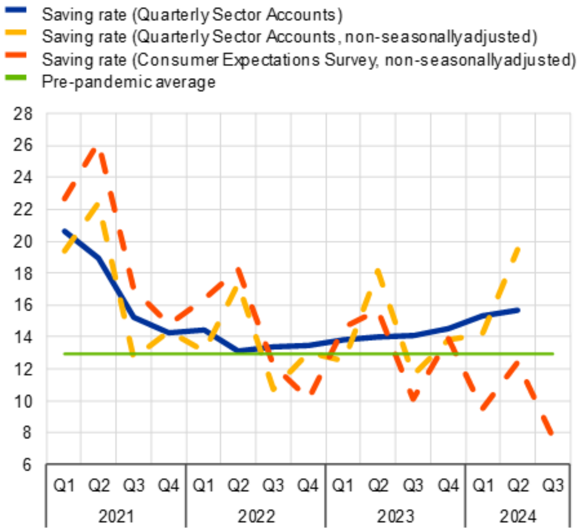
Sources: Eurostat and ECB staff calculations.

Chart 12

Household saving behaviour

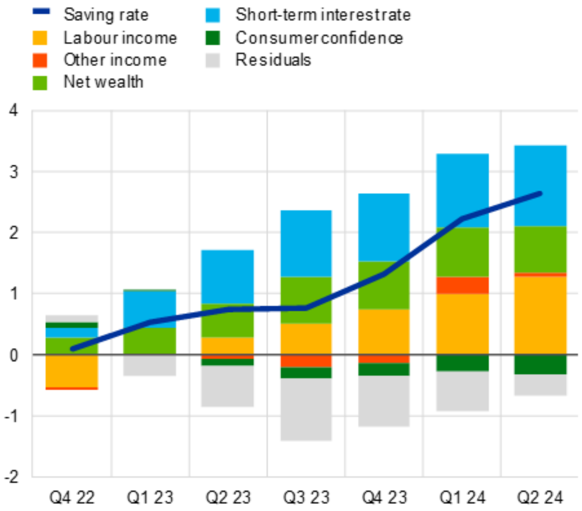
a) Household saving rate

(percentages)



b) Model-based decomposition of the change in the saving rate

(percentage points)



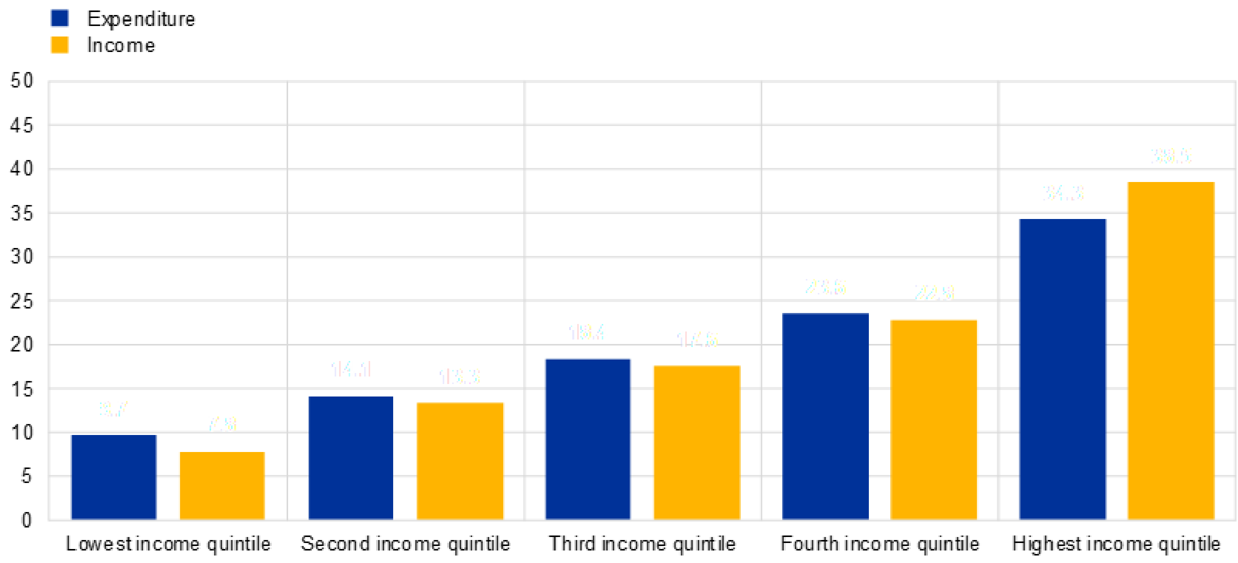
Sources: Panel a): Eurostat, ECB, Consumer Expectations Survey and ECB staff calculations; panel b): Eurostat, European Commission, Consumer Expectations Survey, ECB, Haver Analytics, September 2024 macroeconomic projections and ECB calculations.

Notes: Panel a): the latest observations are for the second quarter of 2024 for the Quarterly Sector Accounts and for the third quarter of 2024 for the Consumer Expectations Survey. panel b): the decomposition is based on an error-correction model with private consumption, real labour and other income, real net worth, real interest rate and household confidence. Real interest rates are computed as the difference between the nominal 3-month EURIBOR and households' inflation expectations one year ahead, as provided by the European Commission. The model is estimated over the period Q1 1999-Q4 2019 and the saving rate is derived, conditional on income.

Chart 13

Expenditure and income breakdown by income quintiles in the euro area

(percentages)

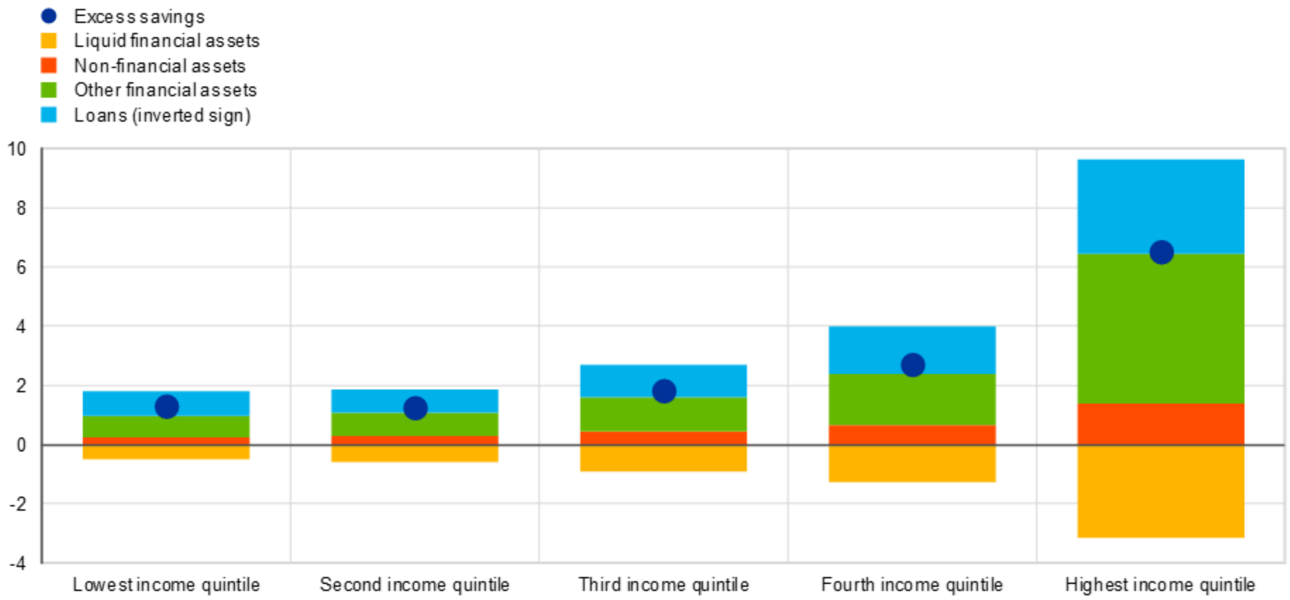


Sources: Eurostat, EU Statistics on Income and Living Conditions (EU-SILC), Household Budget Survey (HBS) and ECB staff calculations.
Notes: The income breakdown by income quintile is based on information from the EU-SILC, reported as a percentage of national equivalised income. The breakdown of expenditure is based on information from the HBS, reported as a percentage of national equivalised expenditure. To achieve this, the figures for each quintile are computed by weighting the country-specific (quintile-specific) mean expenditure with country GDP weights. The aggregated mean expenditure is calculated by summing the weighted mean consumption expenditure across quintiles. For Italy and Ireland, due to lack of recent data, the calculations use data from the 2010 and 2015 waves respectively. The latest observations are for 2021 for the income breakdown and 2020 for the expenditure breakdown.

Chart 14

Euro area household excess savings by use in the second quarter of 2024

(percentages of annual household disposable income)



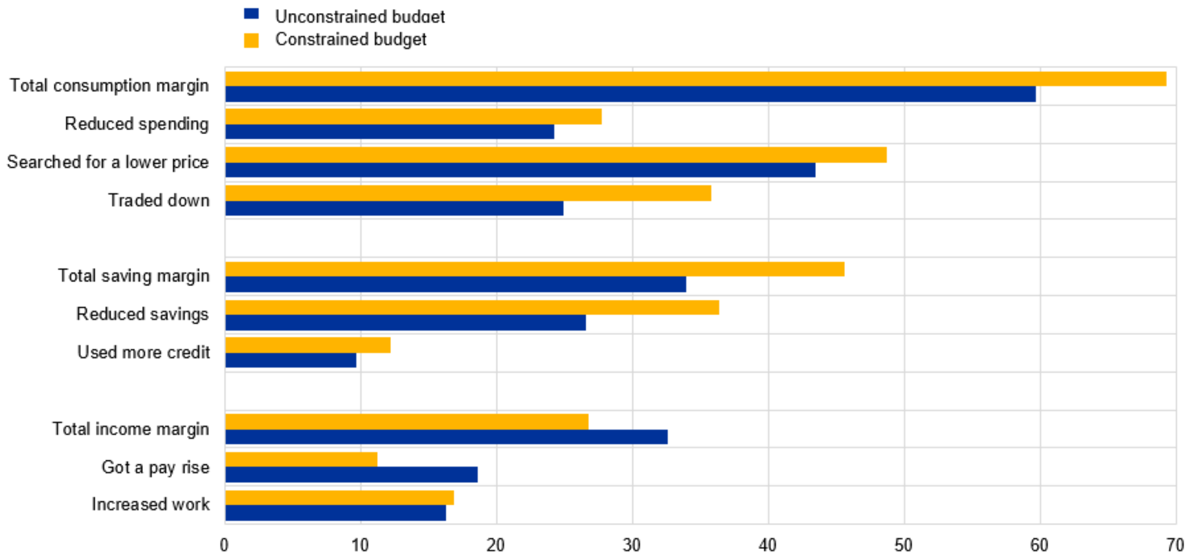
Sources: Eurostat, ECB and ECB staff calculations.
Notes: Each entry represents the cumulated value exceeding its trend estimated between 2015 and 2019. Liquid financial assets refer to cash and deposits. Non-financial assets refer to gross capital formation, which mainly comprises housing investment. Other financial assets mainly refer to equities and bonds and are measured as the residual between savings and the sum of liquid financial assets, non-financial assets and loans. Loans are shown with an inverted sign, since below-trend loan flows imply the use of excess savings to borrow less or repay loans.

Chart 15

Consumption and saving patterns

Responses in July 2024 (for the previous 12 months)

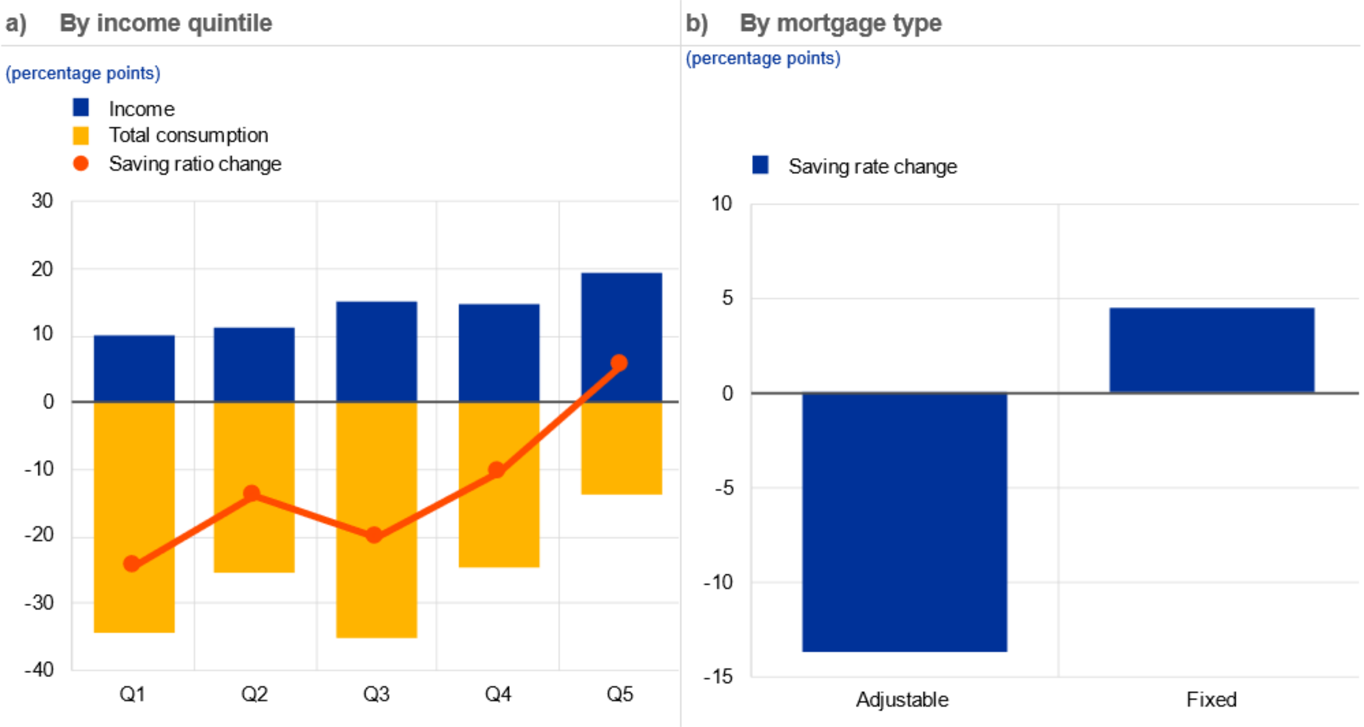
(percentages)



Sources: Consumer Expectations Survey (CES) and ECB staff calculations.
Notes: The question in the CES reads as follows: "Please think about your expectations for changes in prices in general over the past 12 months. Which of the following actions, if any, have you taken, over the past 12 months because of these price changes? Please select all options that apply. 1. Brought forward major purchases of durable goods. 2. Reduced usual spending and put aside more money. 3. Shopped around more actively to find the best price for the same exact product or service. 4. Substituted goods and services with cheaper alternatives. 5. Saved less than usual or liquidated (some or all) savings to finance spending. 6 Used more credit than usual to finance spending (e.g. increased balance on credit cards or other consumer loans). 7. Got a pay rise from your current employer or found a higher paying job. 8. Increased your income in other ways (e.g. took on a second job, worked more hours with current employer). 9. None of the above."

Chart 16

Decomposition of the saving rate in the Consumer Expectations Survey

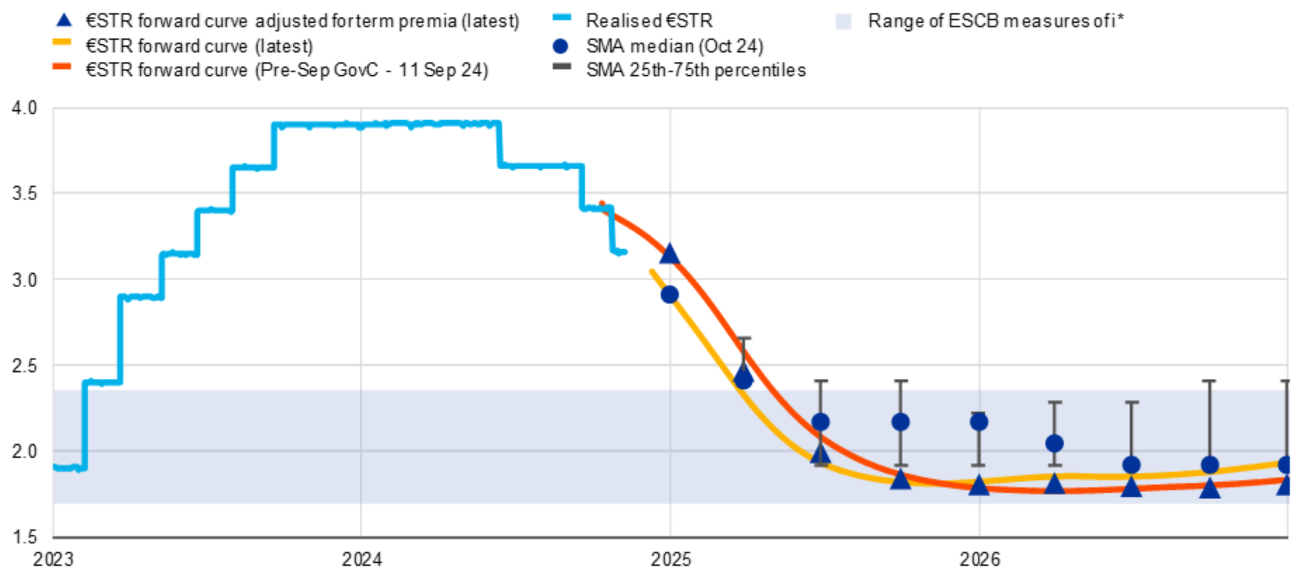


Sources: CES and ECB calculations.
Notes: The decomposition refers to the CES saving rate (defined as the ratio of savings to household net income) by income quintile and mortgage type in the third quarter of 2024 vs the third quarter of 2022. The latest observations are for the third quarter of 2024.

Chart 17

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

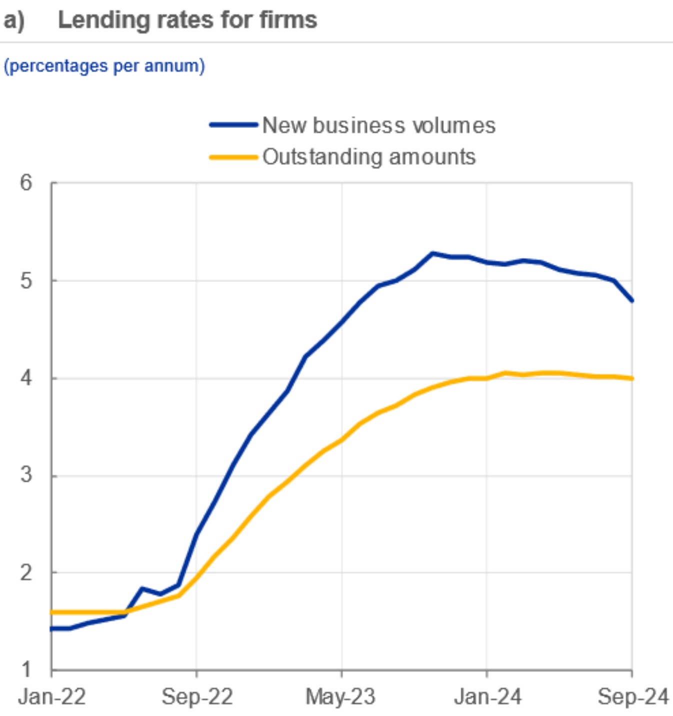
(percentages per annum)

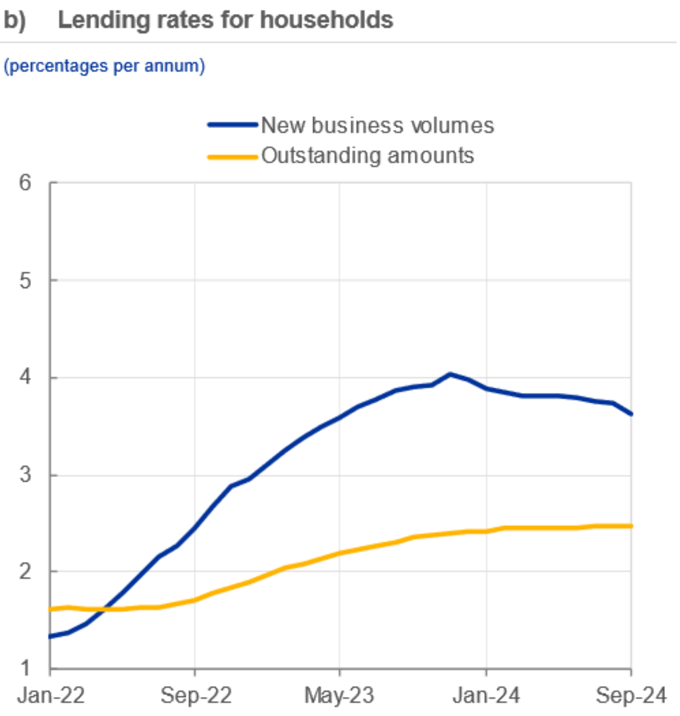


Sources: Bloomberg, Survey of Monetary Analysts (SMA) and ECB calculations.
Notes: The deposit facility rate (DFR) expectations from the SMA are adjusted for the current €STR vs. DFR spread. Model estimates are based on two affine term structure models, with and without survey information on rate expectations (both variations of Joslin, Singleton and Zhu (2011)), and a lower bound term structure model following Geiger and Schupp (2018) incorporating survey information on rate expectations. The range for the (nominal) neutral rate i* is based on ESCB estimates. The latest observations are for 8 November 2024.

Chart 18

Lending rates for firms and households





Source: ECB (MIR).
Notes: Interest rates on new business are equivalent to the indicator for the total cost of borrowing for firms and house purchases respectively, which is calculated by aggregating short-term and long-term rates using a 24-month moving average of new business volumes. The latest observations are for September 2024.

Chart 19

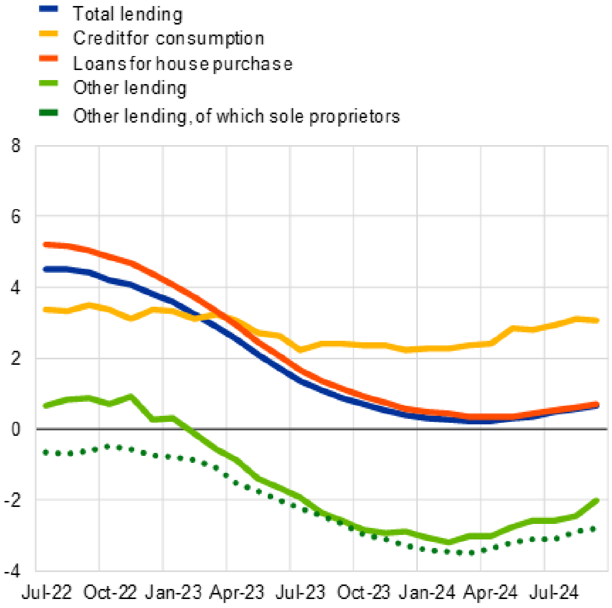
Bank loans to firms and households

a) Bank loans to firms

(3-month annualised growth rates, percentage changes)

b) Bank loans to households

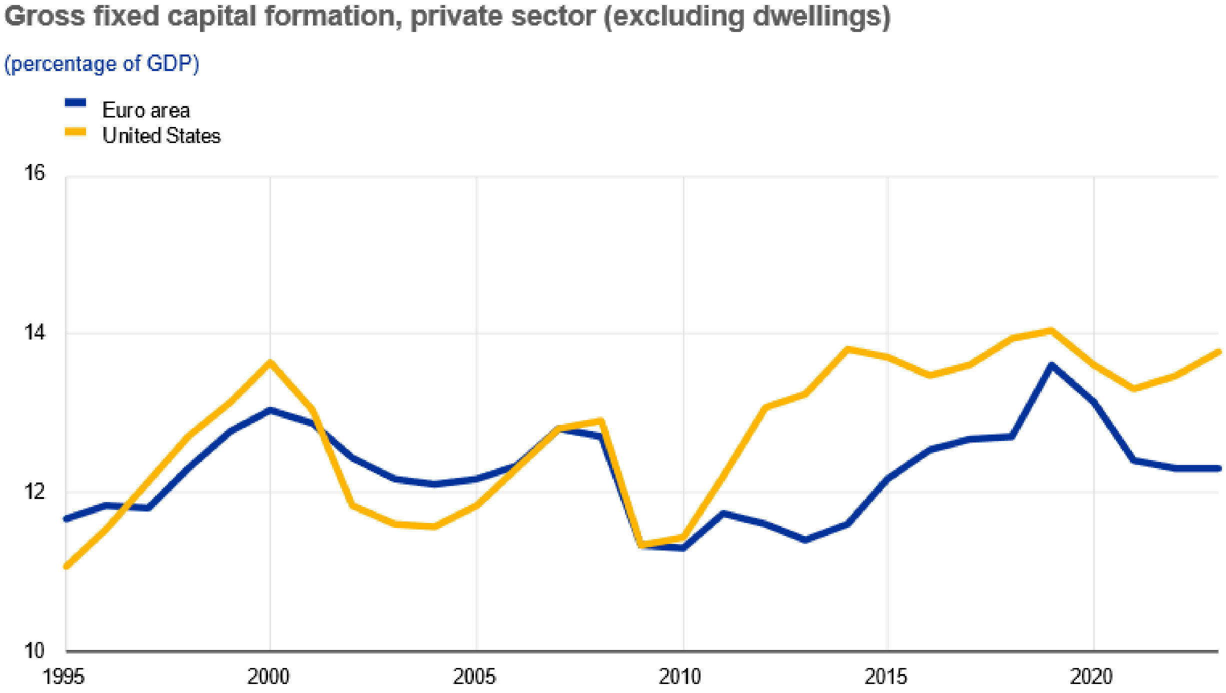
(annual percentage changes)



Source: ECB.
Notes: MFI loans are adjusted for sales, securitisation and cash pooling activities. Bank loans are adjusted for sales and securitisation. The latest observations are for September 2024.

Chart 20

Private investment in the United States and the euro area



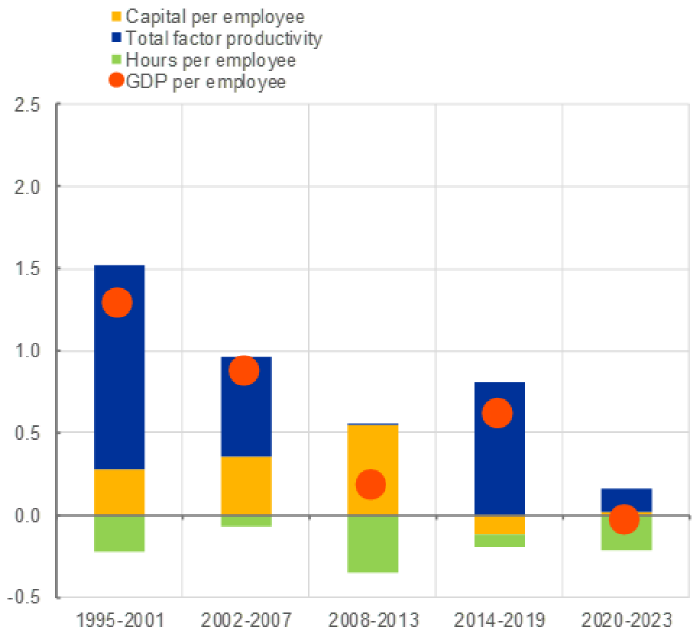
Source: Ameco database and ECB staff calculations.

Chart 21

Decomposition of annual productivity growth in the euro area and the United States

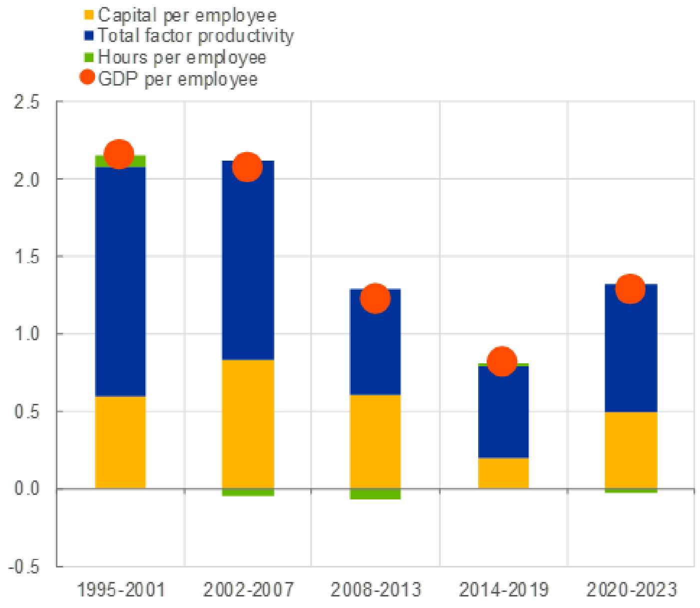
a) Euro area

(percentages)



b) United States

(percentages)



Sources: European Commission's AMECO database and ECB staff calculations.