

Inflation in the euro area – causes and outlook

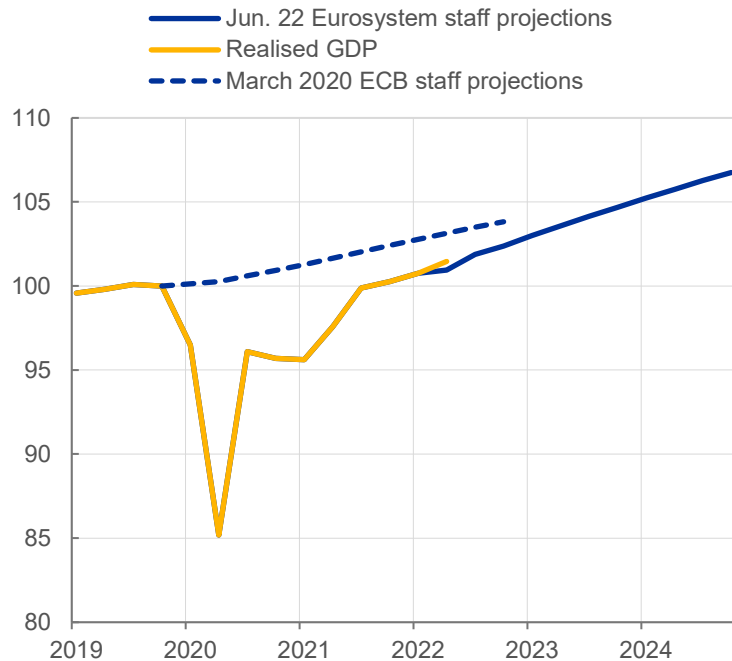
Isabel Schnabel, Member of the ECB's Executive Board

Hochschule der Deutschen Bundesbank, 18 August 2022

Economic growth and inflation in the euro area since the start of the pandemic

Real GDP growth

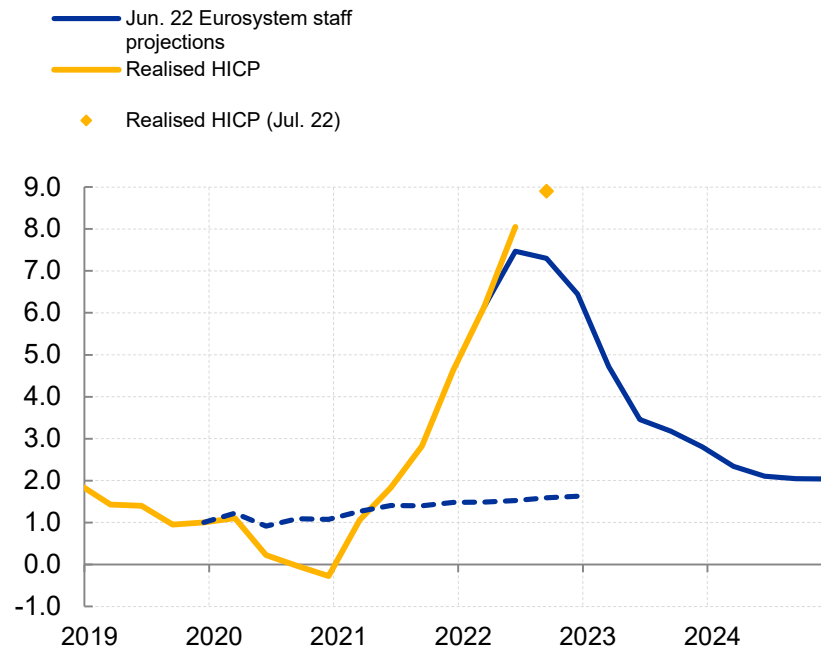
(index: Q4 2019 = 100)



Sources: Eurostat, ECB and Eurosystem.
Latest observation: Q2 2022.

Inflation

(annual percentage changes, quarterly data)

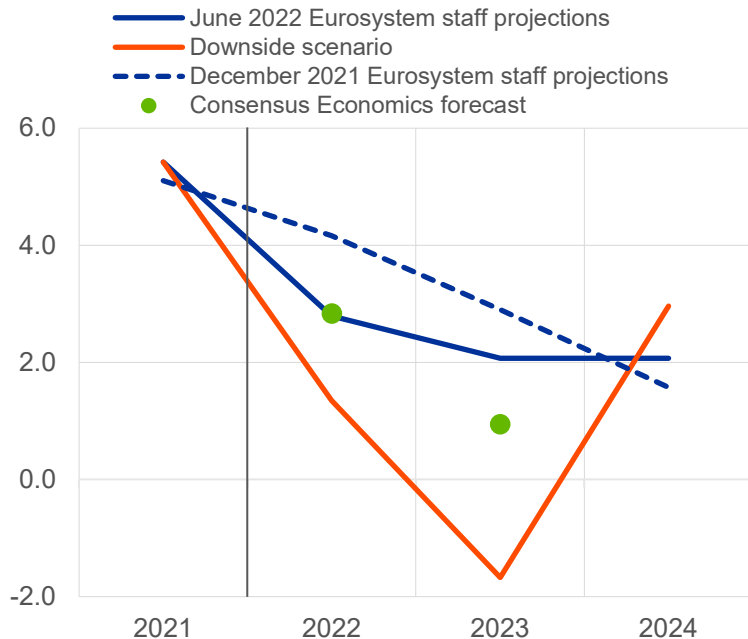


Sources: Eurostat, ECB and Eurosystem.
Latest observation: Q2 2022, July for HICP (flash).

The war is having a marked negative impact on economic growth

Real GDP growth projections

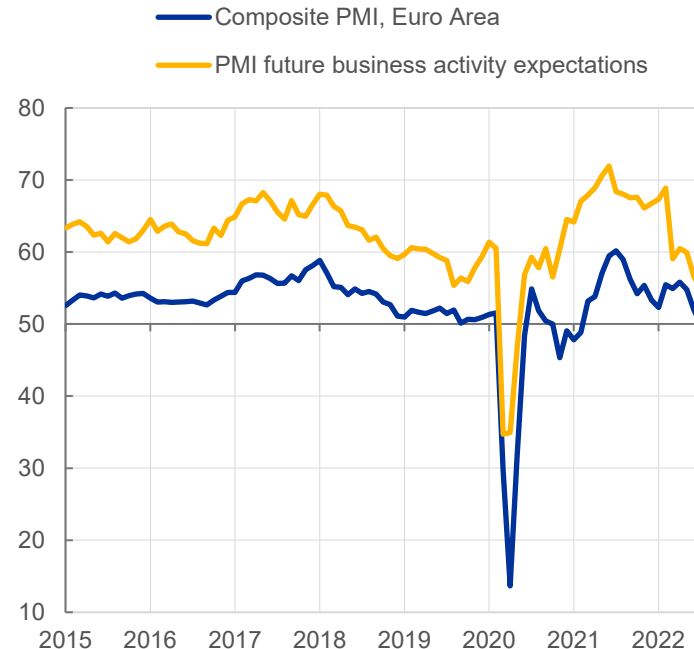
(annual percentage changes)



Sources: Eurosystem and Consensus Economics.
Note: Consensus Economics forecast: survey 8 August 2022, published 11 August 2022.

Euro area PMIs

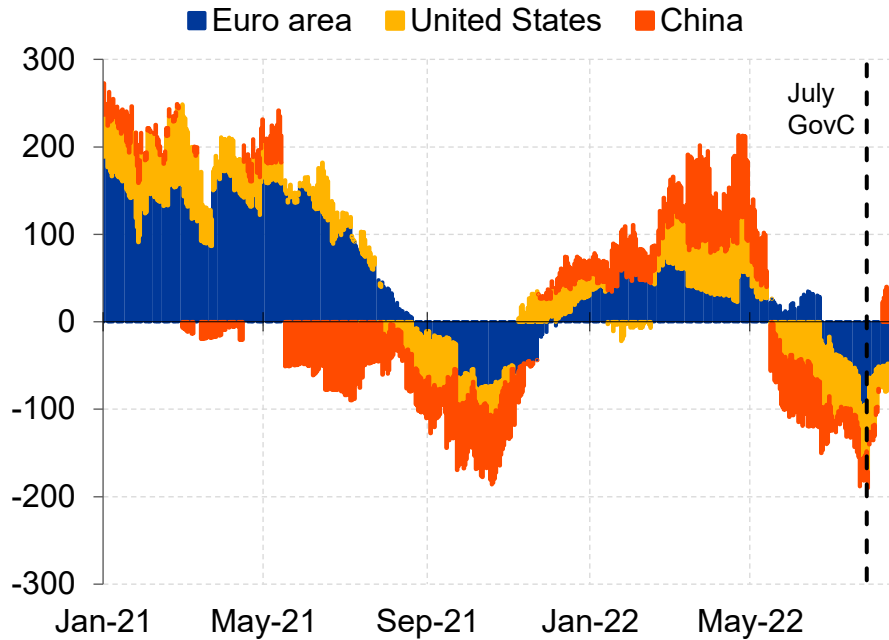
(diffusion index)



Source: Markit.
Latest observation: July 2022.

Negative economic surprises and faltering gas supply raise stagflation concerns

Economic surprises in major jurisdictions

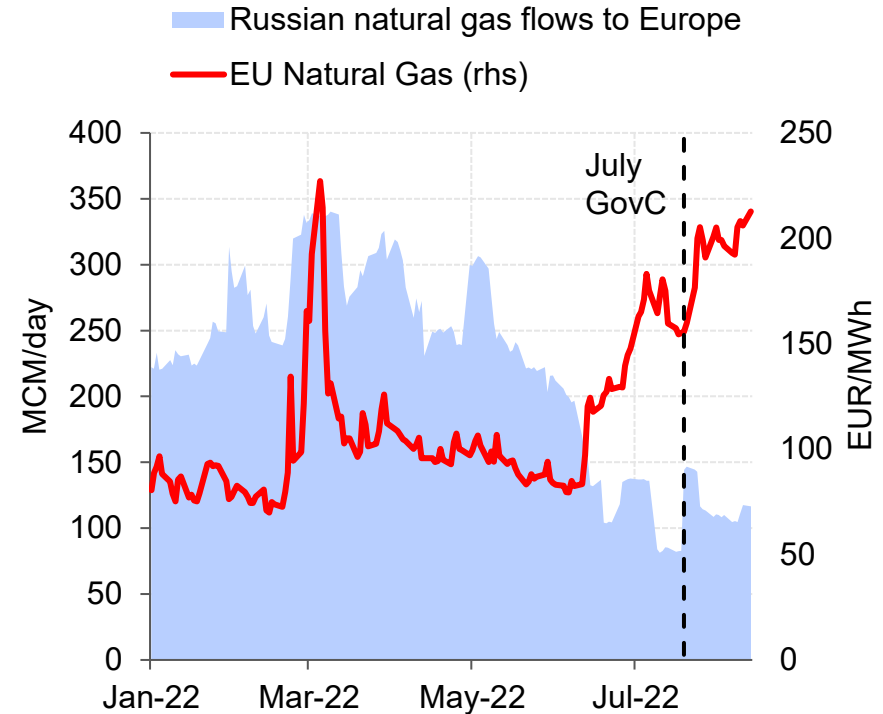


Sources: Bloomberg and ECB calculations.

Notes: The data shows economic data surprises relative to market expectations. A positive (negative) reading means that data releases have been stronger (weaker) than expected.

Latest observation: 15 August 2022.

EU natural gas prices and pipeline flows from Russia to Europe



Sources: Bloomberg and ECB calculations.

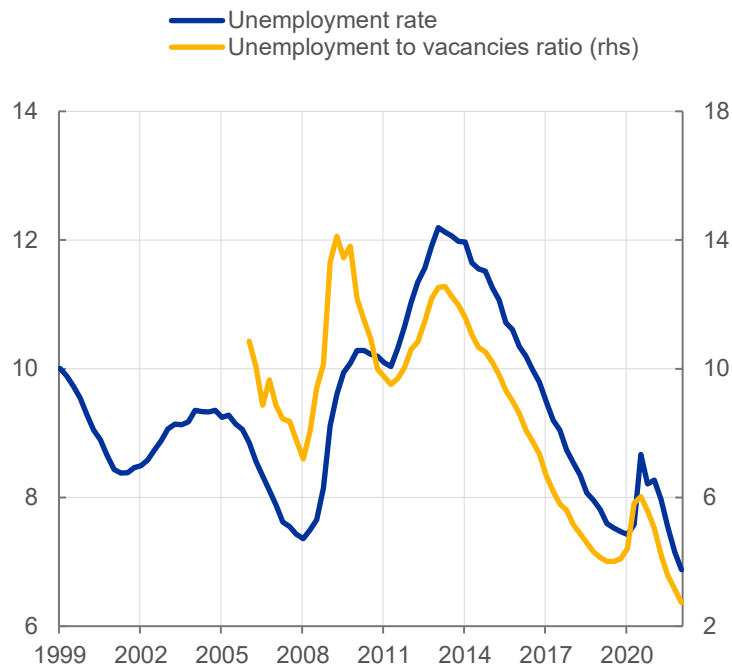
Notes: The chart shows natural gas prices in Europe (Dutch TTF futures) in addition to natural gas pipeline flows from Russia to Europe (via Nord Stream to Germany, Yamal to Poland, Ukraine and Bulgaria).

Latest observation: 15 August 2022.

Euro area unemployment rate at record low amid an increasingly tight labour market

Unemployment and vacancies

(left-hand scale: percentages; right-hand scale: ratio)



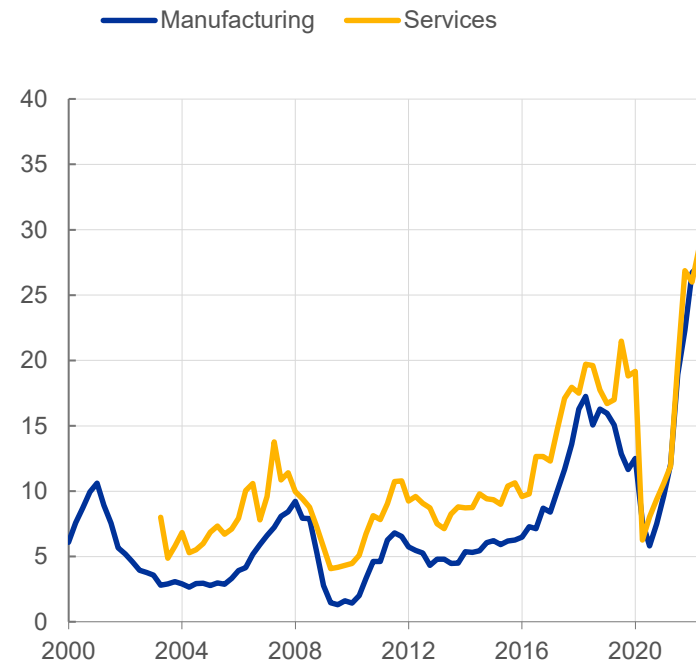
Sources: Eurostat and ECB staff calculations.

Notes: Vacancies data not available for Italy and Estonia. Vacancies data for France only available for firms with more than 10 employees.

Latest observations: Q1 2022.

Limits to production – shortage of labour

(percentage balances)



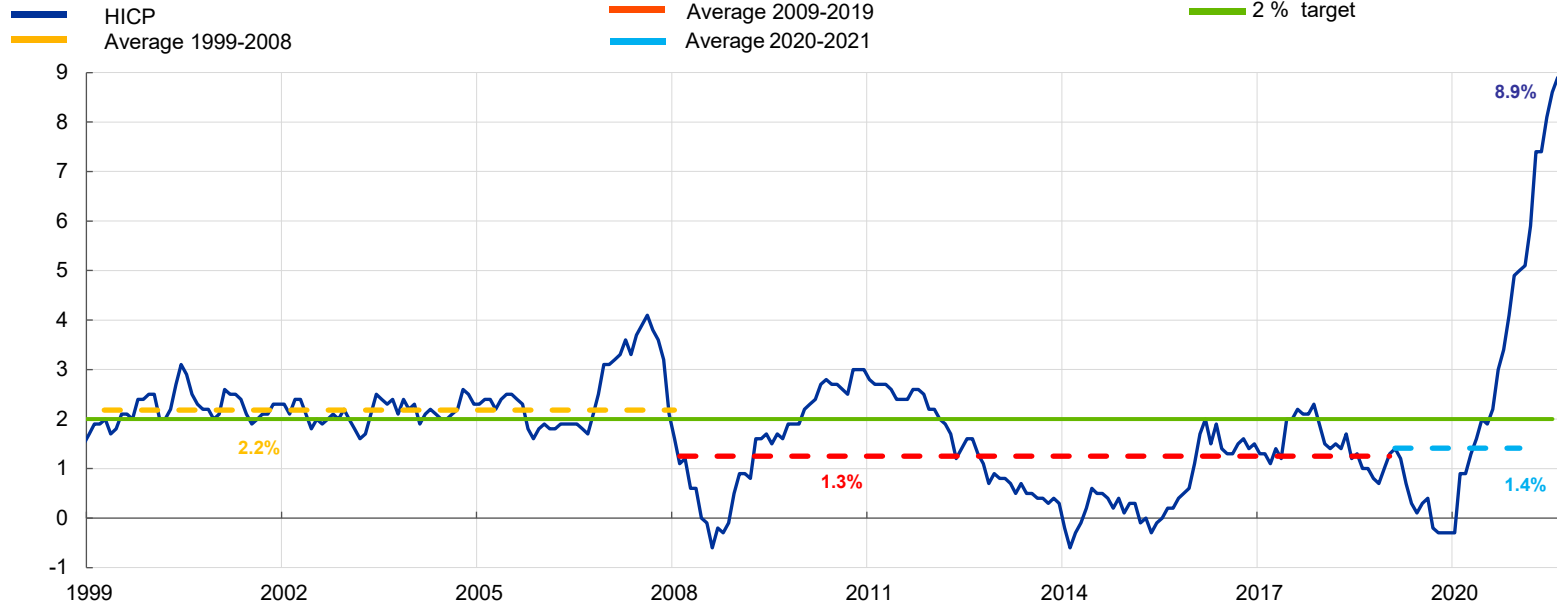
Source: European Commission.

Notes: Survey in industry and the services sector: percentage of firms who indicate labour shortages as limits on production and business.

Latest observation: Q3 2022.

Sharp increase in inflation since 2021 after a prolonged period of subdued inflation

Euro area inflation (annual percentage changes)

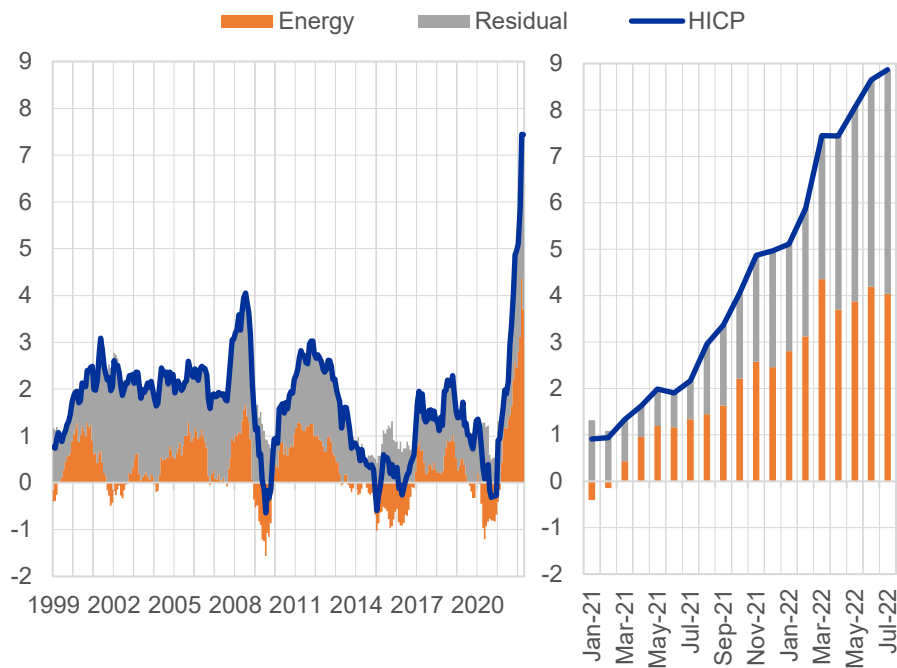


Source: ECB.
Latest observation: July 2022 (flash).

Energy is the main contributor to headline inflation in the euro area

Energy contribution to HICP

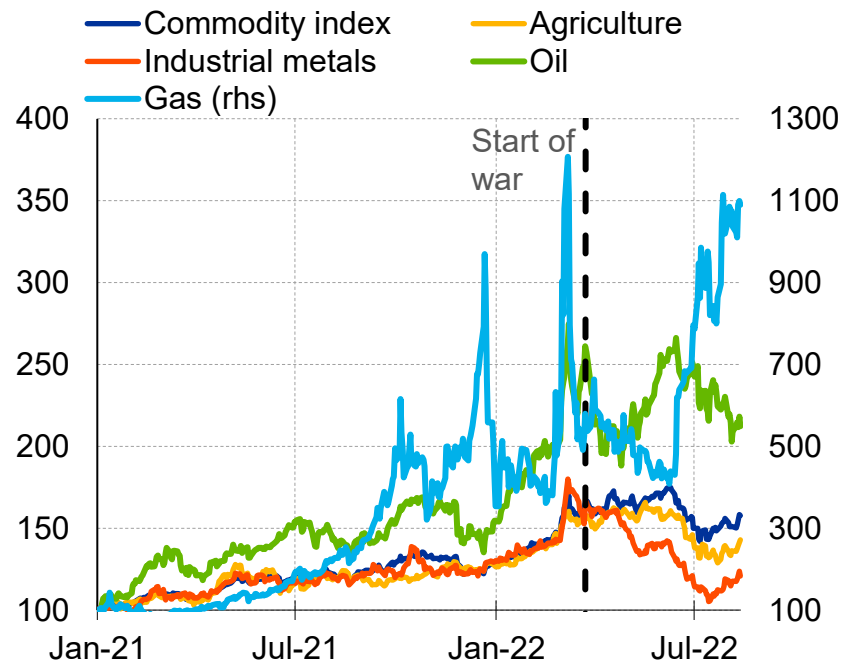
(annual percentage changes; percentage point contributions)



Sources: Eurostat and ECB staff calculations.
Latest observation: July 2022 (flash).

Commodity prices

(index: 1 January 2021 = 100)

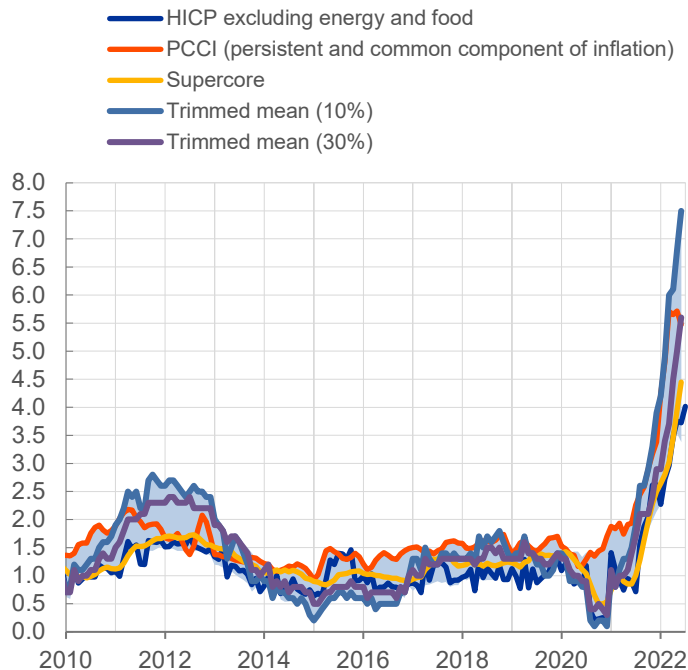


Sources: Bloomberg, Refinitiv and ECB calculations.
Latest observation: 12 August 2022.

Inflation pressures are becoming increasingly broad-based

Measures of underlying inflation

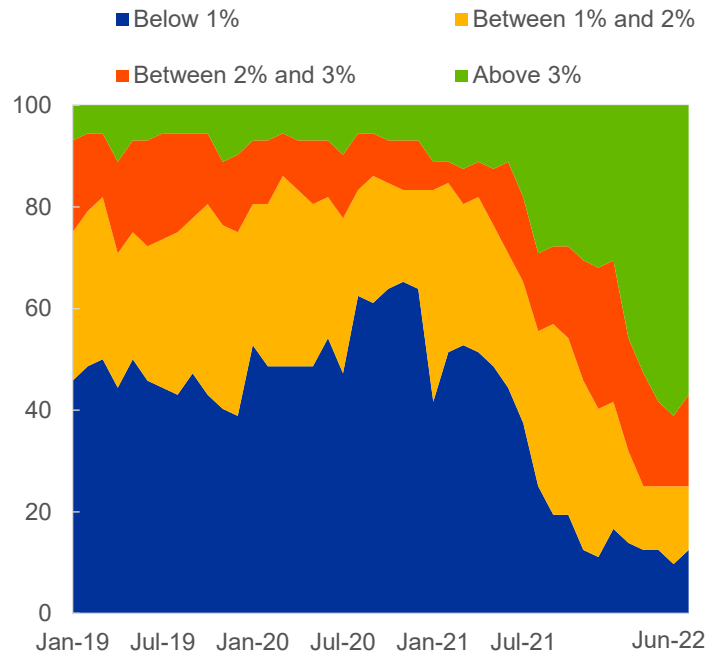
(annual percentage changes)



Sources: ECB and ECB staff calculations.
Latest observation: July 2022 (flash) for HICP excluding energy and food, June 2022 for the rest.

Share of HICP components according to pace of change

(percentage point contributions)

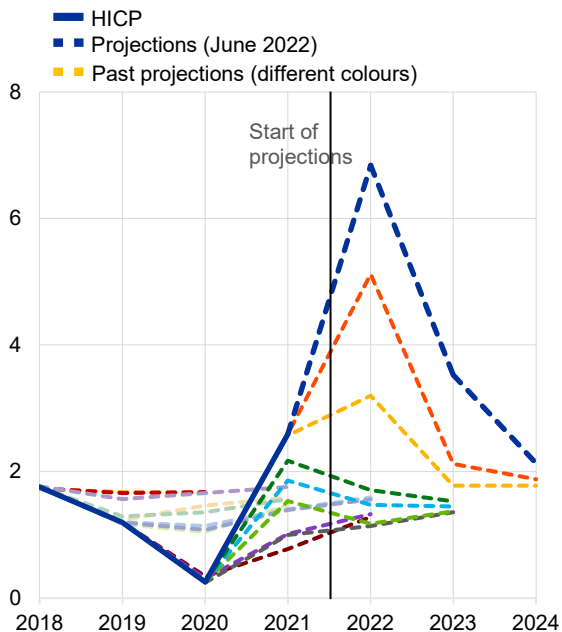


Sources: ECB and ECB staff calculations.
Latest observation: June 2022.

Projections are pointing to a decline in inflation, but history of projection errors

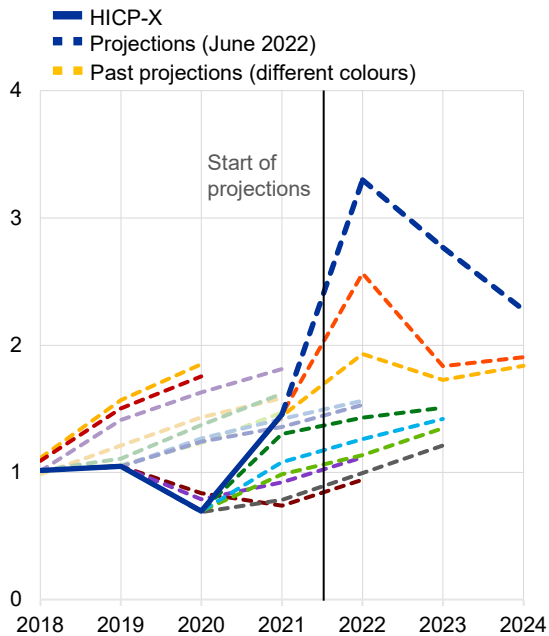
Inflation projections – HICP

(annual percentage changes)



Inflation projections – HICP-X

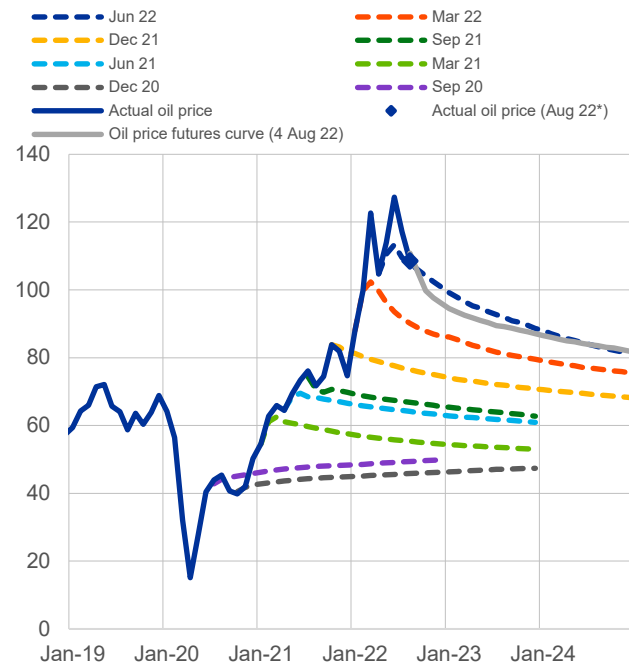
(annual percentage changes)



Sources: Eurostat, ECB and Eurosystem.
Latest observation: 2021 for HICP and HICP-X (annual data).

Oil prices and assumptions

(USD per barrel)

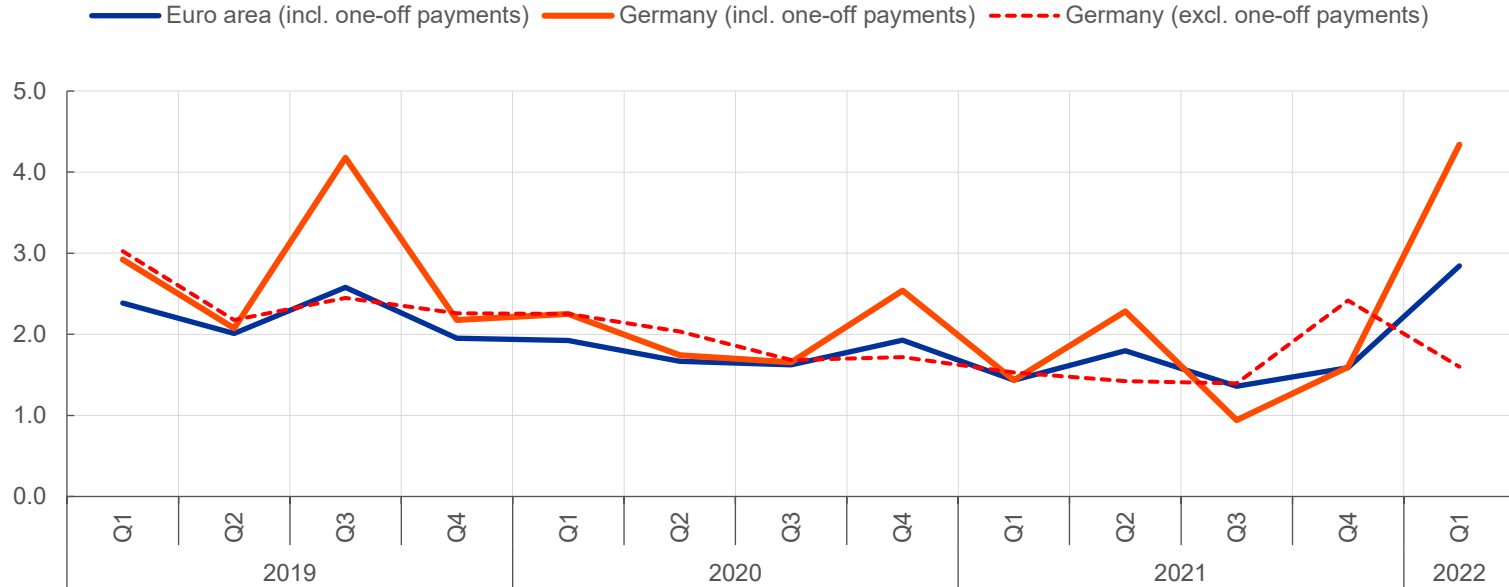


Sources: Refinitiv and ECB.

Notes: Dashed lines refer to oil price assumptions in respective ECB and Eurosystem staff projection exercises. Oil price futures curves are calculated using 10 business day averages. (*) the blue diamond shows the average oil price level in August 2022 (1 to 12 August 2022).
Latest observations: July 2022 for monthly data; 12 August 2022 for August 2022 (blue diamond) and 04 August 2022 for oil price futures (grey line).

No wage-price spiral yet, but risks are increasing

Negotiated wages (annual percentage changes)

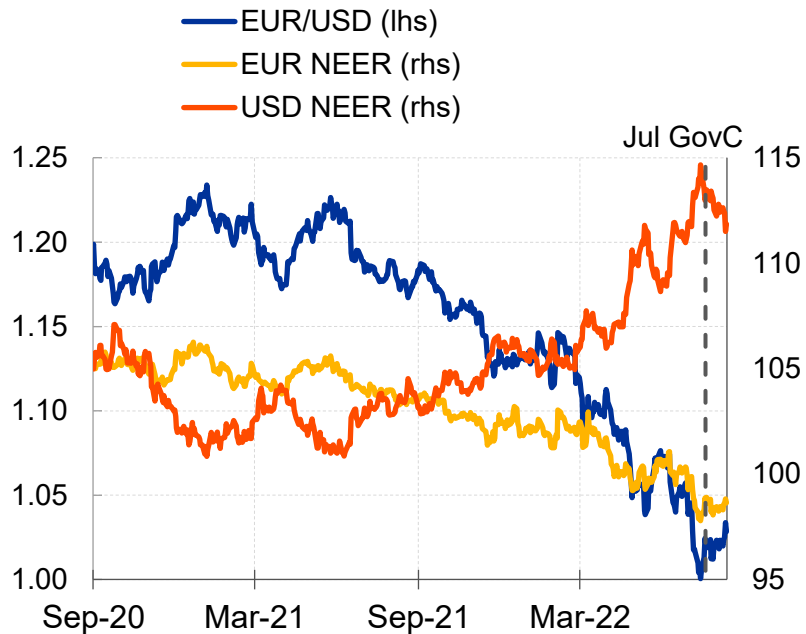


Source: Bundesbank and ECB.
Last observation: Q1 2022.

Depreciation of euro exchange rate implies further pressure on inflation

EUR/USD, EUR NEER and USD NEER

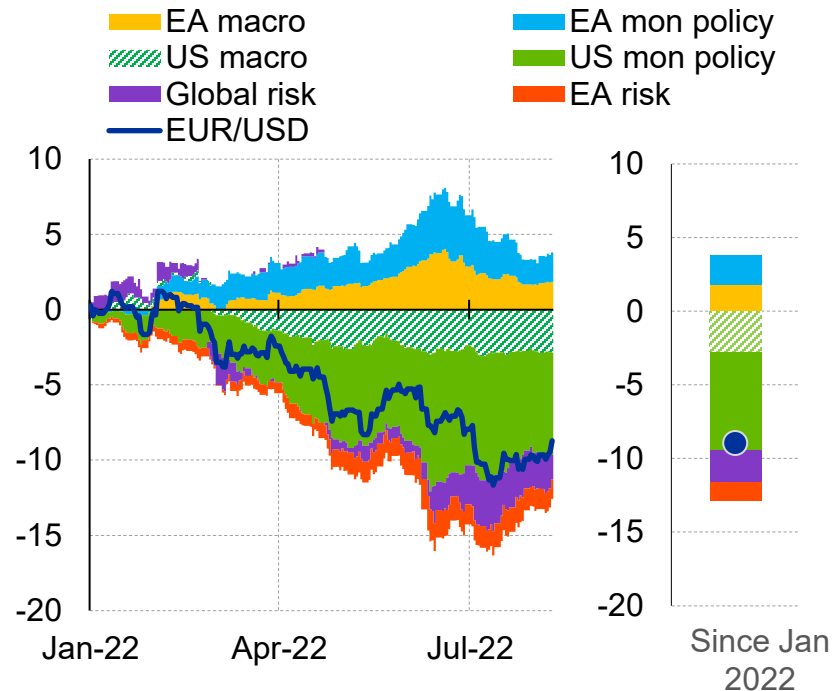
(lhs: USD per EUR, rhs: index – 01/01/2018=100)



Sources: ECB and ECB staff calculations.
 Notes: Nominal effective exchange rate for 42 trading partners.
 Latest observation: 12/08/2022.

Drivers of EUR/USD

(lhs: cumulative changes since Jan-22, rhs: percent)

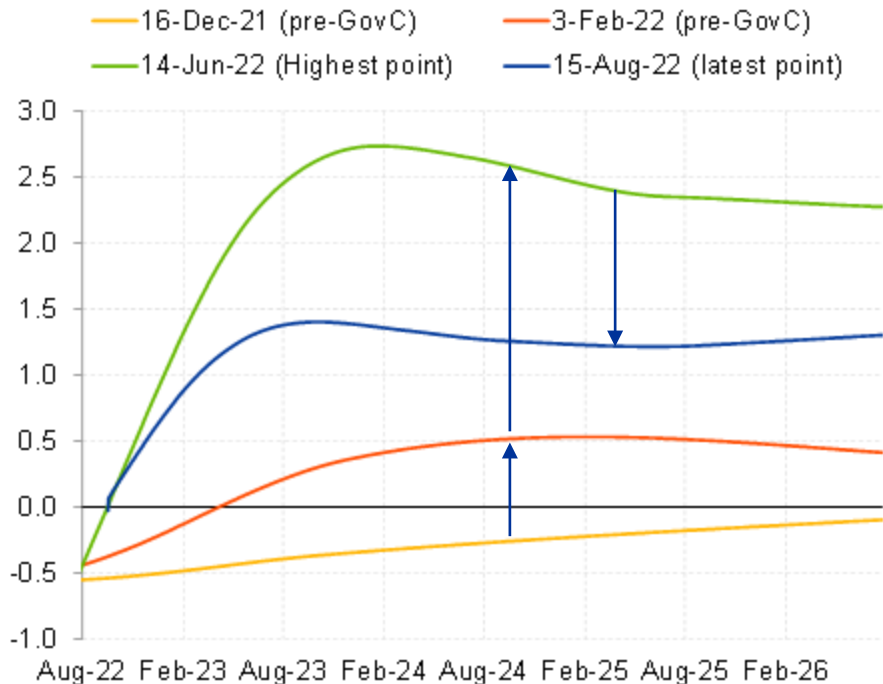


Source: ECB calculations.
 Notes: Based on 2-country BVAR including 10-year EA OIS rate, EA GDP-weighted sovereign spread, EA stock price, EUR/USD, 10-year EA OIS - US Treasury spread & US stock prices.
 Identification via sign and narrative restrictions & estimated using daily data 2005-22. Increase denotes a euro appreciation.
 Latest observation: 11/08/2022.

Global tightening of monetary policy and financing conditions, but recent headwinds

EUR OIS forward curve

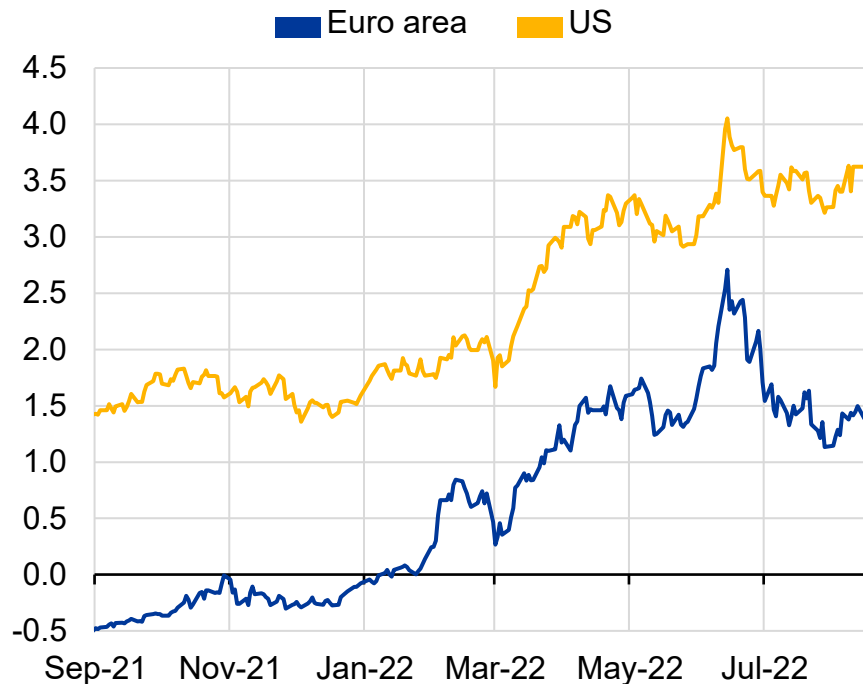
(percentage per annum)



Sources: Bloomberg and ECB.
 Note: "GovC" refers to Governing Council meetings.
 Latest observation: 15 Aug 2022.

Market pricing of terminal rate

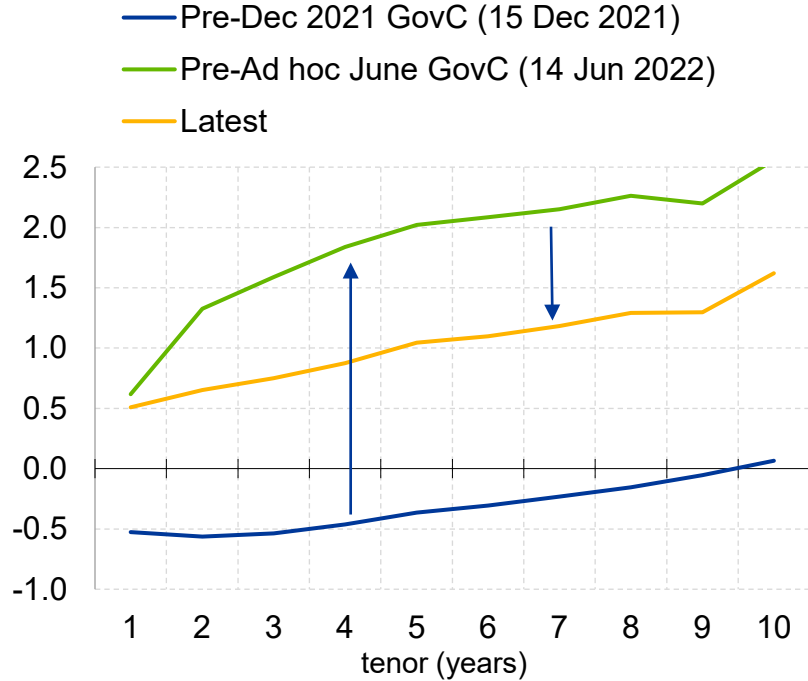
(percentage per annum)



Sources: Morgan Stanley, Bloomberg, ECB and ECB calculations.
 Notes: The terminal rate for the euro area is derived from the euro overnight index swap (OIS) forward curve by capturing the first local peak within a five-year horizon for each observation. The terminal rate for the United States is an estimate calculated by Morgan Stanley.
 Latest observation: 15 Aug 2022.

Recent flattening of euro area sovereign yield curve amid recession fears

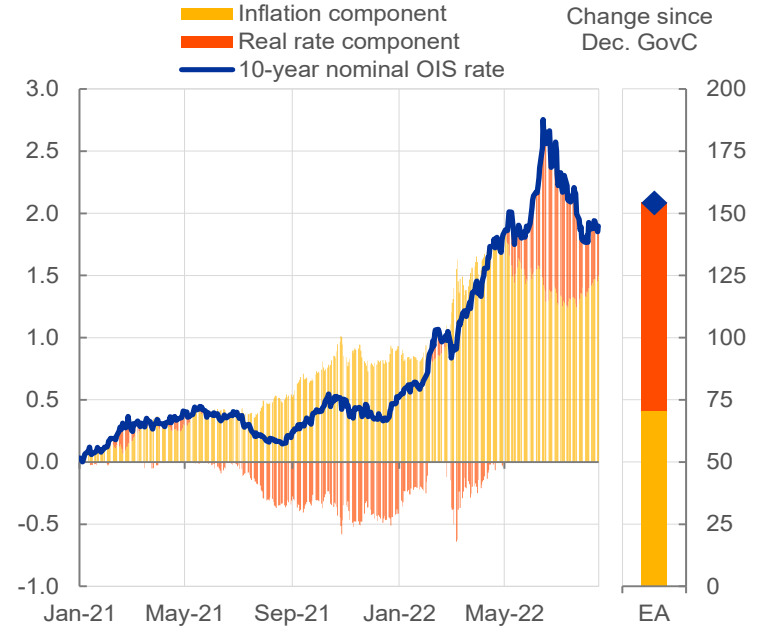
Euro area GDP-weighted yield curve (percentages)



Sources: Bloomberg and ECB.
Latest observation: 15 August 2022.

Decomposition of 10-year OIS into real rate and inflation

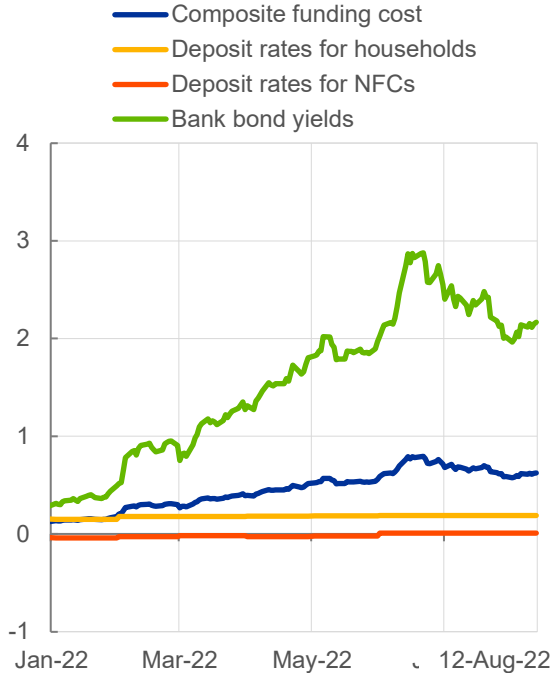
(left-hand scale: percentages per annum, cumulative change since 4 January 2021; right-hand scale: basis points)



Sources: Bloomberg, Refinitiv and ECB calculations.
Notes: Real rate is defined as the difference between the nominal 10-year OIS rate and 10-year inflation-linked swap rate. "GovC" refers to Governing Council meetings.
Latest observation: 16 August 2022.

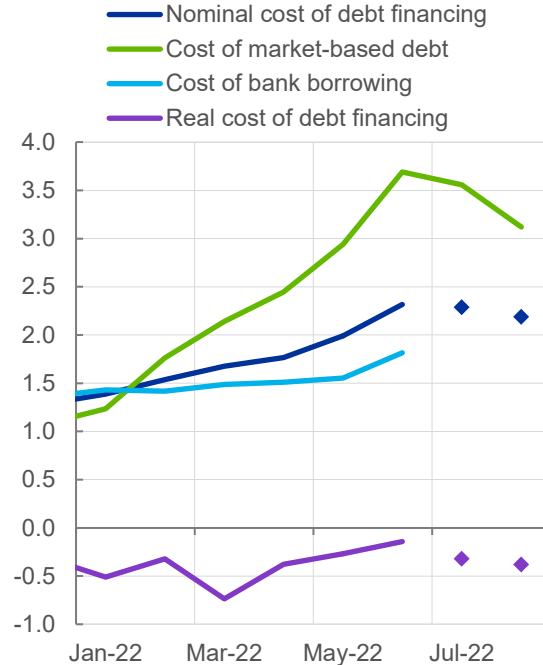
Rising funding costs for banks, corporates and households, but real rates stay low

Composite bank funding costs (% per annum)



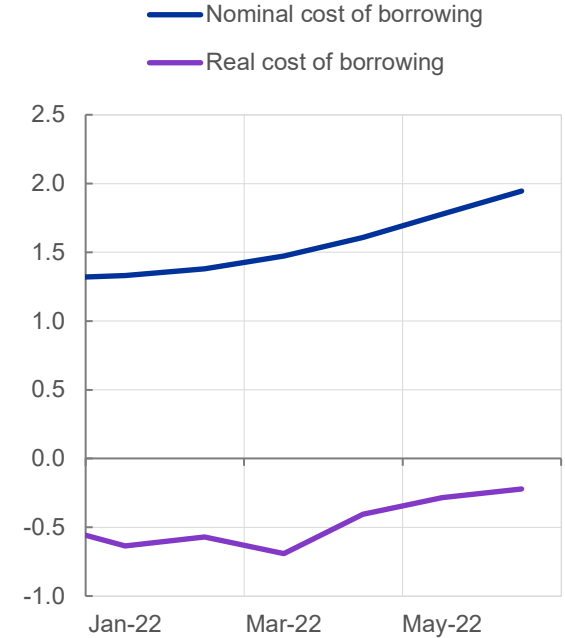
Sources: ECB (MIR, BSI), IHS Markit iBoxx and ECB calculations. Notes: Composite funding cost is the weighted average of the cost of deposits and market debt funding, with the respective outstanding amounts on bank balance sheets used as weights. Deposit rates are on new business. Calculated assuming that deposit rates remain at their June level until 12 August 2022. Latest observations: June 2022 for BSI and MIR; 12 August 2022 for iBoxx.

Cost of debt financing for euro area firms (% per annum)



Sources: ECB (MIR, QSA), Merrill Lynch, Refinitiv, Bloomberg, Consensus Economics and ECB calculations. Notes: The diamonds refer to estimates assuming the cost of bank borrowing remained at its June 2022 level in July and August 2022. Latest observations: June 2022 for the nominal and real cost of debt financing and bank borrowing; 12 August 2022 for the cost of market-based debt.

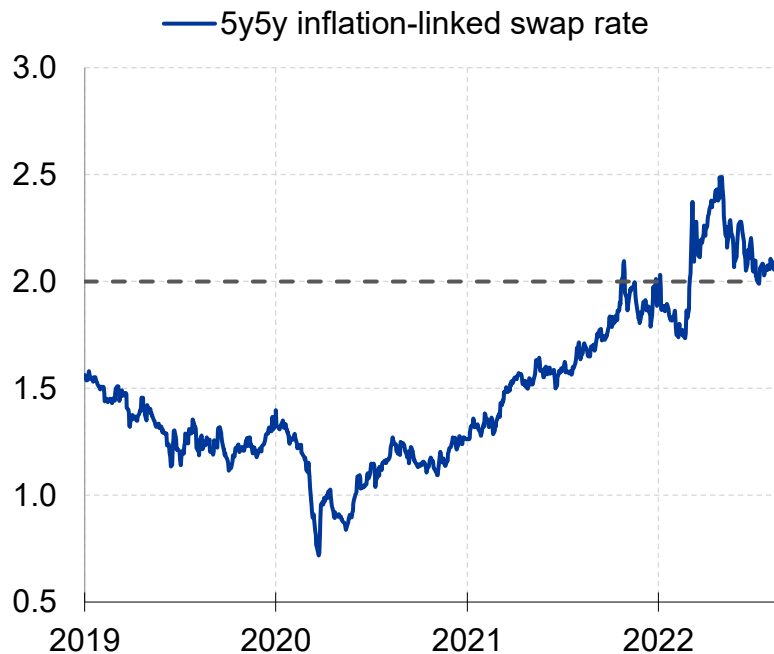
Cost of borrowing of households for house purchase (% per annum)



Sources: ECB (MIR), Bloomberg, Consensus Economics and ECB calculations. Notes: The cost of borrowing indicator for households for house purchase is calculated by aggregating short- and long-term rates on new loans for house purchase using a 24-month moving average of new business volumes. Latest observations: June 2022.

Market-based measures of inflation compensation

(percentages per annum)



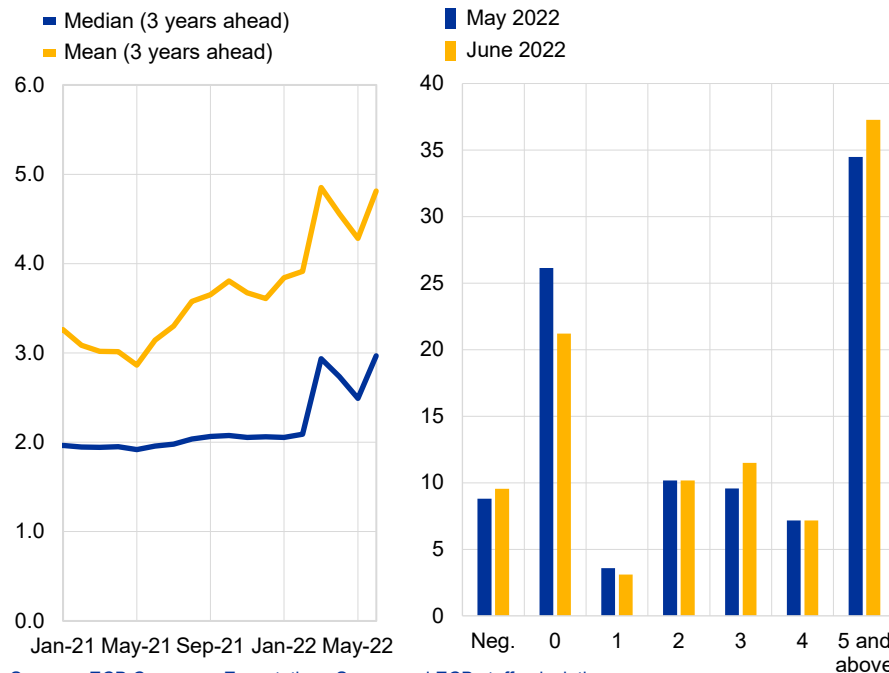
Sources: Bloomberg, Refinitiv and ECB calculations

Notes: The real forward rates are calculated by subtracting the inflation-linked swap forward rates from the nominal OIS forward rates.

Latest observation: 15 August 2022.

Inflation expectations in the ECB Consumer Expectations Survey

(left panel: annual percentage changes; right panel: x-axis: annual percentage changes; y-axis: percentages of respondents)



Sources: ECB Consumer Expectations Survey and ECB staff calculations.

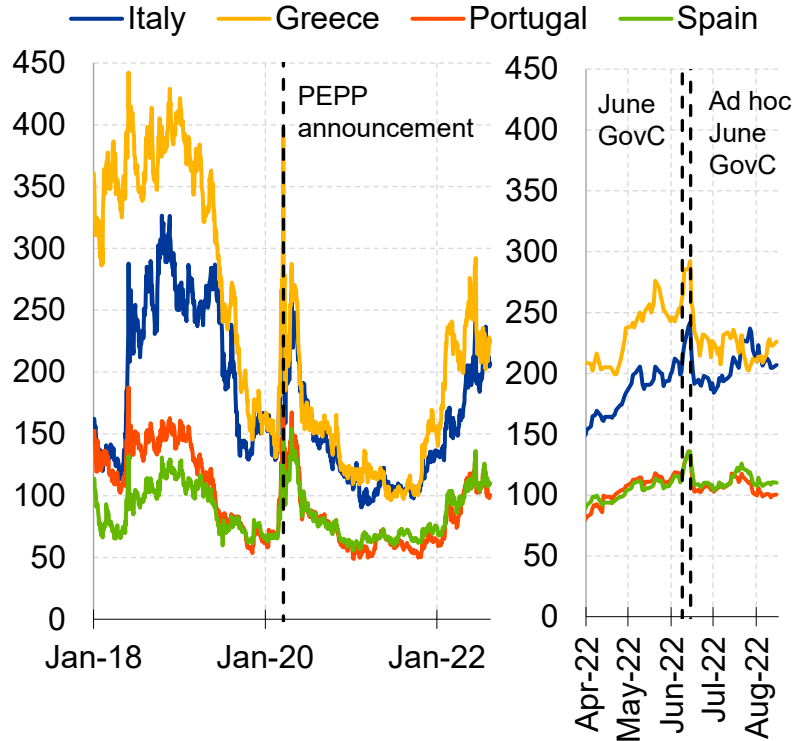
Notes: "Median" refers to the median across individual respondents. The data are winsorised at the 2nd and 98th percentile. Mean values are 4.6%, 4.3% and 4.8% for April, May and June respectively. Median values are 2.7%, 2.5% and 3.0% for April, May and June respectively.

Latest observations: June 2022.

Fragmentation risk in euro area sovereign bond markets amid normalisation

10-year euro area sovereign bond spreads

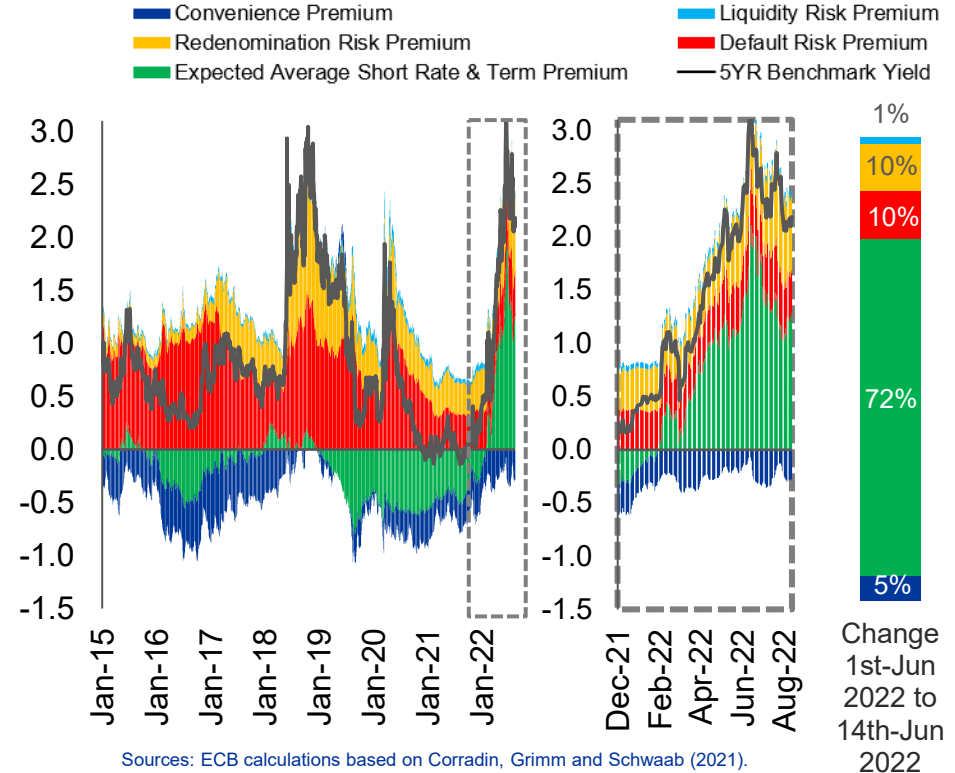
(basis points)



Source: Bloomberg.
Latest observation: 15 August 2022.

Decomposition of 5-year Italian sovereign bond yield

(percent)

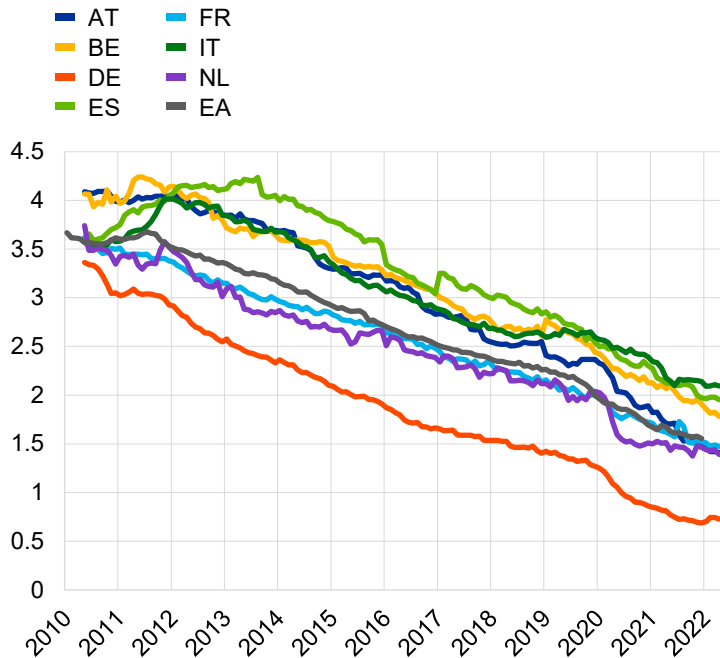


Sources: ECB calculations based on Corradin, Grimm and Schwaab (2021).
Latest observation: 12 August 2022 (daily data).

No acute threat to fiscal sustainability in euro area countries

Average nominal sovereign yields on total government debt securities

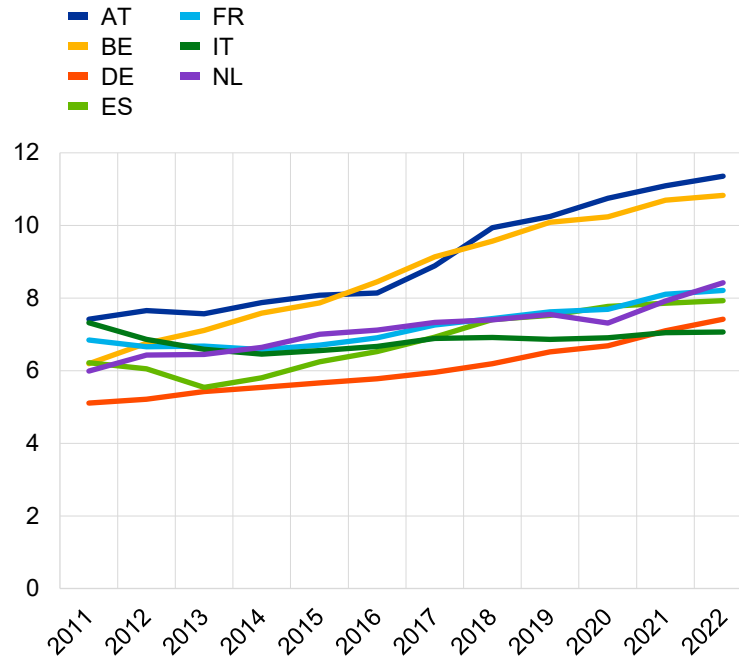
(percentage points)



Sources: ECB and ECB calculations.
Latest observation: May 2022.

Residual maturities

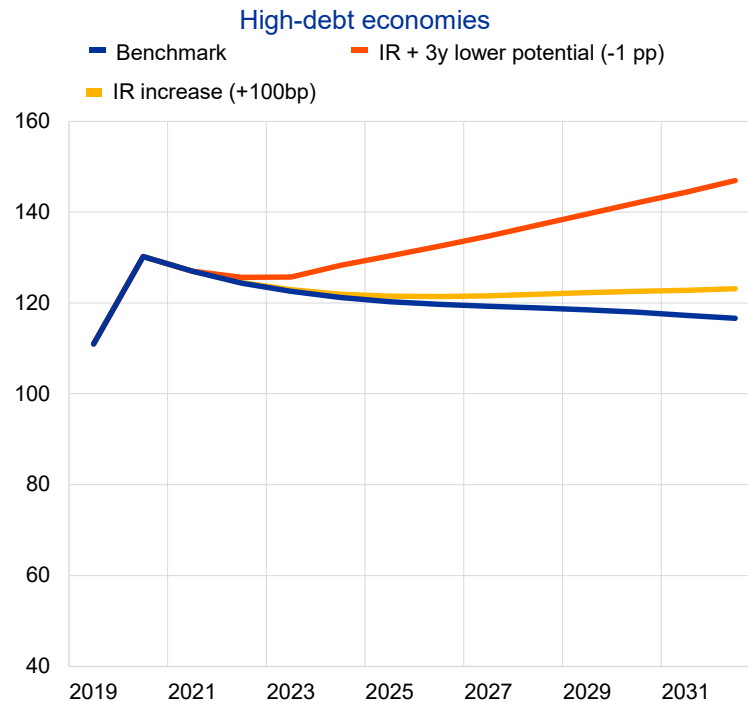
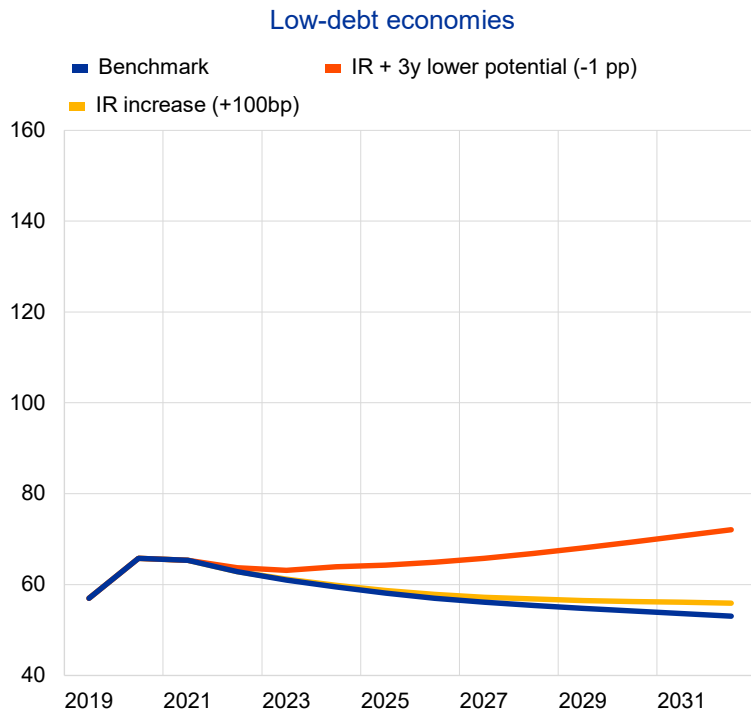
(years)



Sources: ECB and ECB calculations.
Notes: All original maturities. Annual averages per year. For 2022, average over the period from January to May.

Potential growth matters more for sovereign finances than interest rates

Impact of an interest rate (IR) and GDP shock on debt-to-GDP ratio (percentages)



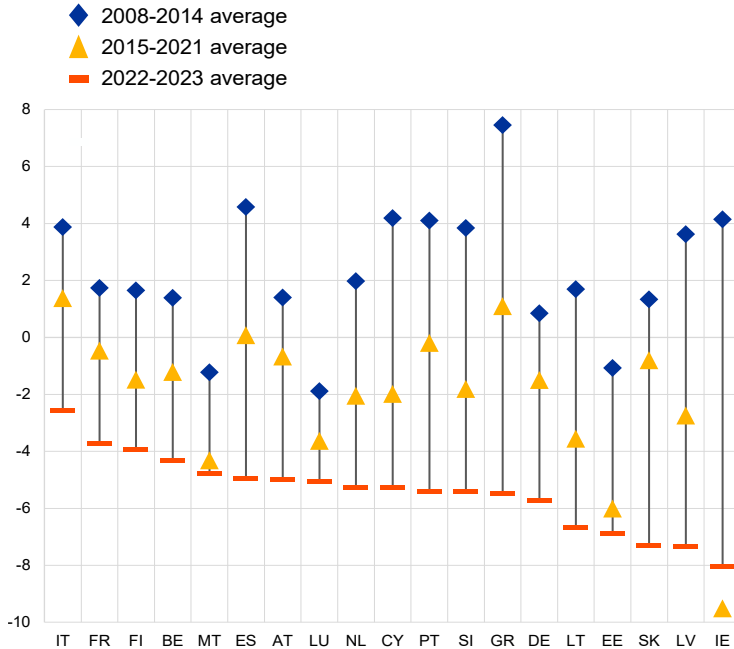
Sources: European Commission and ECB calculations.

Notes: High-debt economies are countries with a debt-to-GDP ratio exceeding 90% in 2019. Interest rate shock assumes permanently higher interest rates by 100 basis points (bp) across countries and maturities. Potential growth shock assumes potential growth lower by 1 percentage point (pp) for three years, implying permanently lower potential output levels.

Favourable interest rate-growth differentials support decline in public debt ratios

Interest rate-growth differential

(percentage points, average over period)

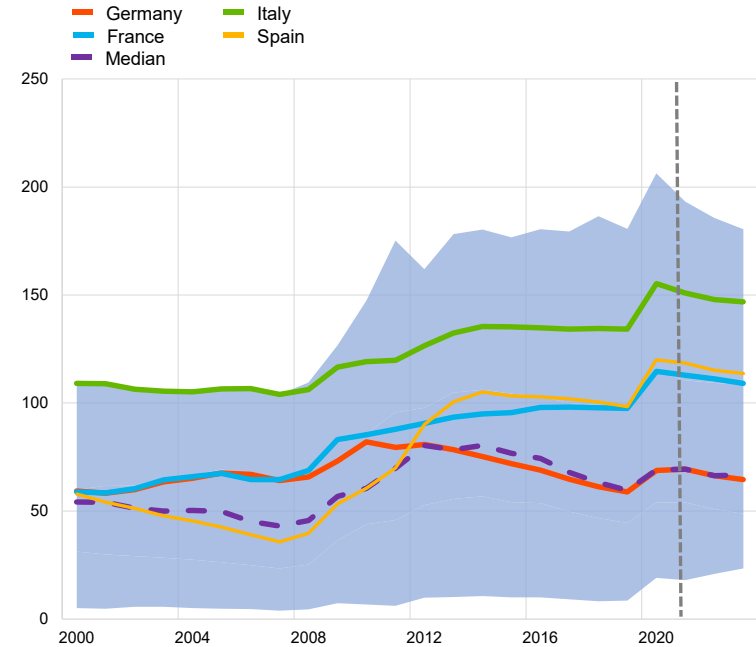


Sources: European Commission and ECB calculations.

Notes: The interest rate-growth differential is calculated using the implicit interest rate on government debt and the growth rate of nominal GDP. The implicit interest rate in year t is interest payments by the government in year t divided by government gross debt in $t-1$. Countries are sorted according to the 2022-2023 average interest rate-growth differential. Figures for 2022 and 2023 refer to the European Commission Spring 2022 Economic Forecast.

Government debt in selected countries

(percentages of GDP)



Source: European Commission

Notes: The range shows the min and the max of all euro area countries. Figures for 2022 and 2023 refer to the European Commission Spring 2022 Economic Forecast. Latest observation: 2023.