

Inflation in the euro area – causes and outlook

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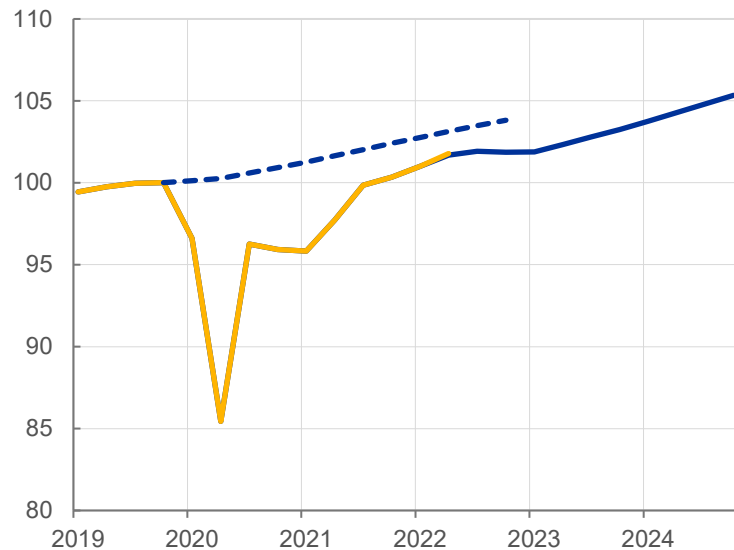
Spuerkeess (Banque et Caisse d'Epargne de l'Etat), Luxembourg, 22 September 2022

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

Real GDP growth

(index: Q4 2019 = 100)

- Sep. 22 ECB staff projections
- Realised GDP
- - - March 2020 ECB staff projections

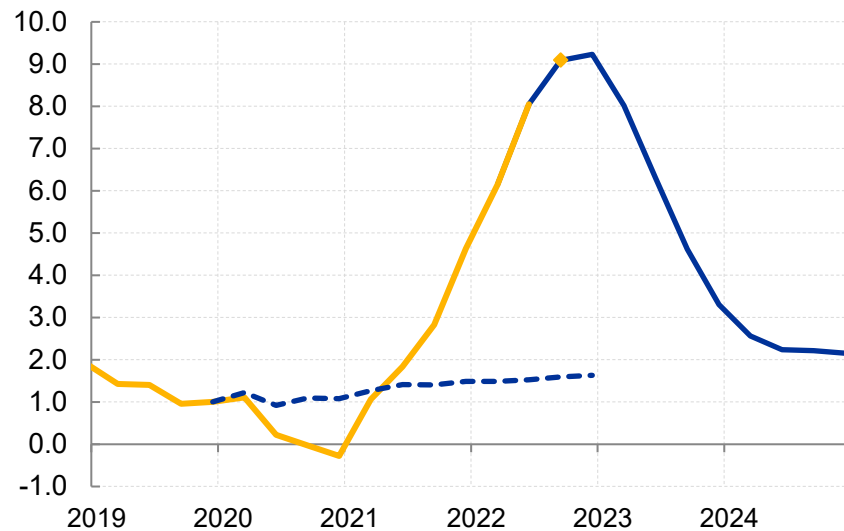


Sources: Eurostat, ECB and Eurosystem.
Latest observation: Q2 2022.

Inflation

(annual percentage changes, quarterly data)

- Sep. 22 ECB staff projections
- Realised HICP
- ◆ Realised HICP (Aug. 22)
- - - March 2020 ECB staff projections

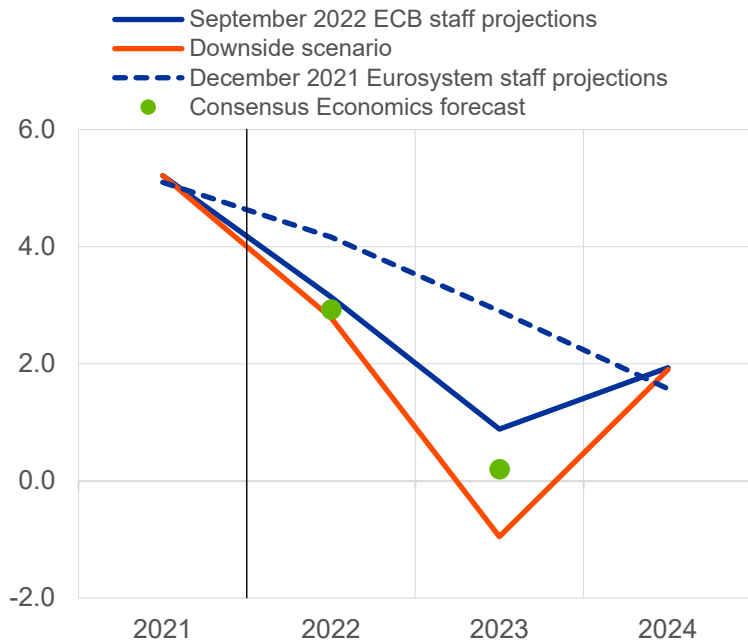


Sources: Eurostat, ECB and Eurosystem.
Latest observation: Q2 2022, August for HICP.

The war is having a marked negative impact on economic activity

Real GDP growth projections

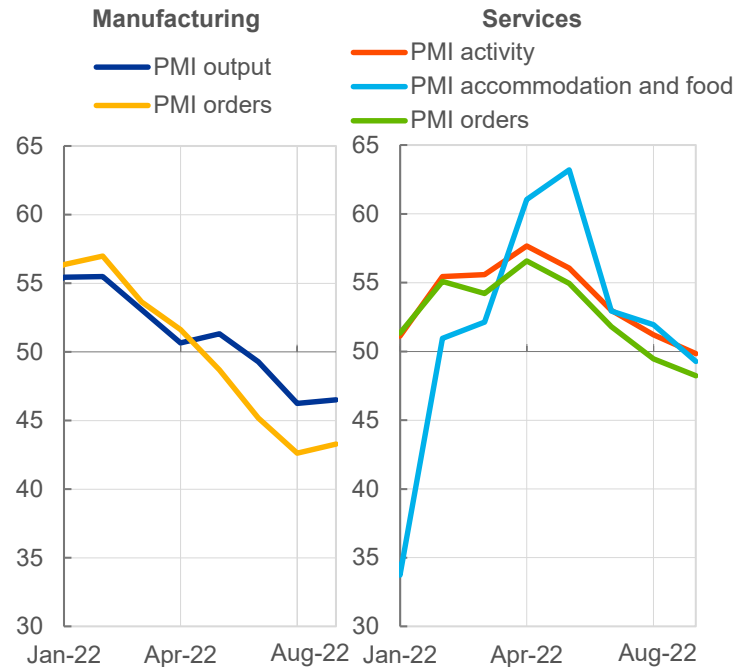
(annual percentage changes)



Sources: Eurosystem and Consensus Economics.
Note: Consensus Economics survey date 12 September 2022.

Euro area PMIs

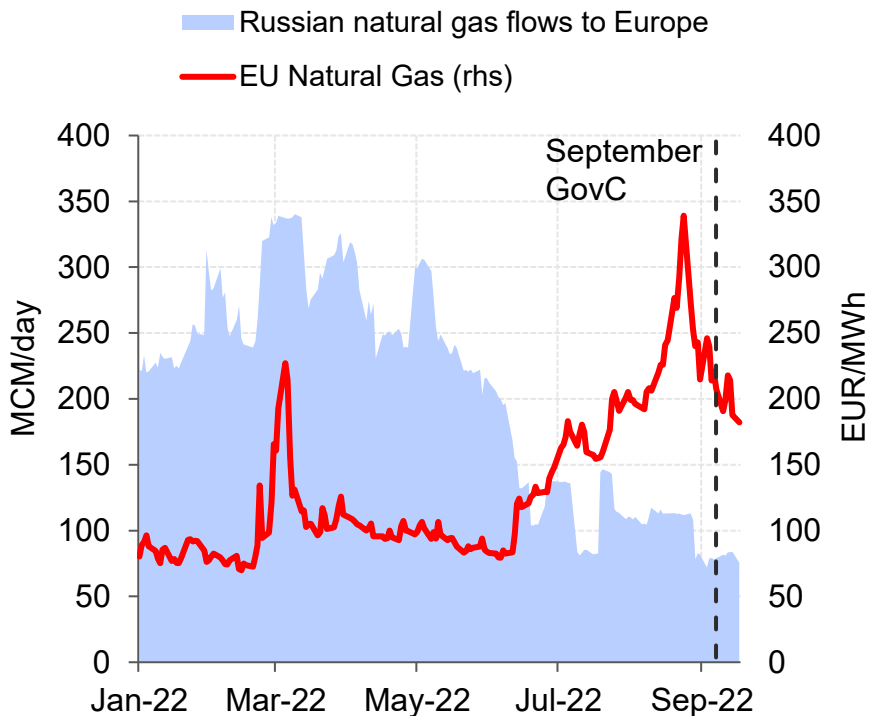
(diffusion index)



Source: S&P Global.
Latest observation: August 2022

Faltering gas supply raises recession concerns amid hit to energy and utilities sector

EU natural gas prices and pipeline flows from Russia to Europe



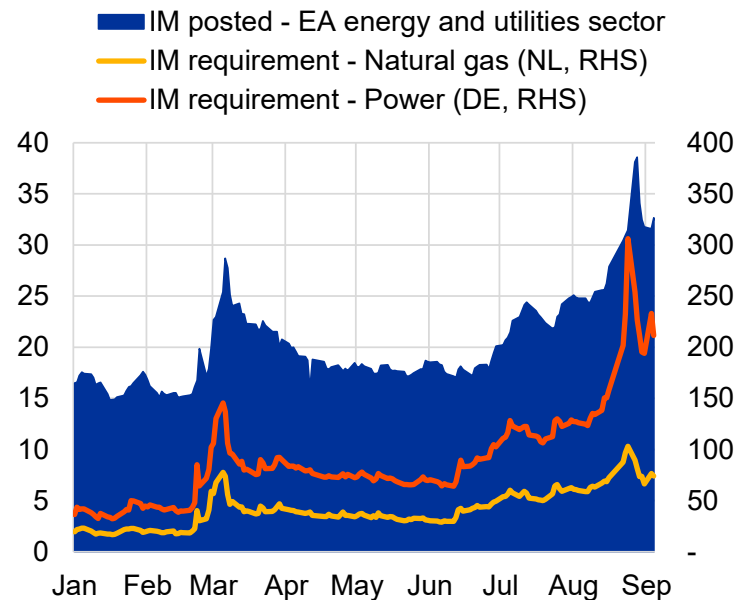
Sources: Bloomberg and ECB calculations.

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: 19 September 2022.

Initial margins posted by energy and utilities sector and initial margin requirements for natural gas and power futures

EUR bln (LHS), EUR/MWh (RHS)



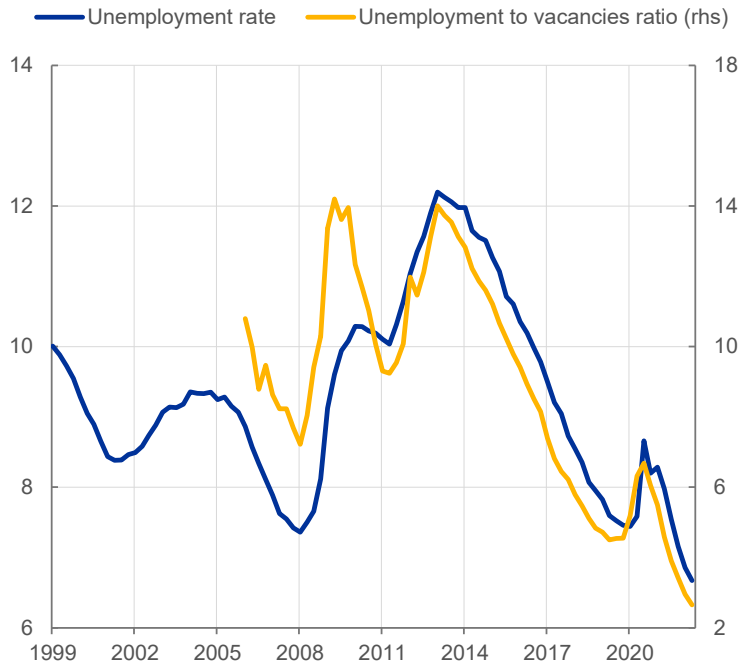
Notes: Initial margin requirements calculated as average for 1-6M Dutch TTF natural gas futures and 1-6M German power base futures. Last update includes 6 September 2022.

Sources: EEX, EMIR, ECB calculations.

Euro area unemployment rate at record low amid a tight labour market

Unemployment and vacancies

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



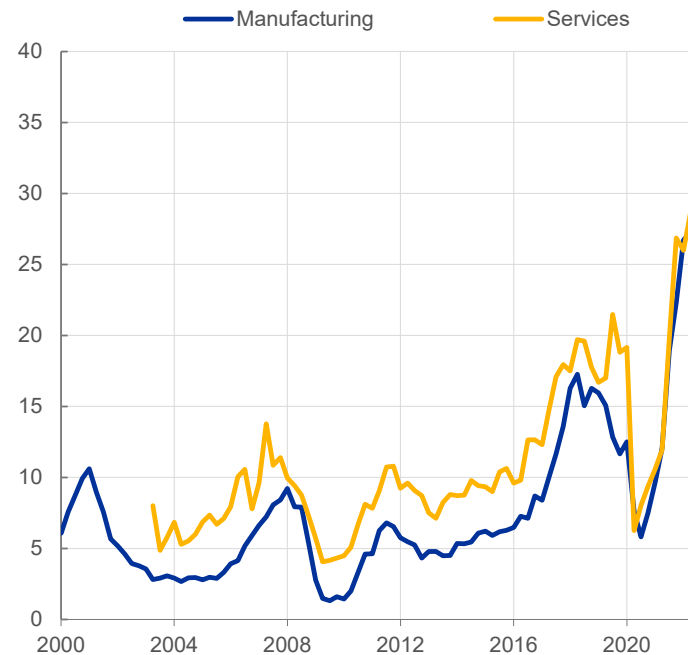
Sources: Eurostat, Haver Analytics and ECB staff calculations.

Notes: Eurostat vacancies are reported only in firms with 10 or more employees in France.

Latest observations: 2022 Q2.

Limits to production – shortage of labour

(percentage balances)



Source: European Commission.

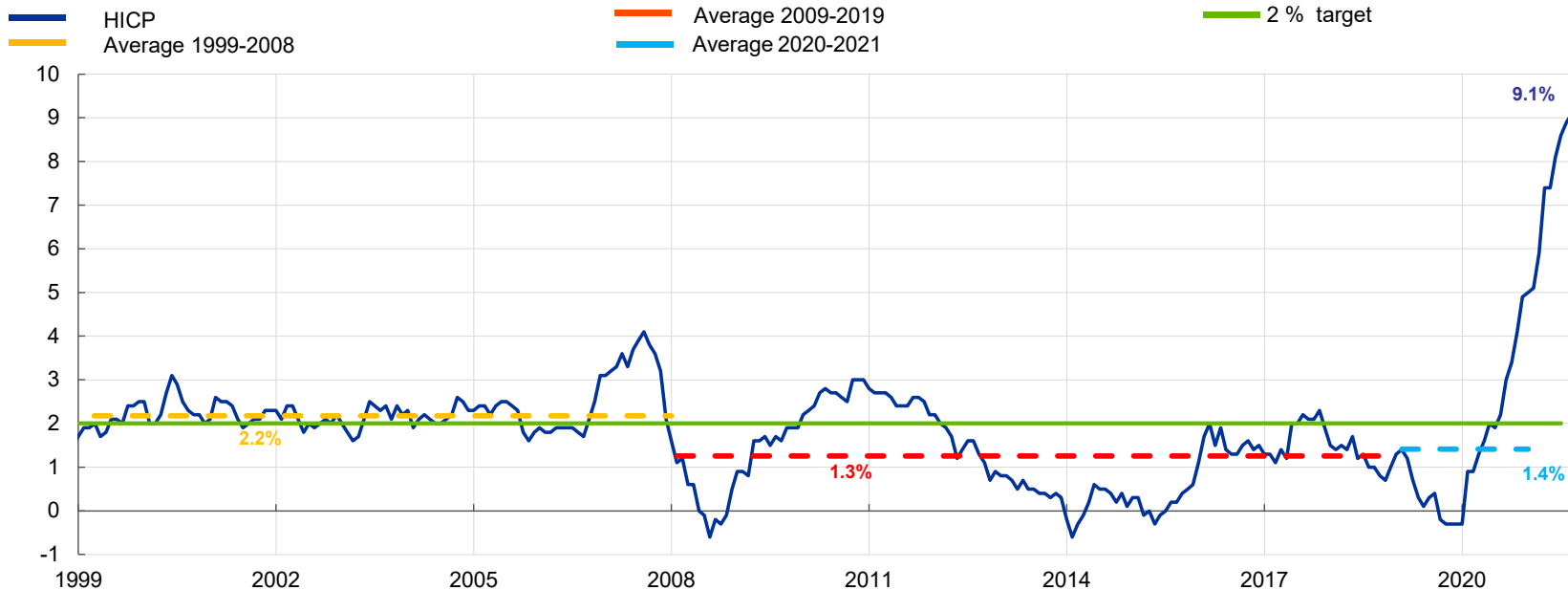
Notes: Survey in industry and the services sector: percentage of firms who indicate labour shortages as limits on production and business.

Latest observation: 2022 Q3 (August 2022).

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

Euro area inflation

(annual percentage changes)

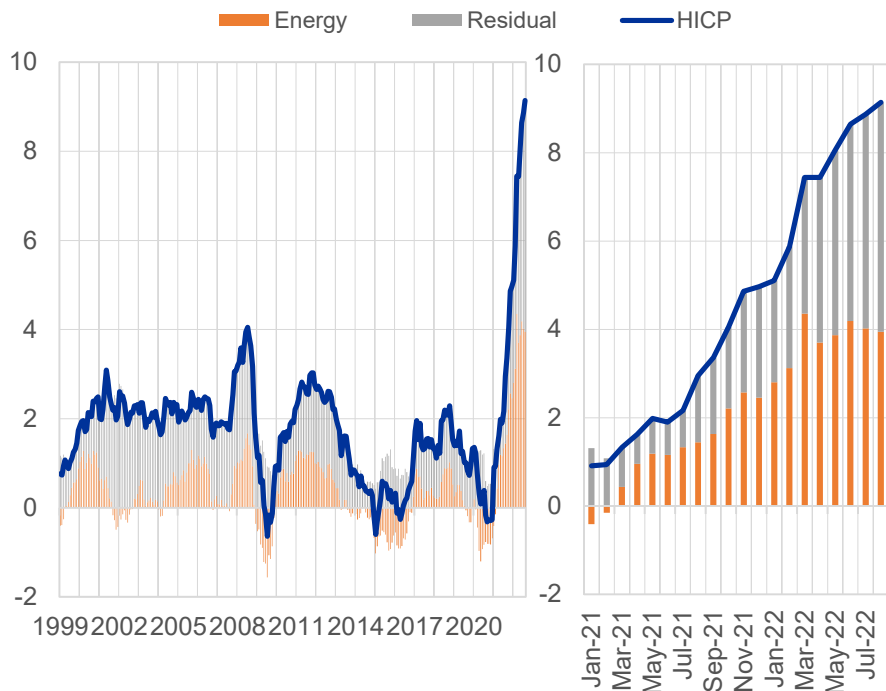


Source: ECB.
Latest observation: August 2022.

Energy is a key contributor to headline inflation in the euro area

Energy contribution to HICP

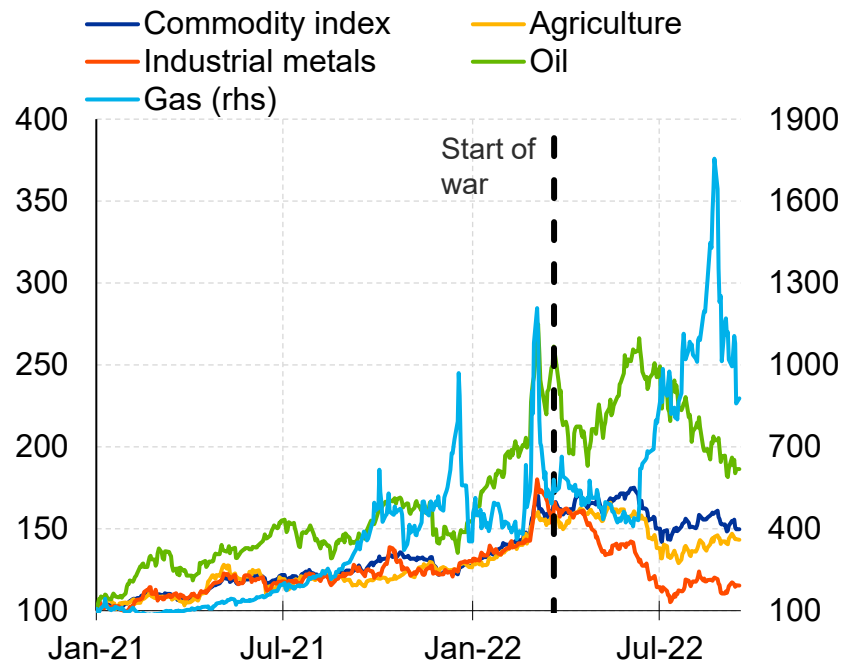
(annual percentage changes; percentage point contributions)



Sources: Eurostat and ECB staff calculations.
Latest observation: August 2022.

Commodity prices

(index: 1 January 2021 = 100)



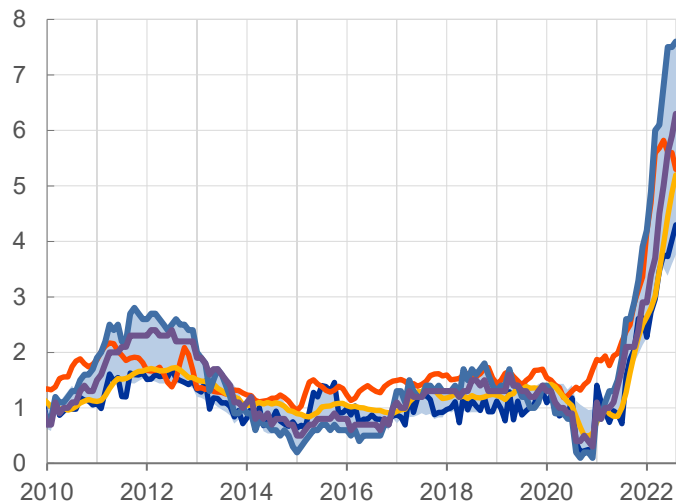
Sources: Bloomberg, Refinitiv and ECB calculations.
Latest observation: 19 September 2022.

Inflation pressures have become broad-based

Measures of underlying inflation

(annual percentage changes)

- HICP excluding energy and food
- PCCI (persistent and common component of inflation)
- Supercore
- Trimmed mean (10%)
- Trimmed mean (30%)

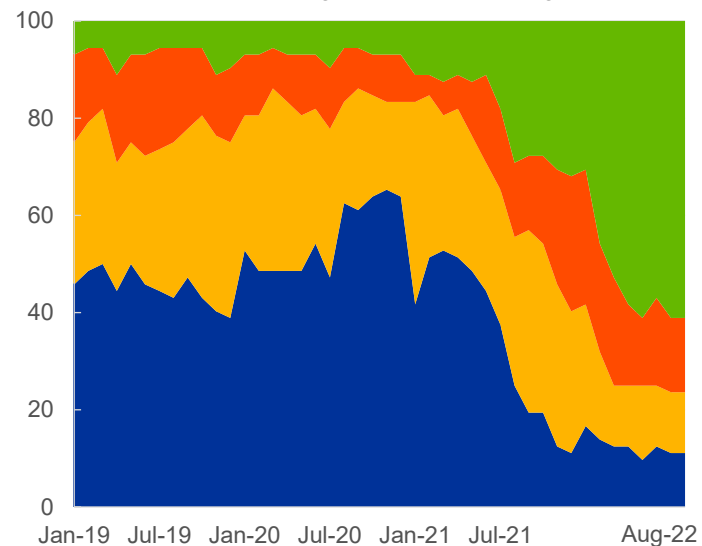


Sources: ECB and ECB staff calculations.
Latest observation: August 2022.

Share of HICP components according to pace of change

(percentage point contributions)

- Below 1%
- Between 1% and 2%
- Between 2% and 3%
- Above 3%

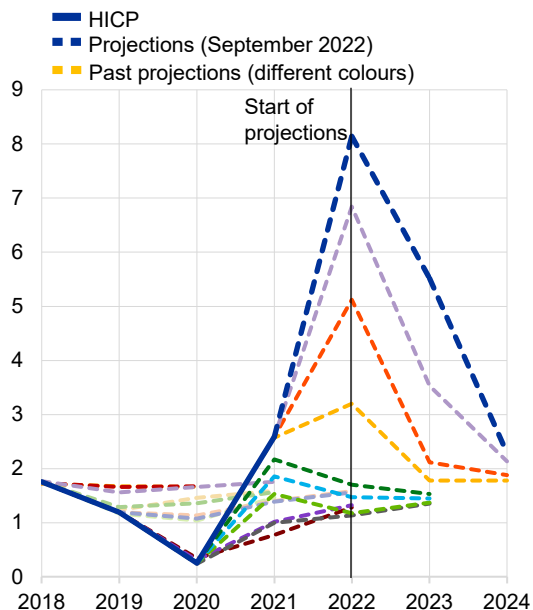


Sources: ECB and ECB staff calculations.
Latest observation: August 2022.

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

Inflation projections – HICP

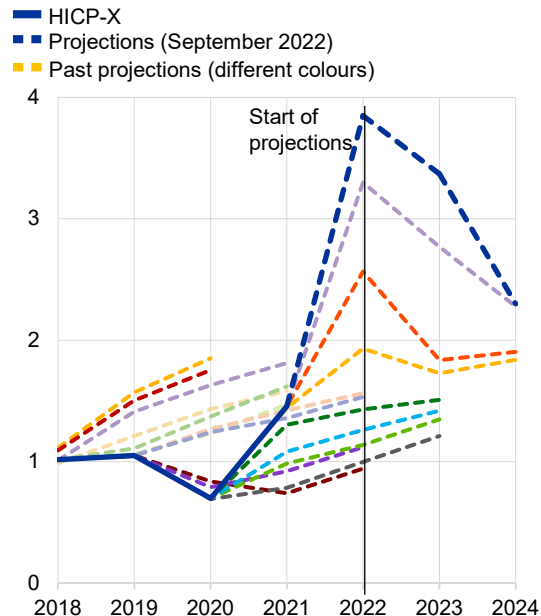
(annual percentage changes)



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

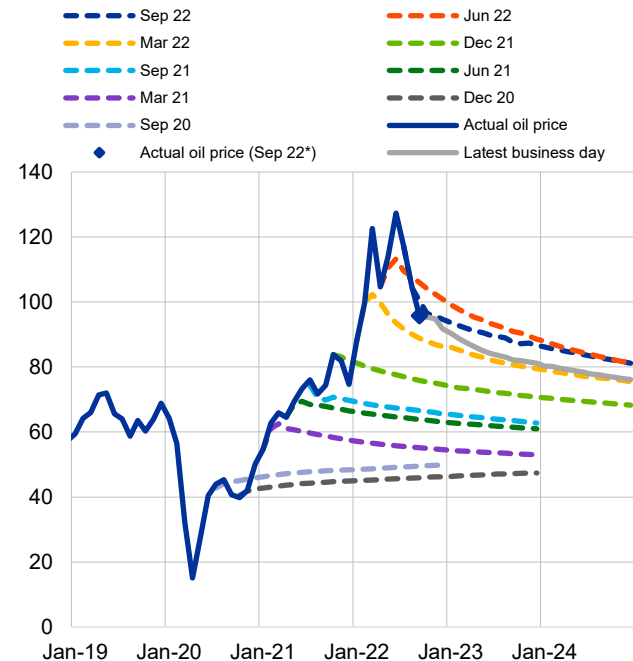
Inflation projections – HICP-X

(annual percentage changes)



Oil prices and assumptions

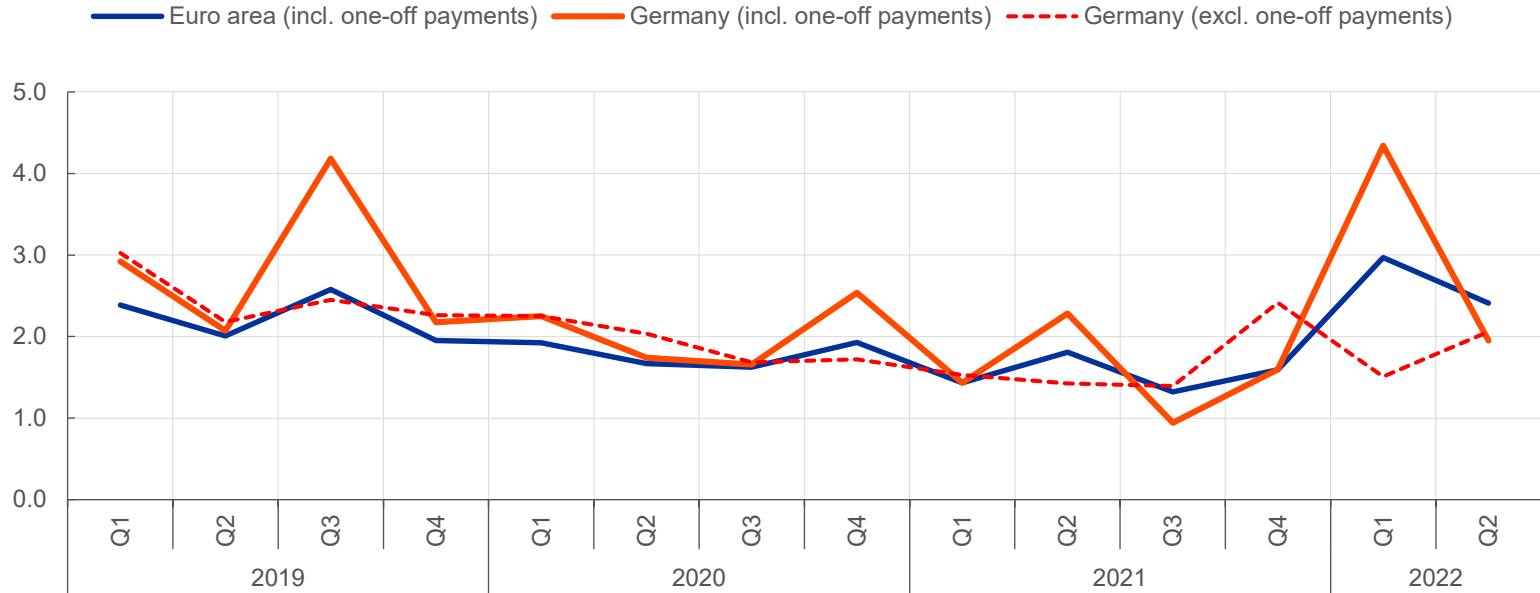
(USD per barrel)



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 September 2022 (1 to 19 September 2022).
Latest observations: August 2022 for monthly data; 19 September 2022 for Sep 2022 (blue diamond) and 19 Sep 2022 for oil price futures (grey line).

No signs of wage-price spiral yet but careful monitoring of wage dynamics

Negotiated wages (annual percentage changes)

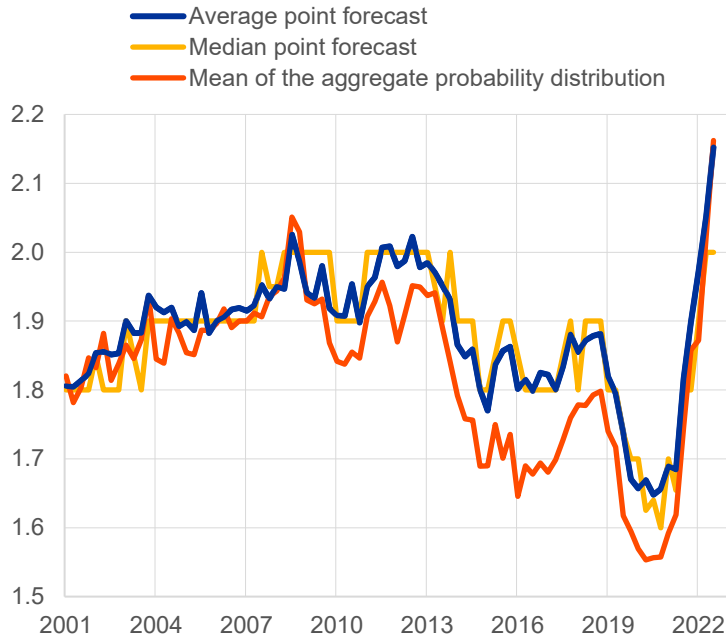


Source: Bundesbank and ECB.
Last observation: Q2 2022.

Rising risks of de-anchoring of inflation expectations

Long-term inflation expectations in Survey of Professional Forecasters

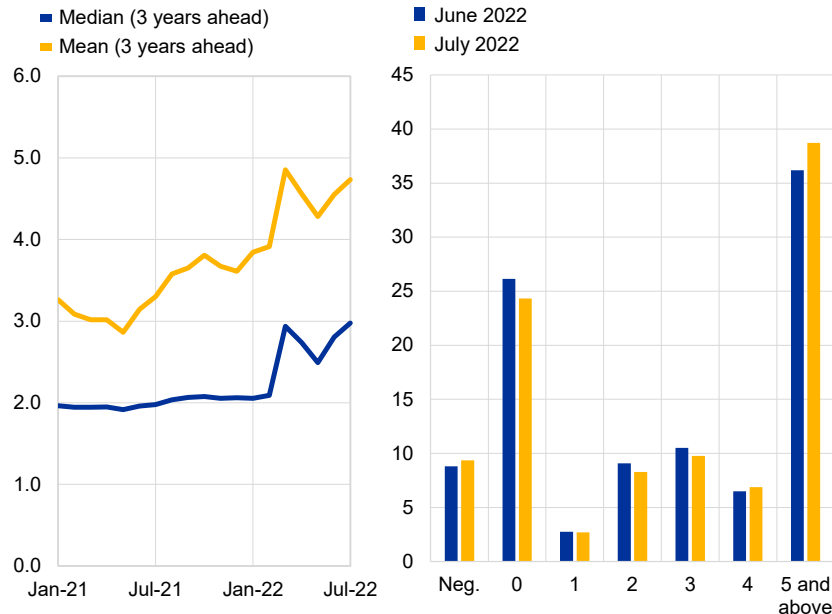
(annual percentage changes)



Sources: ECB SPF.
Latest observations: 2022 Q3 (July).

Inflation expectations in Consumer Expectations Survey

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

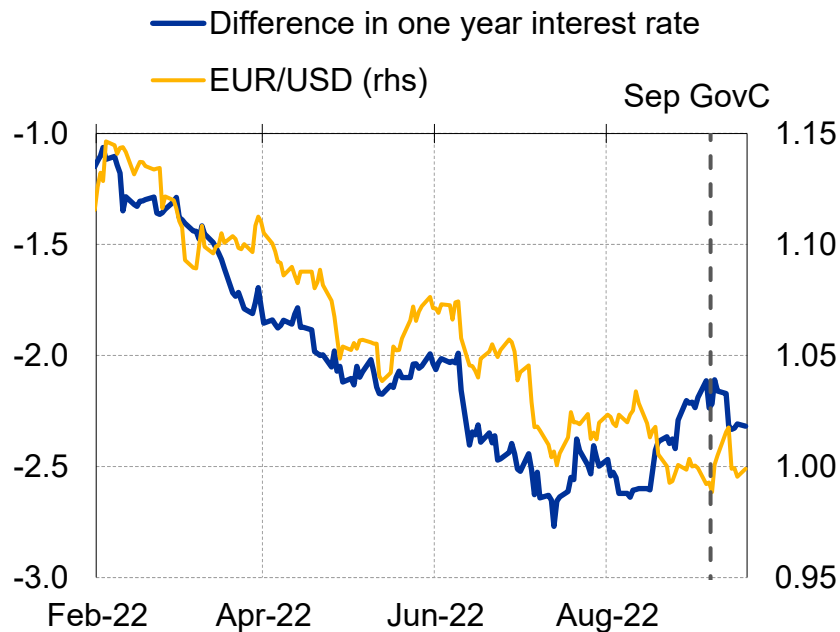


Sources: ECB Consumer Expectations Survey and ECB staff calculations.
Notes: "Median" refers to the median across individual respondents. The data are winsorised at the 2nd and 98th percentile. Mean values are 4.3%, 4.6% and 4.7% for May, June and July respectively. Median values are 2.5%, 2.8% and 3.0% for May, June and July respectively.
Latest observations: July 2022.

Euro depreciated to parity due to divergent policy expectations and growth outlook

EUR/USD and short rate expectations

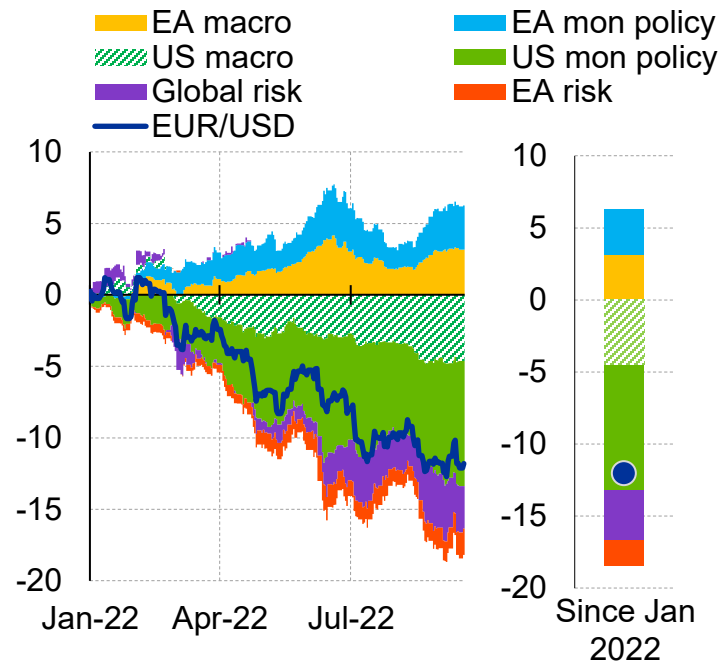
(lhs: differential in 1Y OIS, rhs: EUR/USD)



Source: Bloomberg and ECB.
 Notes: Blue lines depicts the differential of Euro Area and US (EA-US) one-year OIS rates.
 Latest observation: 19 September 2022.

Drivers of EUR/USD

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

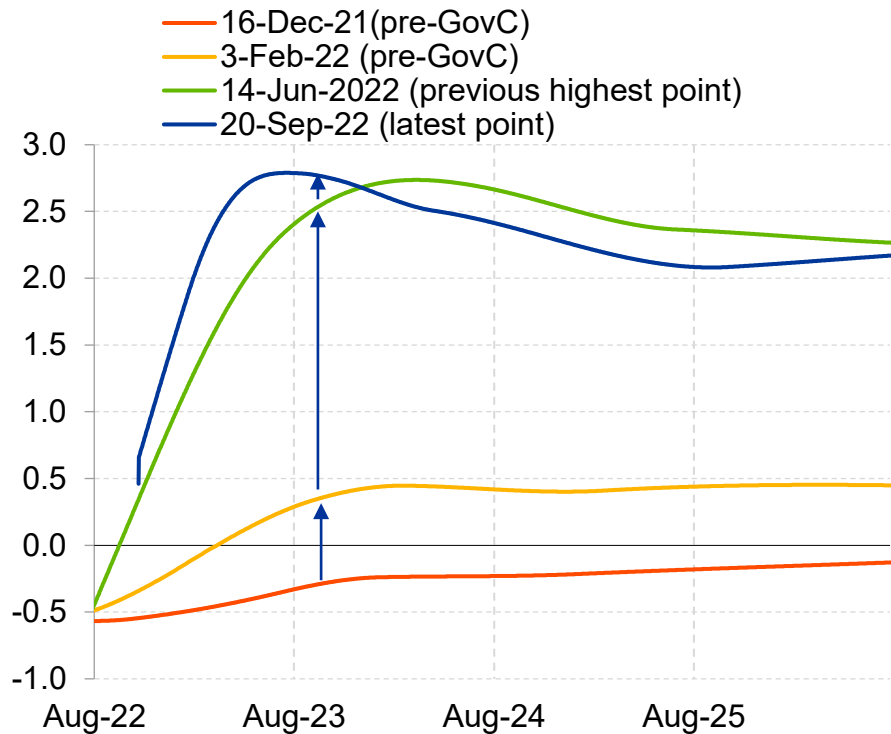


Source: ECB and ECB staff calculations.
 Notes: Based on 2-country BVAR including 10-year EA OIS rate, EA GDP-weighted sovereign spread, EA stock price, EUR/USD, 10-year EA OIS -US Treasury spread & US stock prices. Identification via sign and narrative restrictions & estimated using daily data 2005-22. Decrease denotes a euro depreciation against the US dollar.
 Latest observation: 19 September 2022.

Substantial tightening of monetary policy expectations and financing conditions

EUR OIS forward curve

(percentage per annum)



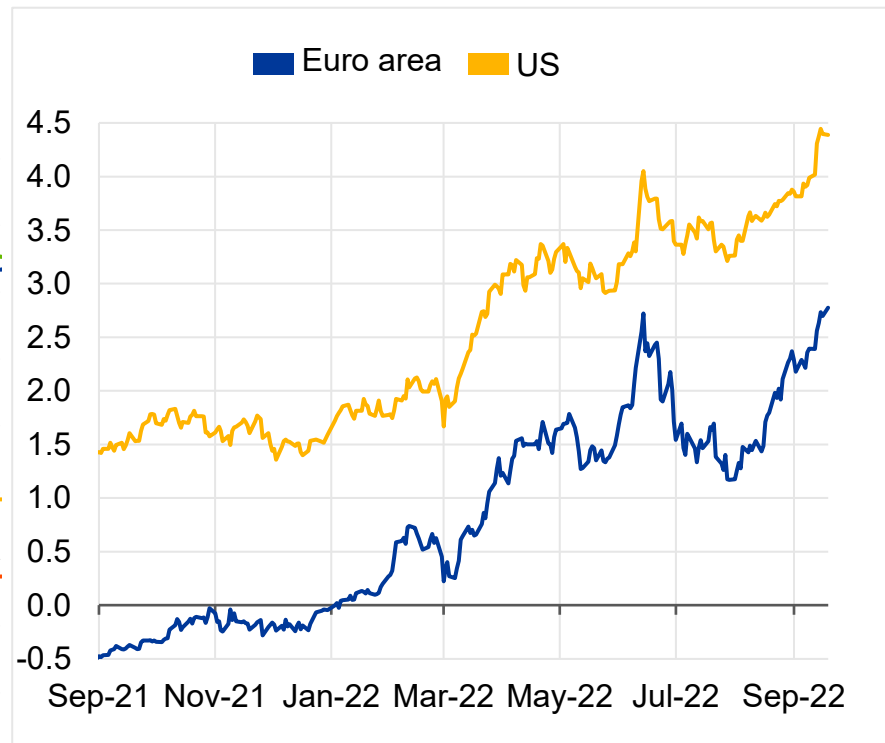
Sources: Bloomberg and ECB.

Note: "GovC" refers to Governing Council meetings.

Latest observation: 20 September 2022.

Market pricing of terminal rate

(percentage per annum)

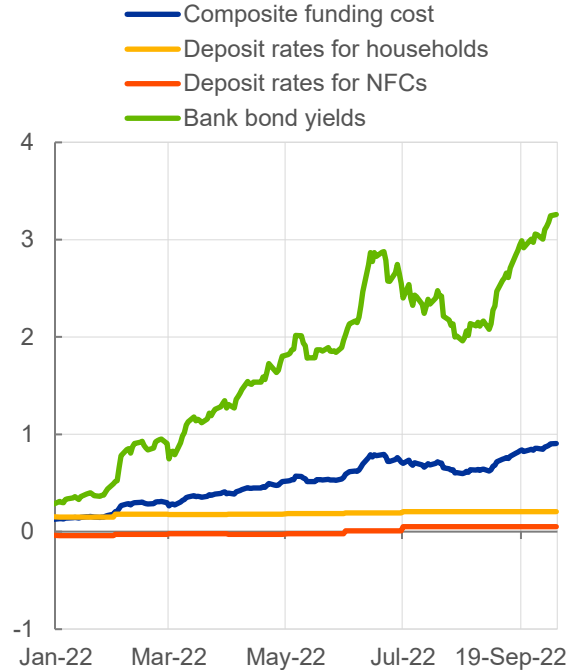


Sources: Morgan Stanley, Bloomberg, ECB and ECB calculations.

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: 19 September 2022.

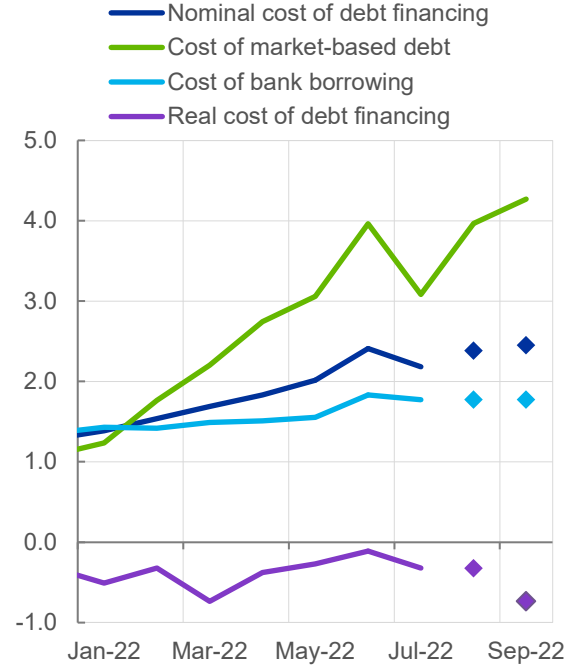
Rising funding costs for banks, corporates and households, but real rates stay low

Composite bank funding costs (% per annum)



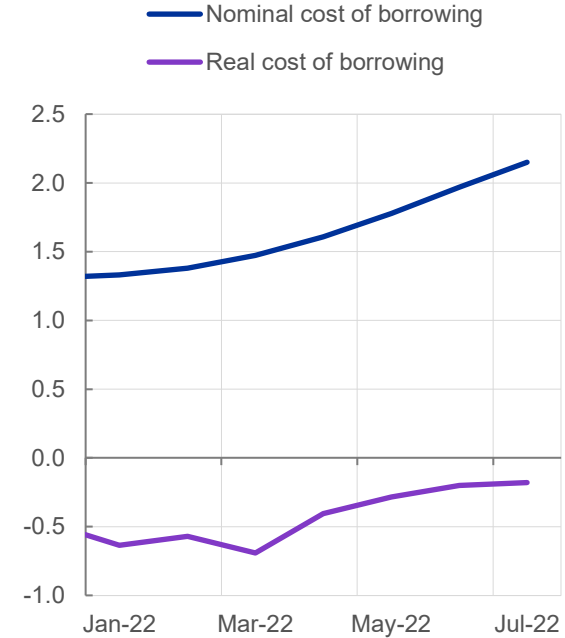
Sources: ECB (MIR, BSI), IHS Markit iBoxx and ECB calculations. Notes: Composite funding cost is the weighted average of the cost of deposits and market debt funding, with the respective outstanding amounts on bank balance sheets used as weights. Deposit rates are on new business. Calculated assuming that deposit rates remain at their July level until 19 September 2022. Latest observations: July 2022 for BSI and MIR; 19 September 2022 for iBoxx.

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



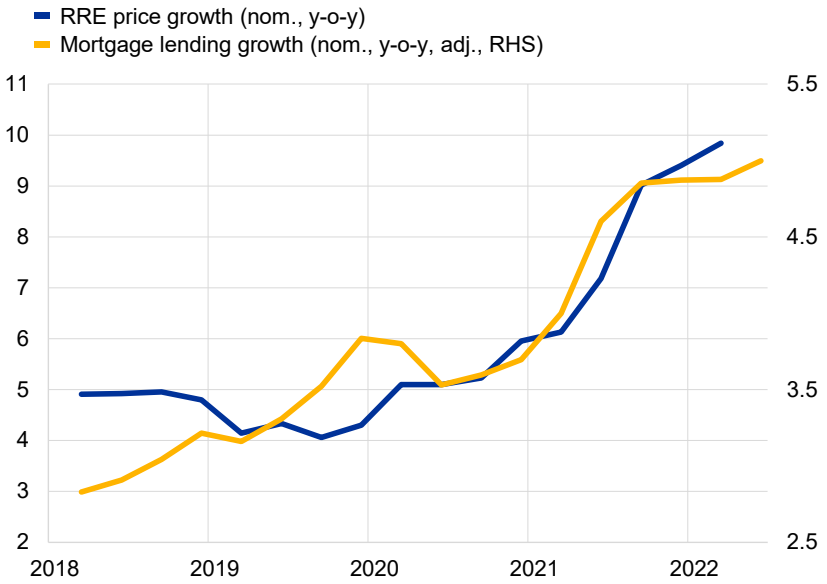
Sources: ECB (MIR, QSA), Merrill Lynch, Refinitiv, Bloomberg, Consensus Economics and ECB calculations. Notes: The diamonds refer to estimates assuming the cost of bank borrowing remained at its July 2022 level in August and September 2022. Latest observations: July 2022 for the nominal and real cost of debt financing and bank borrowing; 19 September 2022 for the cost of market-based debt.

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

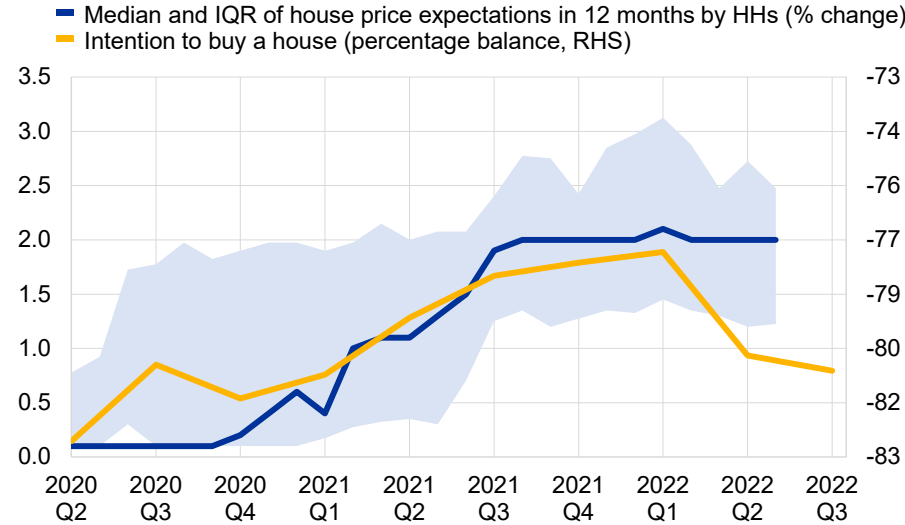


Sources: ECB (MIR), Bloomberg, Consensus Economics and ECB calculations. Notes: The cost of borrowing indicator for households for house purchase is calculated by aggregating short- and long-term rates on new loans for house purchase using a 24-month moving average of new business volumes. Latest observations: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

Euro area RRE prices and mortgage lending (Percentages)



Euro area households' expectations for house prices and intention to buy a house in next 12 months (Percentage; median and interquartile range (IQR))



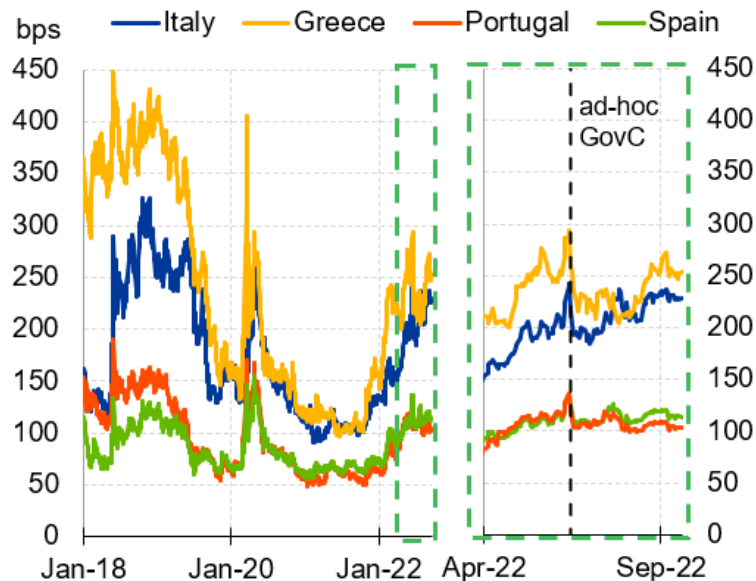
Sources: ECB and ECB calculations.
 Latest observation: RRE price growth (nom., y-o-y) 2022 Q1, Mortgage lending growth (nom., y-o-y, adj., RHS) 2022 Q2.

Sources: CES, European Commission and ECB calculations.
 Latest observation: July 2022 for house price expectations and 2022 Q3 for intention to buy a house.

Sovereign bond spreads have become less sensitive to shifts in rate expectations

Sovereign bond spreads

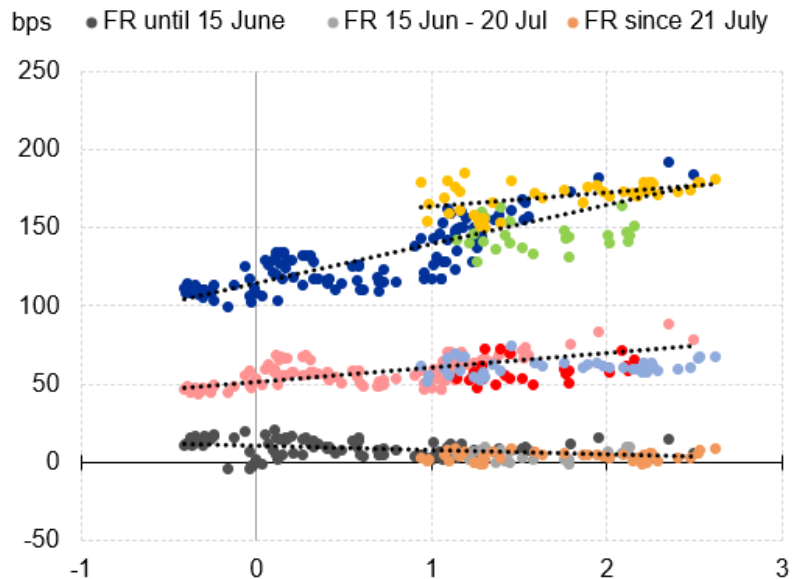
(basis points)



Sources: Bloomberg.
Latest observation: 20 September 2022.

Sensitivity of sovereign bond spreads to rate expectations

- IT until 15 June
- IT 15 Jun - 20 Jul
- IT since 21 July
- ES until 15 June
- ES 15 Jun - 20 Jul
- ES since 21 July
- FR until 15 June
- FR 15 Jun - 20 Jul
- FR since 21 July

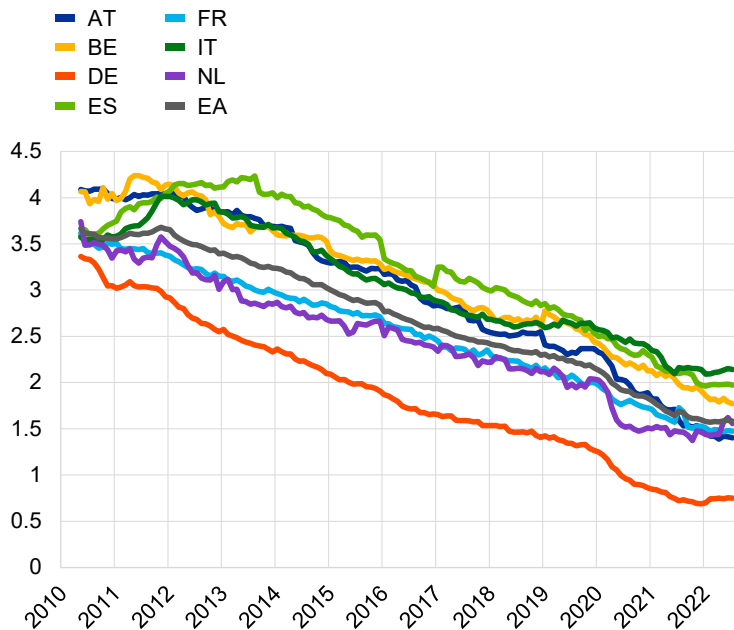


Sources: Bloomberg, ECB calculations.
Latest observation: 20 September 2022.

Public debt sustainability hinges more on economic growth than interest rates

Average nominal sovereign yields on total government debt securities

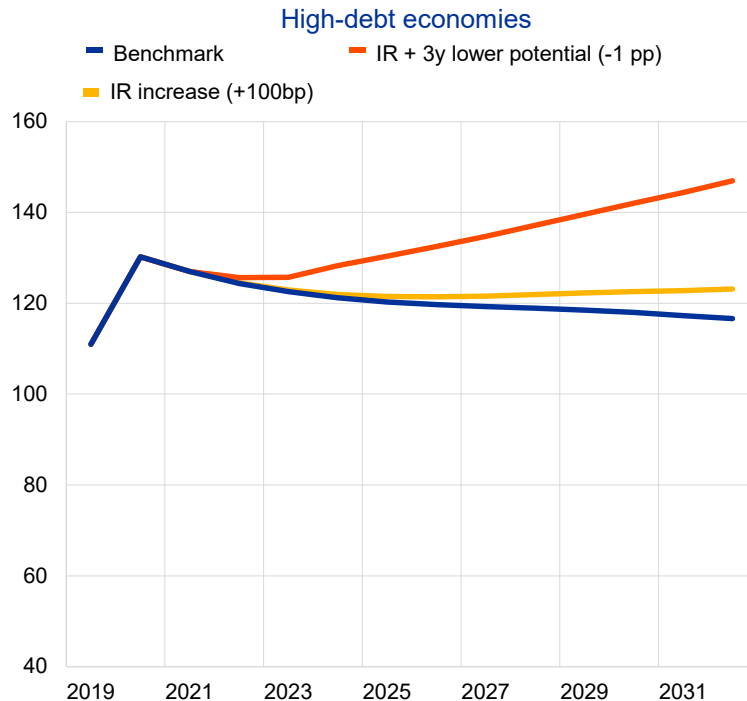
(percentage points)



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

Impact of an interest rate 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.

Thank you very much for your attention!