



EUROPEAN CENTRAL BANK

EUROSYSTEM

Reassessing monetary policy tools in a volatile macroeconomic environment

Isabel Schnabel

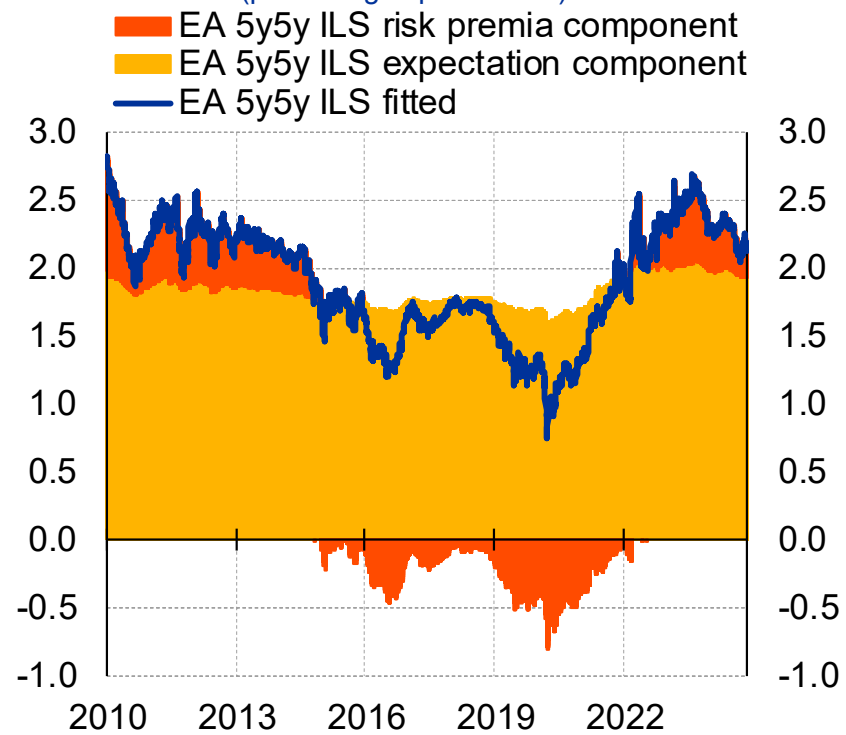
*Member of the Executive Board
of the European Central Bank*



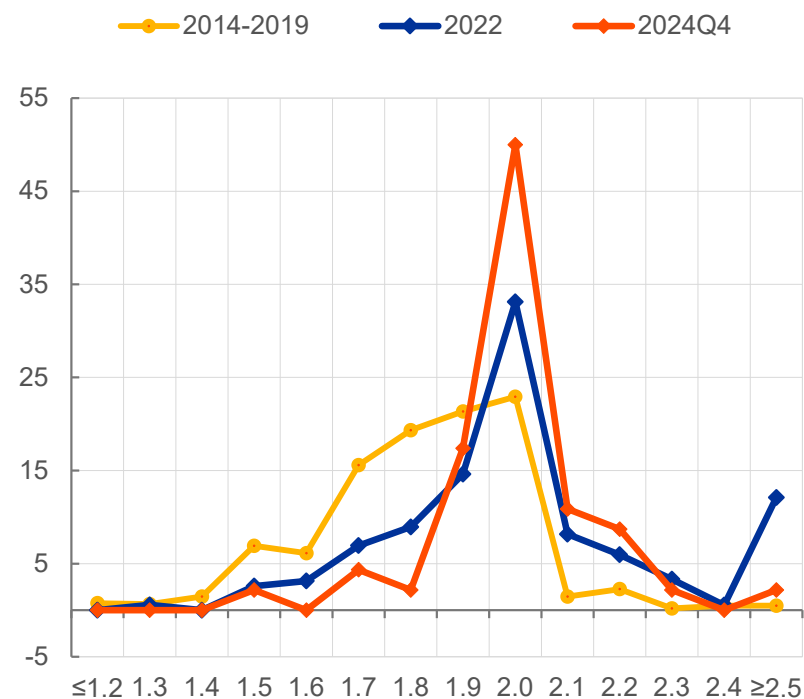
25th Jacques Polak Annual Research Conference
Washington, D.C., 14 November 2024

Decomposition of inflation-linked swap rates in the euro area

(percentages per annum)



Survey of Professional Forecasters: Cross-sectional distribution of longer-term inflation point forecasts (percent)

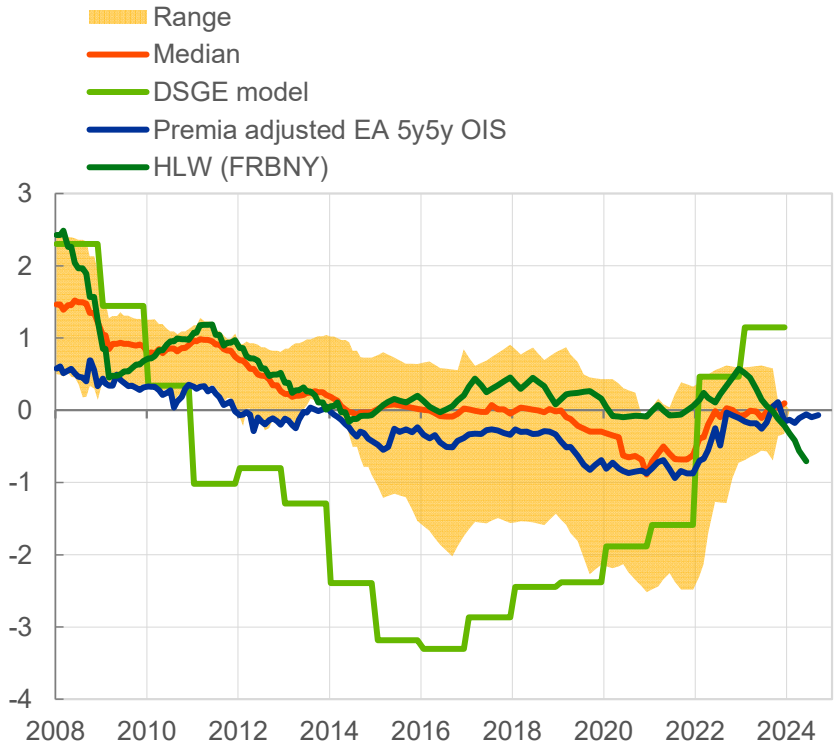


Sources: LSEG, Bloomberg and ECB calculations.
 Notes: Premia-adjusted forward ILS rates are an average of estimates from two affine term structure models as in Joslin, Singleton and Zhu (2011) applied to ILS rates non-adjusted for the indexation lag; see Burban et al. (2022).
 Latest observation: 11 November 2024.

Sources: SPF and ECB calculations.
 Notes: Vertical axis shows percent of respondents; horizontal axis shows the HICP inflation rate. Longer-term expectations refer to 4-5 years ahead.
 Latest observation: Q4 2024 SPF.

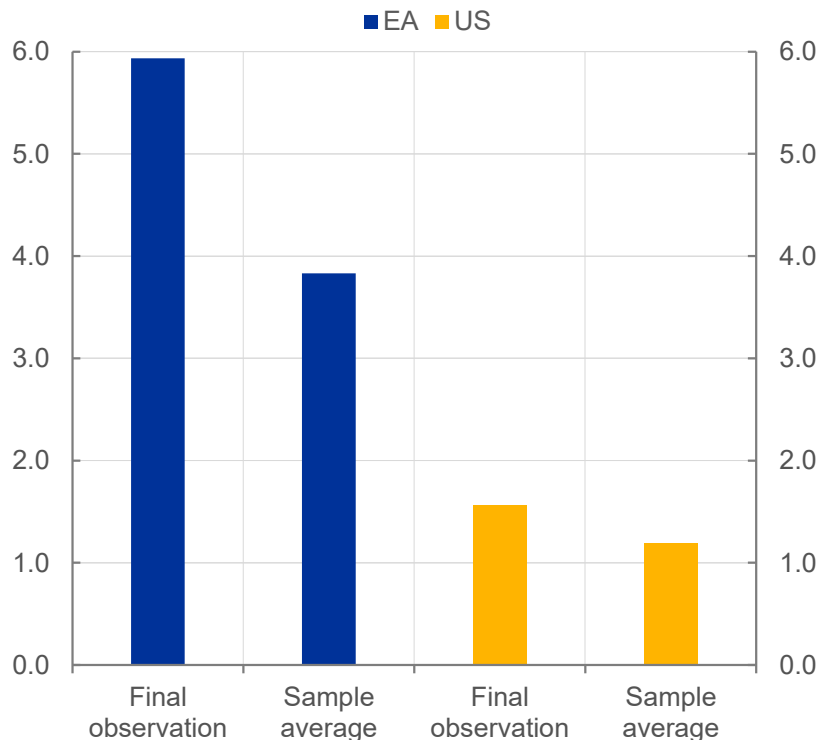
Natural rate estimates are blurred by large model and parameter uncertainty

Model-based real r^* estimates for the euro area (percent)



Source: Bloomberg, ECB, LSEG, Holston, Laubach and Williams (2017) updated via Federal Reserve Bank of New York.
 Notes: The range, median and DSGE model are based on Eurosystem estimates as detailed in Brand, Lisack, Mazelis: "Estimates of the natural interest rate for the euro area: an update" - Box 7 of the ECB Economic Bulletin, Issue 1/2024, with the median and range composed of survey-based, semi-structural and term-structure model-based estimates. The blue line is the 5y5y OIS premia-adjusted real rate, calculated as the difference between the premia-adjusted OIS rate (based on two affine term structure models and a lower bound term structure model) and the premia-adjusted ILS rate (based on two affine term structure models). The dark green line is the updated version of the semi-structural estimate from Holston, Laubach and Williams (2017).

Standard errors of r^* estimates in Holston, Laubach and Williams (percentage points)



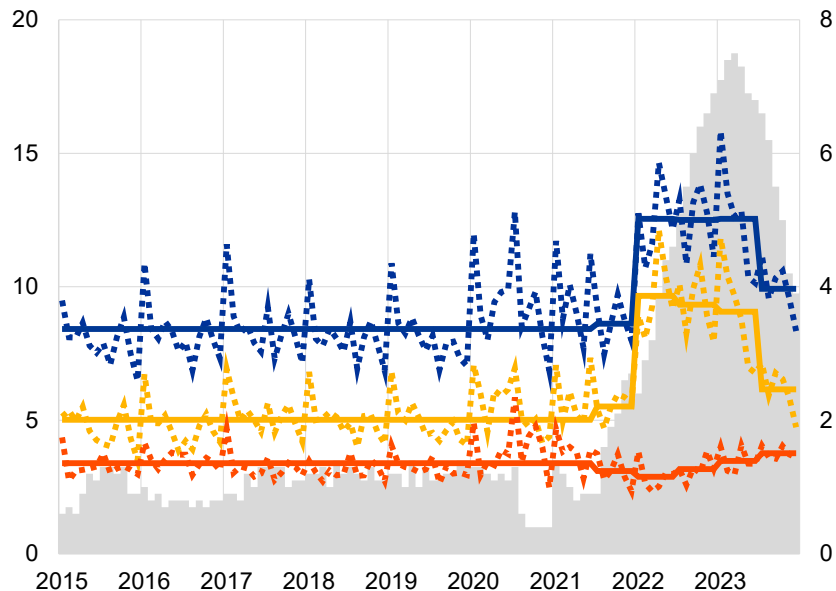
Source: Holston, Laubach and Williams (2017) updated via Federal Reserve Bank of New York.
 Notes: Standard errors for the final observation (Q2-2024) are provided in addition to sample average standard errors. The 68% confidence interval upper bound corresponds to +1 standard error and the lower bound to -1 standard error.
 Latest observation: 2024 Q2.

Steeper Phillips curve amid higher frequency of price changes and tighter labour markets

Frequency of consumer price changes

(lhs: percentages; rhs: annual percentage change)

- Euro area HICP excl. energy and unprocessed food (right-hand scale)
- ▬ Frequency of price changes
- ▬ Frequency of price increases
- ▬ Frequency of price decreases



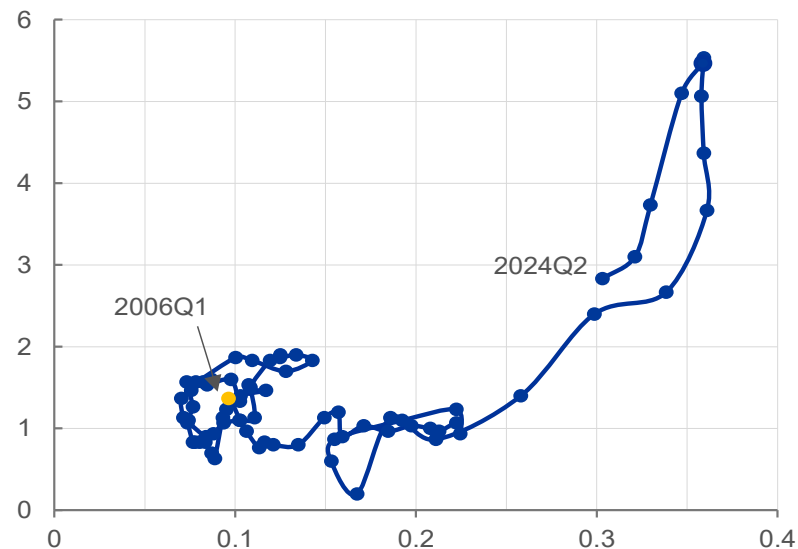
Source: Consumer price micro-datasets from the national statistics institutes of Germany, Estonia, Spain, France, Italy, Latvia and Lithuania.

Notes: The chart shows the weighted average frequencies of price changes (excluding sales). VAT changes in Germany (2020-21) and Spain (2020-23) have been excluded. The solid lines plot the average over the period 2015-21 and half-year averages over the period 2021-23.

Latest observation: December 2023.

Phillips curve

(x-axis: vacancy to unemployment ratio;
y-axis: HICPX annual rate of change)

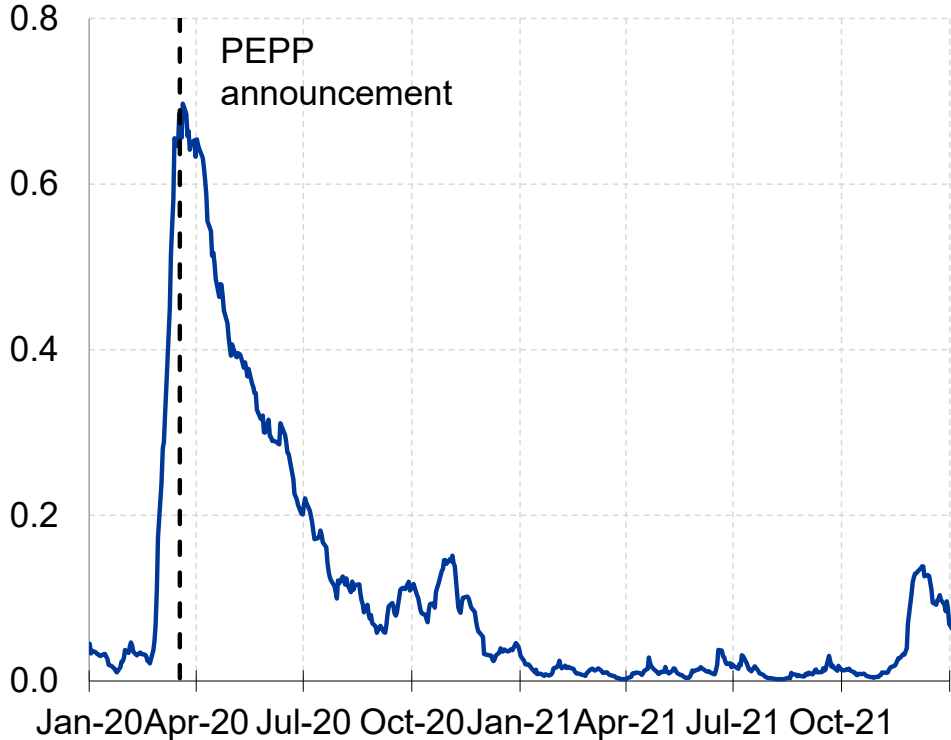


Sources: Haver Analytics, Eurostat and ECB Staff calculations.
Latest observation: 2024 Q2.

Asset purchases can stabilise financial markets through short-lived interventions

Composite Indicator of Systemic Stress (CISS)

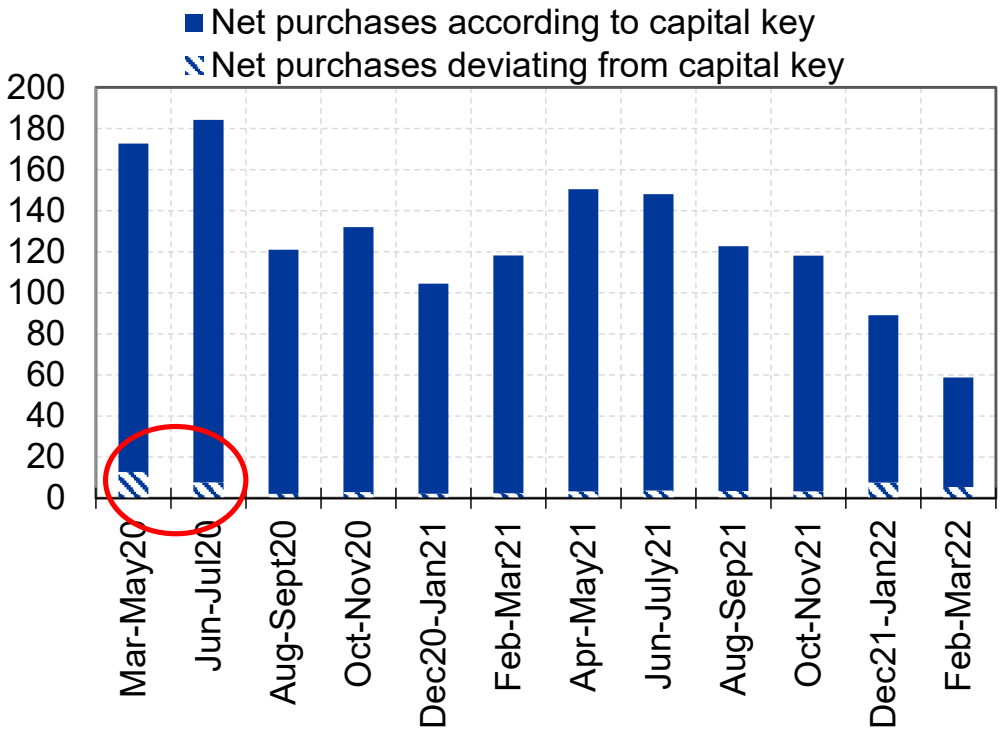
(0 = no stress, 1 = high stress)



Source: ECB.
Observation period: January 2020 – December 2021.

PEPP public sector purchases and capital key deviations

(EUR bn)



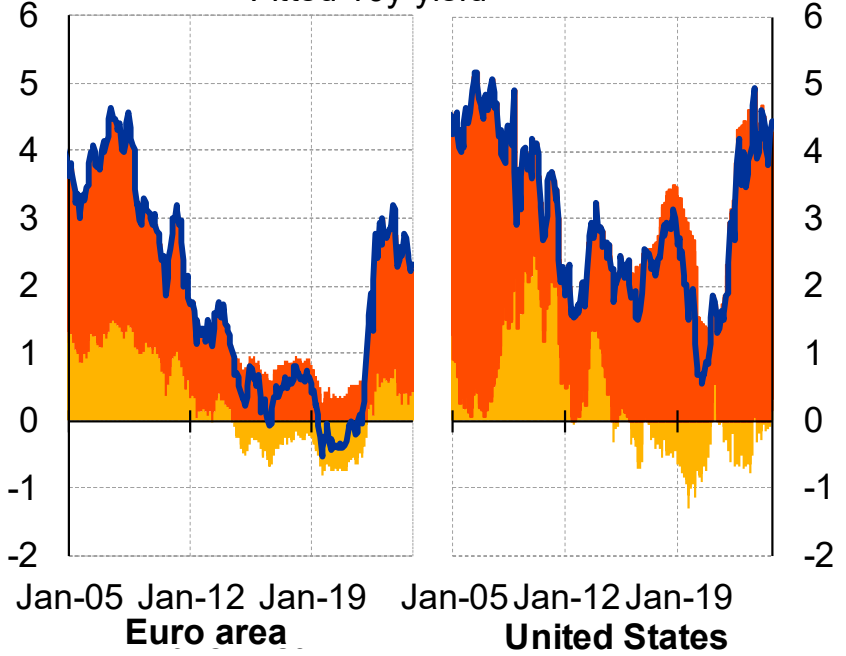
Sources: ECB website and ECB calculations.
Notes: Bimonthly PEPP public sector net purchases excluding supranational bonds. The solid blue part of bars represents the part of net purchases that were conducted according to capital key. The dashed part at the bottom of bars represents the part of net purchases that deviated from capital key.

Compressed term and risk premia imply more muted impact on financial conditions

Decomposition of 10-year spot rates into expected rates and term premia

(percentages per annum)

- Expectation component
- Term premia component
- Fitted 10y yield

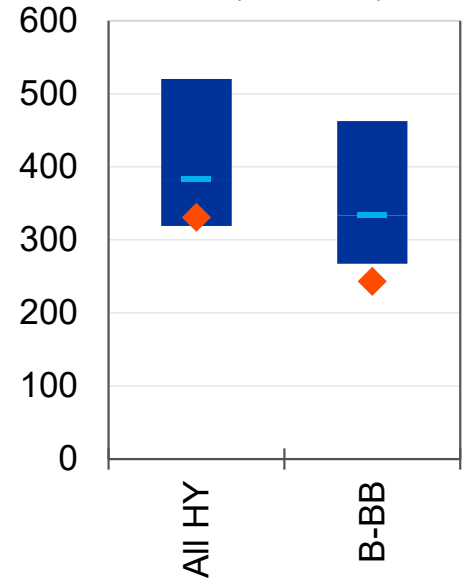


Sources: Bloomberg and ECB calculations.
 Notes: Model estimates for euro area are based on two affine term structure models, one with and one without survey information on interest rate expectations (both variations of Joslin, Singleton and Zhu (2011)), and a lower bound term structure model following Geiger and Schupp (2018) incorporating survey information on interest rates expectations. Model estimates for the United States are based on the Adrian Crump and Moench (2013).
 Latest observation: November 2024 (monthly data).

Corporate bond spreads

(basis points)

- 25-75 percentile
- Median
- ◆ Latest (07 Nov 24)

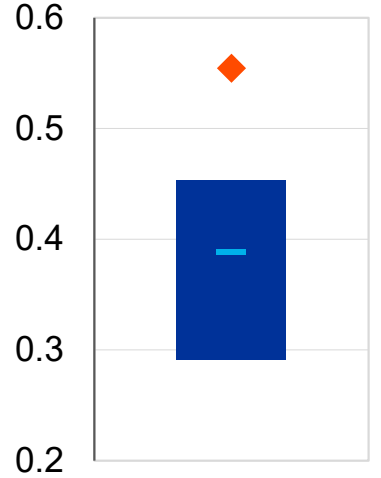


Sources: ICE, Moody's, Compustat and ECB calculations.
 Notes: Distribution of market capitalisation-weighted option-adjusted swap spreads over the period 31 January 2000 to latest within selected rating categories of the bonds in the ICE BofA Global Corporate & High Yield Index.
 Latest observation: November 2024 (monthly data).

Changes in financial conditions scaled by rate hikes

(advanced economies, index points)

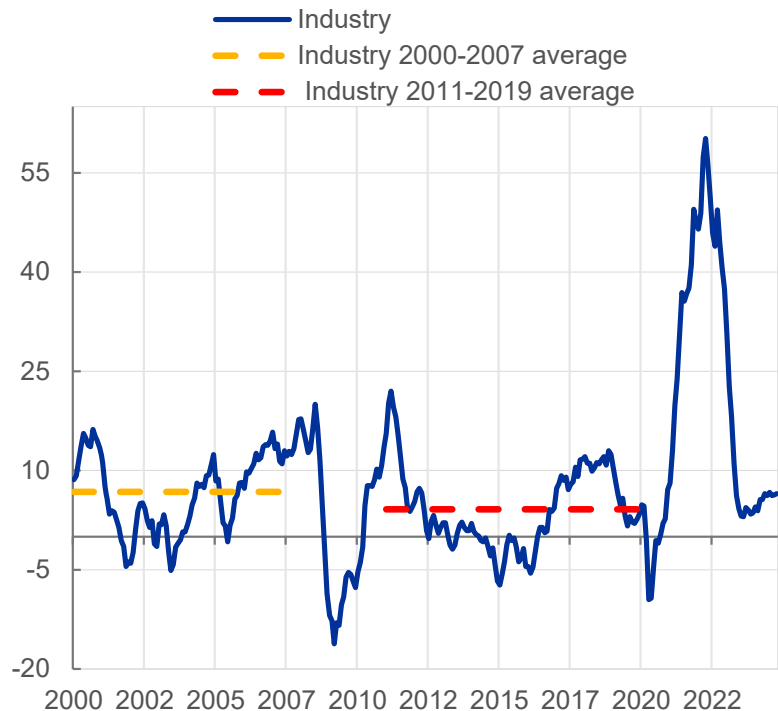
- 25-75 percentile
- Latest median
- ◆ Historical median



Sources: BIS calculations.
 Notes: Maximum change in Goldman Sachs Financial Conditions index for 18 advanced economies (GDP-weighted) throughout tightening episodes, divided by corresponding policy rate increase. Historical episodes since 1980. Latest episode: 2020-22.
www.ecb.europa.eu

Industrial firms' selling price expectations

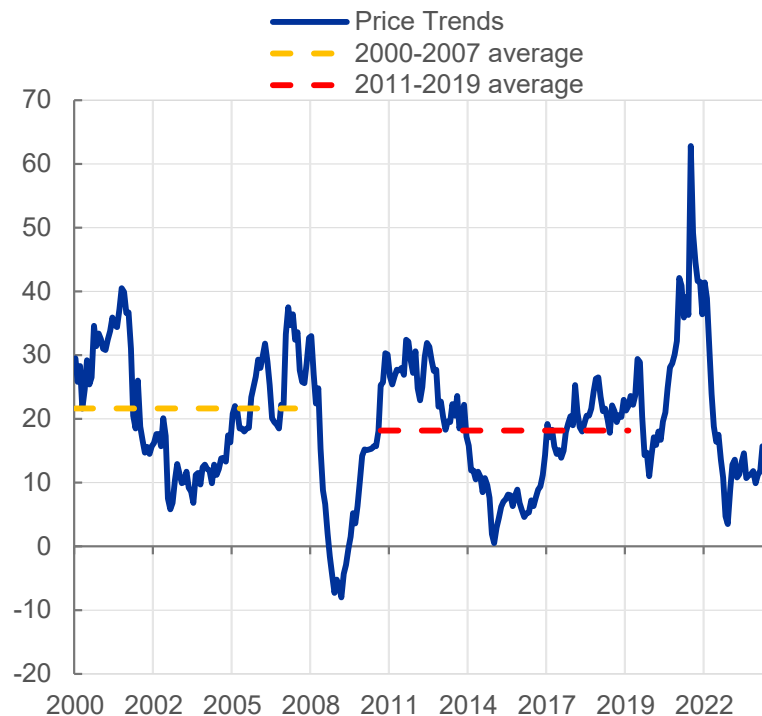
(percentage balances)



Source: European Commission/Haver Analytics.
Notes: Selling price expectations for the 3 months ahead series are seasonally adjusted. Percentage balance equals percent of respondents reporting an increase minus the percent of respondents reporting a decrease.
Latest observation: October 2024.

Consumer's opinion on price trends over next 12 months

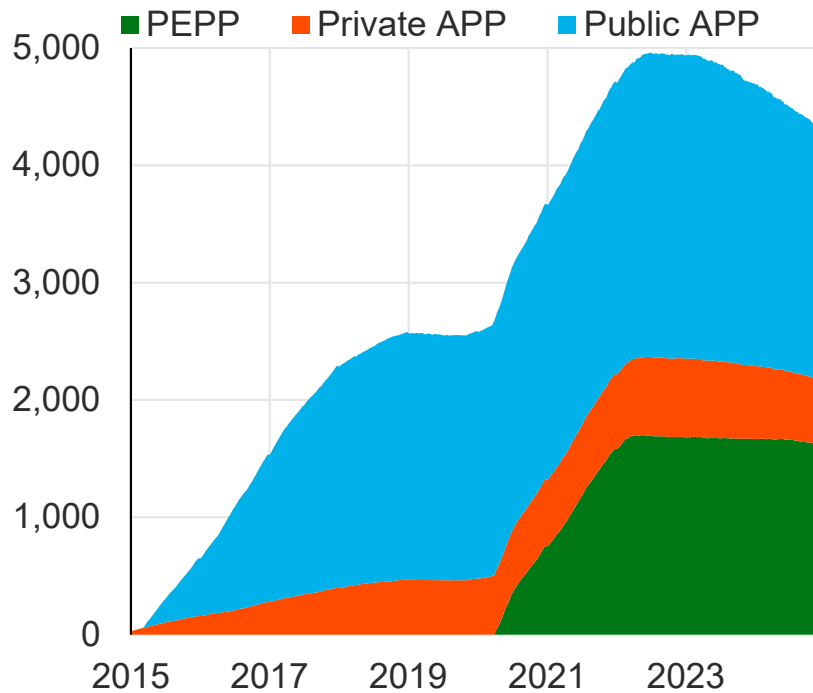
(percentage balances)



Source: European Commission/Haver Analytics.
Notes: Consumer price expectations for the next 12 months series are seasonally adjusted. Percentage balance equals percent of respondents reporting an increase minus the percent of respondents reporting a decrease.
Latest observation: October 2024.

While QE can be unwound only gradually, TLTROs were reversed quickly and smoothly

Bond portfolio Monetary policy assets (EUR billion) Refinancing operations

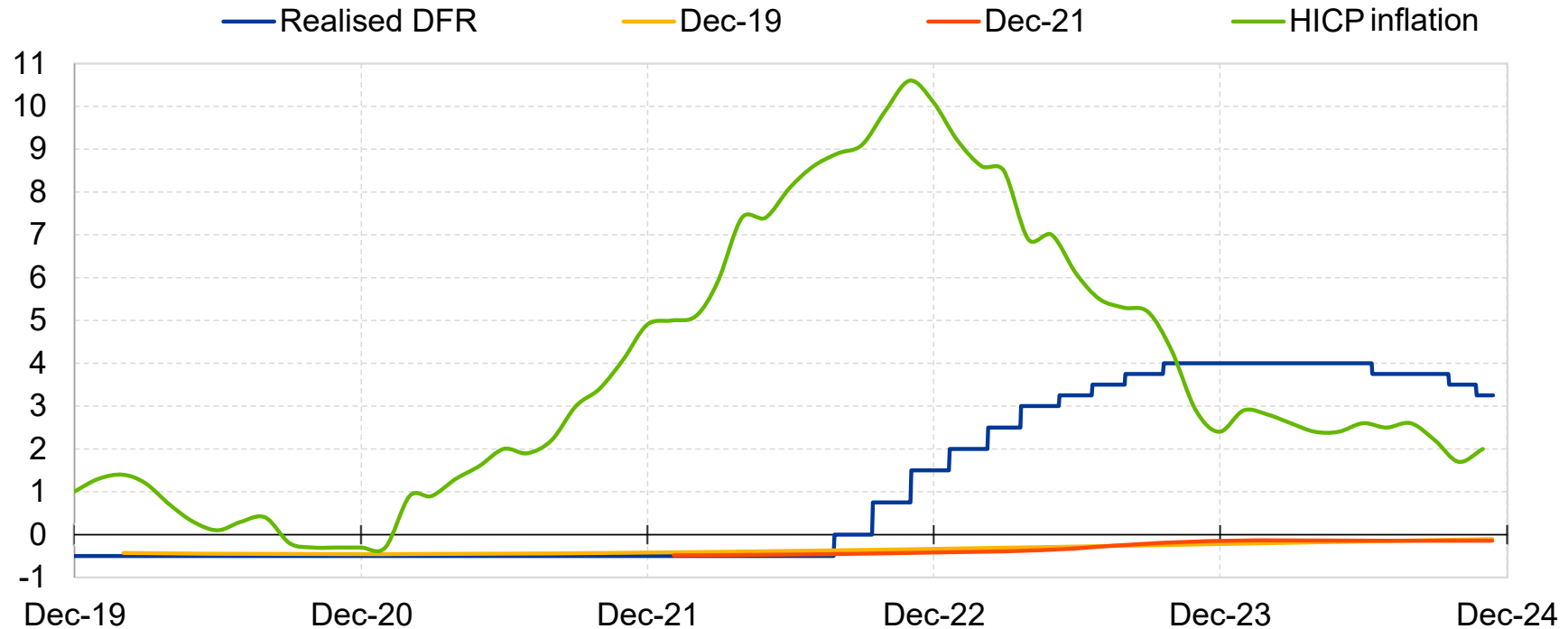


Source: ECB.
 Notes: Public APP is PSPP, Private APP is CBPP3, ABSPP and CSPP.
 Latest observation: November 2024.

Forward guidance slowed reaction to rising inflation

Euro forward OIS curve, realised DFR and HICP inflation

(percent, annual percentage changes)



Sources: Bloomberg and ECB calculations.

Notes: Chart refers to realised and forward deposit facility rate (DFR) levels. Yellow and red lines refer to the forward curves in December 2019 and 2021, respectively.

Latest observation: November 2024 (October 2024 for HICP).

Thank you very much for your attention!