



EUROPEAN CENTRAL BANK

EUROSYSTEM

# What has caused the post-pandemic inflation in the euro area?

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*National Association for Business  
Economics (NABE) and Deutsche  
Bundesbank International Economic  
Symposium*

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**Director General, DG Economics**

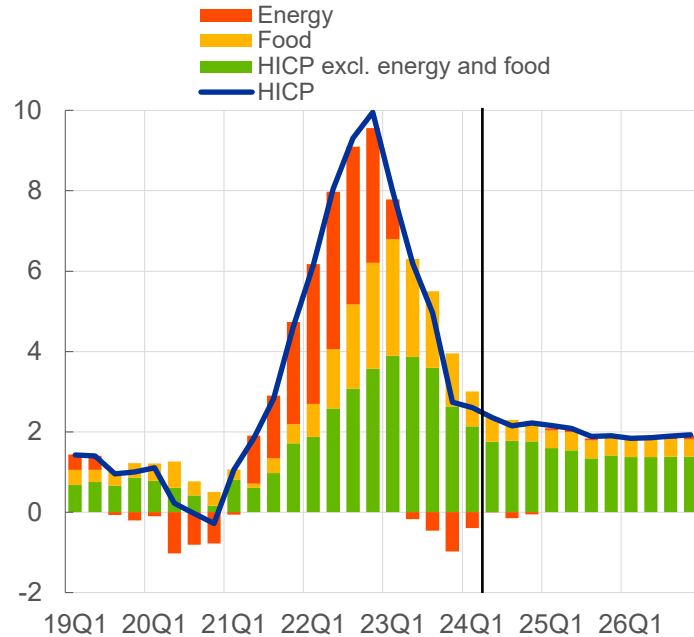
*The views expressed in this presentation are not necessarily representing those of the Executive Board or the Governing Council.*



# The post-pandemic inflation surge and the (bumpy) way forward

## Medium-term HICP projections

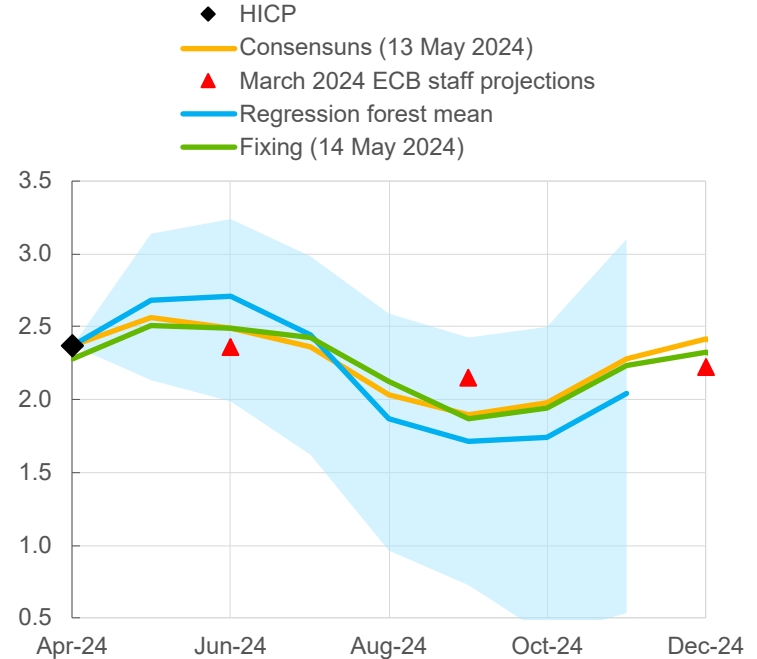
(annual percentage changes and percentage point contributions)



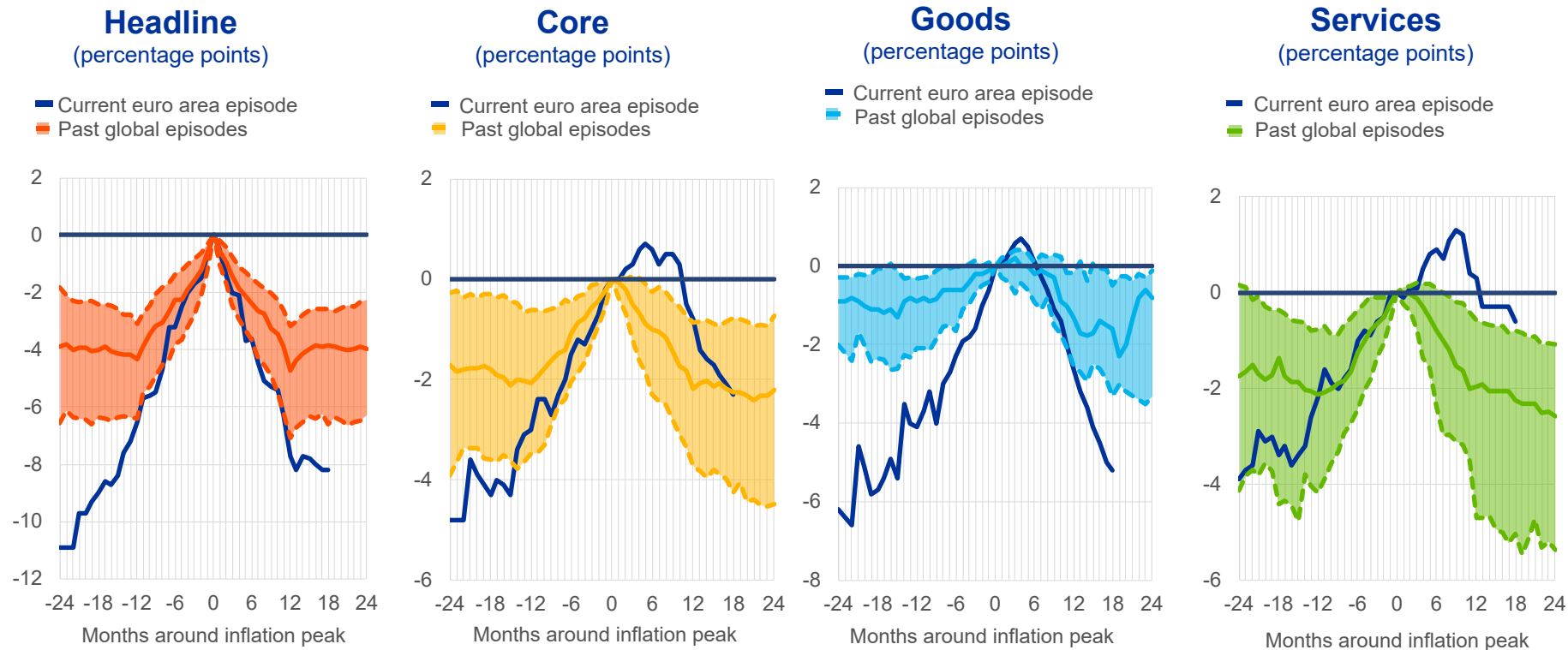
Sources: Eurostat and March 2024 ECB staff macroeconomic projections.  
Latest observation: Q1 2024.

## Short-term HICP projections

(annual percentage changes)



Sources: Eurostat, March 2024 ECB staff macroeconomic projections, Consensus Economics, Bloomberg and ECB calculations. Notes: The cut-off date is 30 April 2024 for the regression forest and 7 May 2024 for fixings. Consensus Economics data were collected on 8 April 2024. The quantile regression forest estimates are from Lenza, M., Moutachaker, I. and Paredes, J. (2023), "Density forecasts of inflation: a quantile regression forest approach", Working Paper Series, No 2830, ECB. The HICP fixings are observed market prices. Latest observation: April 2024 for HICP inflation.

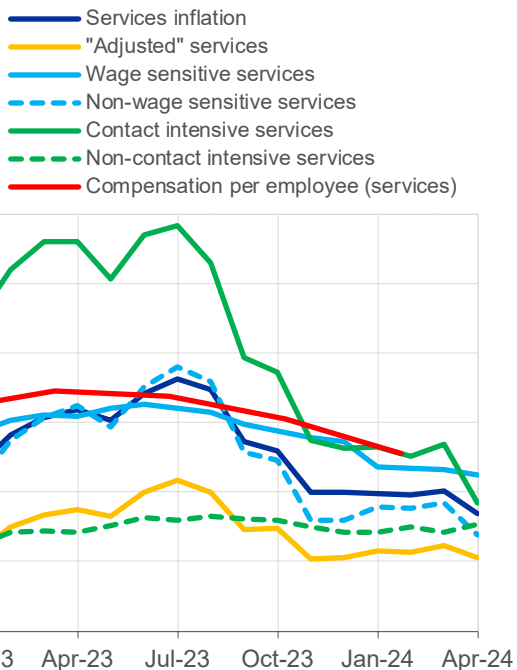


Sources: BIS, Eurostat and ECB calculations.

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: April 2024.

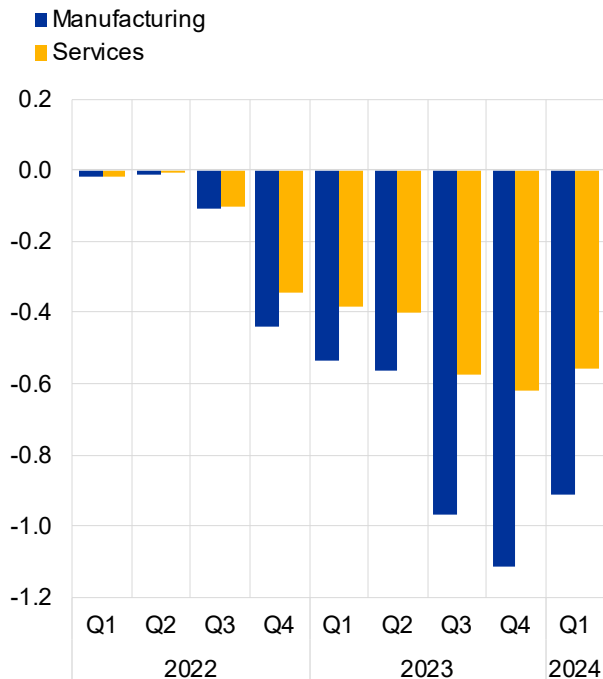
## Drivers of services inflation

(annual percentage changes)



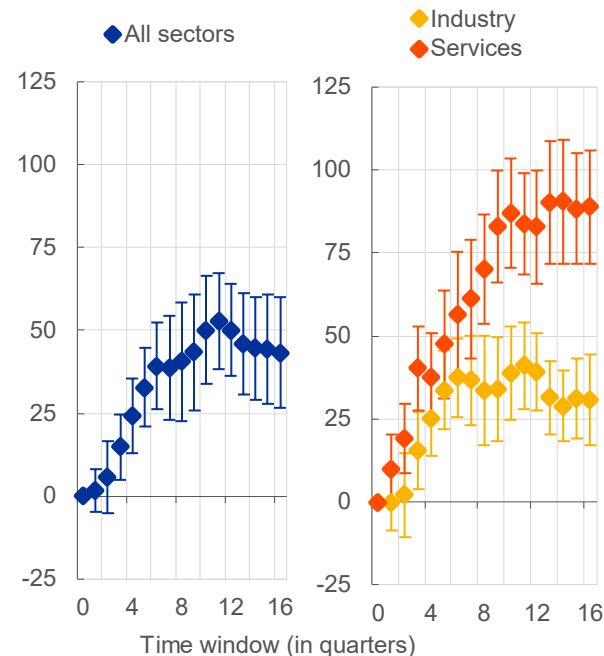
## Impact of monetary policy shocks on manufacturing and services

(percentage changes since the first quarter of 2022)



## Sectoral wage-price pass-through

(in percentage for different time windows)



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 services and April 2024.

Sources: Eurostat, and ECB calculations.

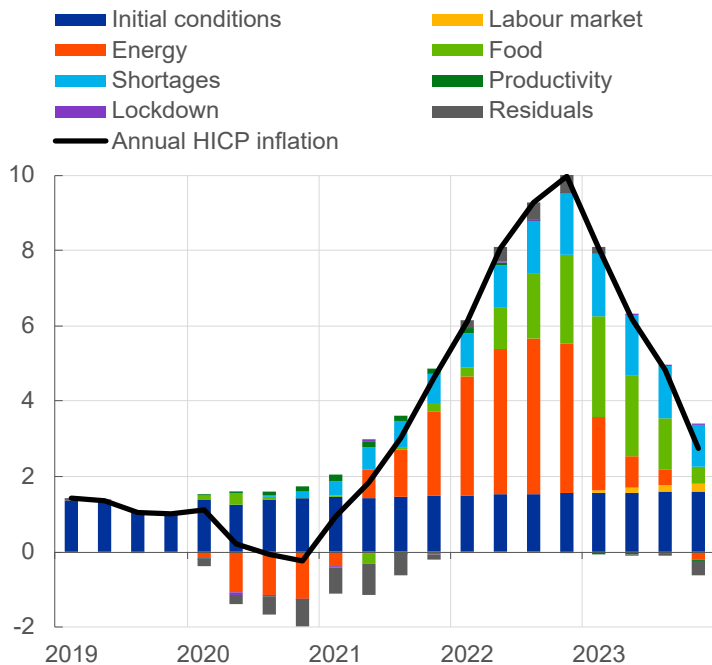
Notes: The chart shows BSVAR-based effects of monetary policy shocks on manufacturing and services activity from the first quarter of 2022 to the first quarter of 2024. The effects for the first quarter of 2024 are based on the projected effects of the estimated monetary policy shocks up to the fourth quarter of 2023. For details on the identification of monetary policy shocks, see the notes to the Chart on the left.

Sources: Ampudia, Lombardi, and Renault (forthcoming).

Notes: Data spans 41 sectors. Industry covers mining, manufacturing, and utilities. Services include retail and wholesale trade, transportation, accommodation and food services and information and communication. The diamonds represent the cumulated response of producer prices following a 1% cumulated increase in hourly wage growth for different time windows (in quarters, on x-axis). The lines show 90% confidence intervals.

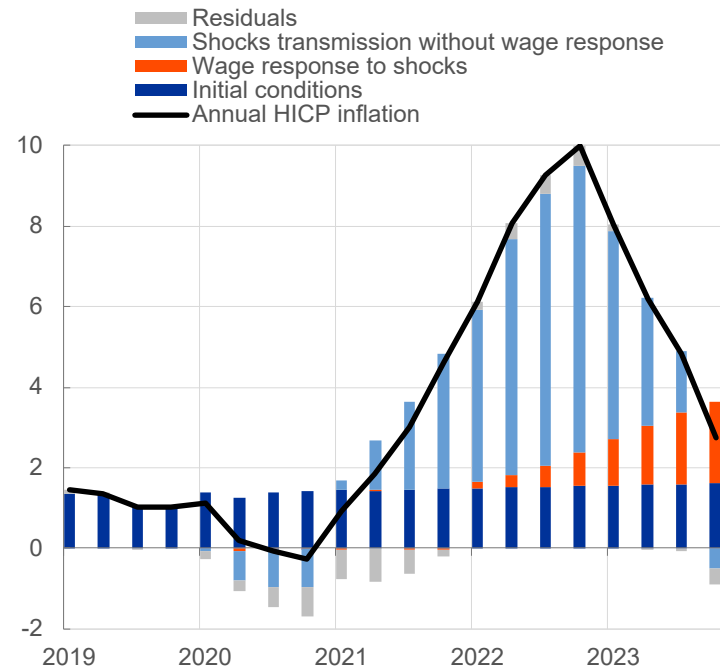
## Decomposition of HICP inflation

(annual percentage changes and percentage point contributions)



## Direct and second round effects of shocks

(annual percentage changes and percentage point contributions)

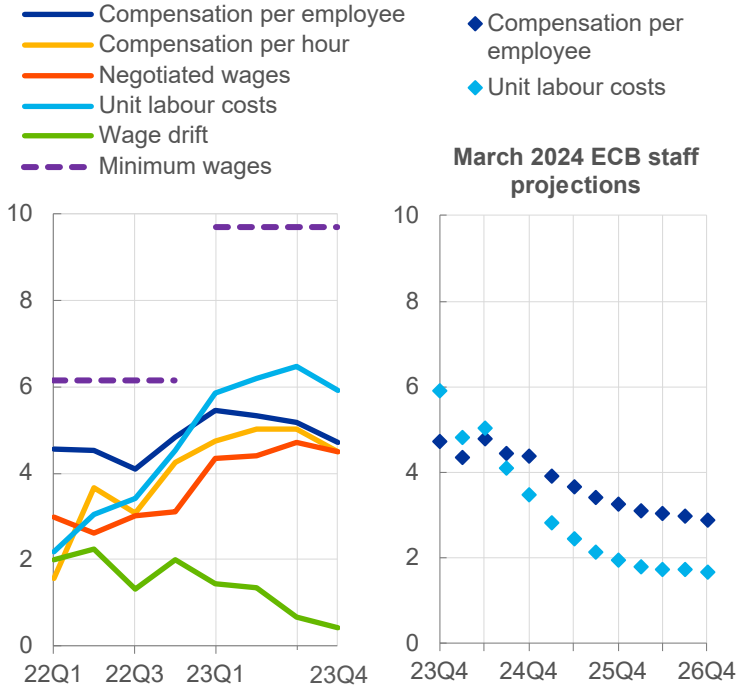


Source: ECB calculations based on Arce, A., Ciccarelli, M., Kornprobst, A. and Montes-Galdón, C. (2024), "What caused the euro area post-pandemic inflation?", Occasional Paper Series, No 343, ECB.

Notes: The figures show a decomposition of the sources of annual HICP inflation between the first quarter of 2019 and the fourth quarter of 2023 based on the solution of the full model and the implied impulse response functions. LHS: The continuous line shows actual data, and the total net heights of the bars are the model's forecast of inflation in each period, given initial conditions up to the fourth quarter of 2019. The contributions of the residuals are computed as the difference between actual and simulated data. The dark blue portion of each bar shows the contribution of pre-2020 data. The coloured segments of each bar show the general equilibrium, fully dynamic contribution of each exogenous variable to inflation in that period, as implied by the estimated model. RHS: The contributions stemming from the "shocks transmission via wages" are computed by simulating a counterfactual path for wages starting in 2020Q1 in which no shock hit the economy.

## Labour cost indicators and projections

(annual percentage changes and percentage point contributions)

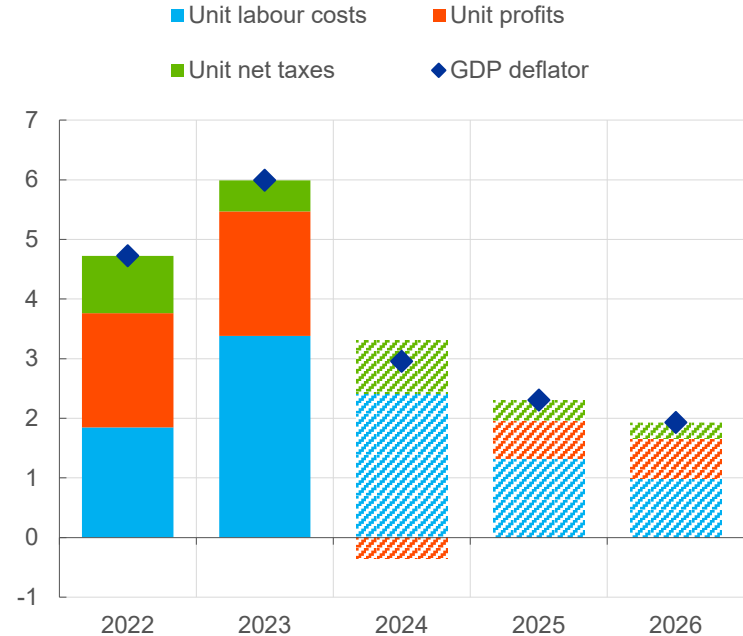


Sources: Eurostat, ECB, ECB calculations and March 2024 ECB projections.

Notes: Minimum wage growth is for the euro area excluding Italy, Austria and Finland. Latest observations: Q4 2023.

## GDP deflator

(annual percentage changes and percentage point contributions)

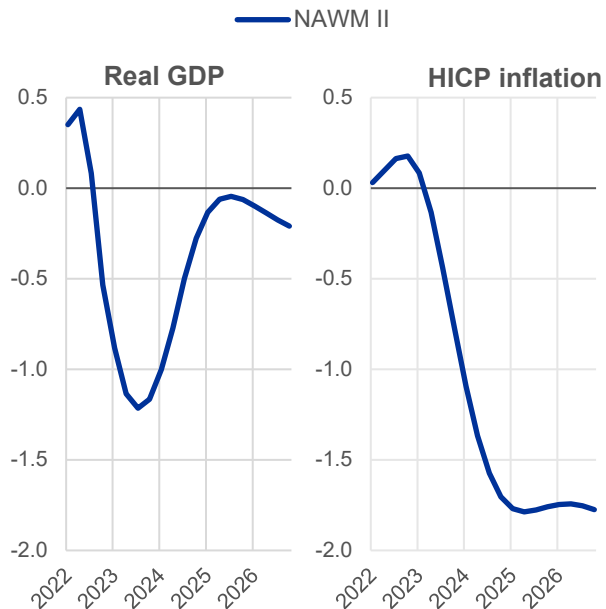


Sources: Eurostat, ECB calculations and March 2024 ECB staff projections

Notes: Unit taxes reflect taxes minus subsidies. When the contribution of indirect taxes 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: 2023.

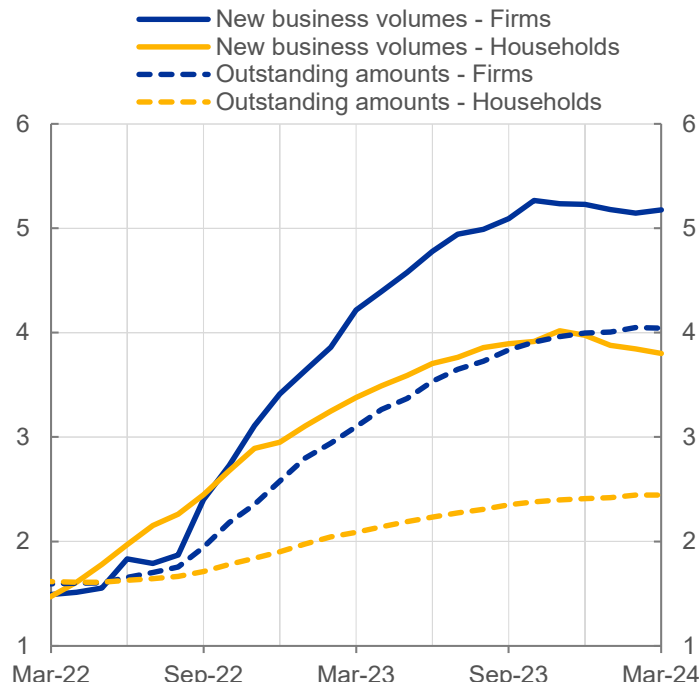
## Impact of monetary policy based on macro models

(LHS: q-o-q changes; RHS: y-o-y changes)



Sources: ECB calculations using the NAWM II, ECB Occasional Paper No. 344, ECB macroeconomic models for forecasting and policy analysis

## Lending rates for new/outstanding amounts (percentages per annum)



Source: ECB (MIR).

Notes: Interest rates on new business volumes refer to the indicator for the total cost of borrowing for firms and households for house purchase, which is calculated by aggregating short-term and long-term rates on new business using a 24-month moving average of new business volumes. The latest observations are for March 2024.

