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# **The recent surge in inflation in the euro area and the ECB policy reaction**

**25<sup>th</sup> Annual DNB Research Conference**

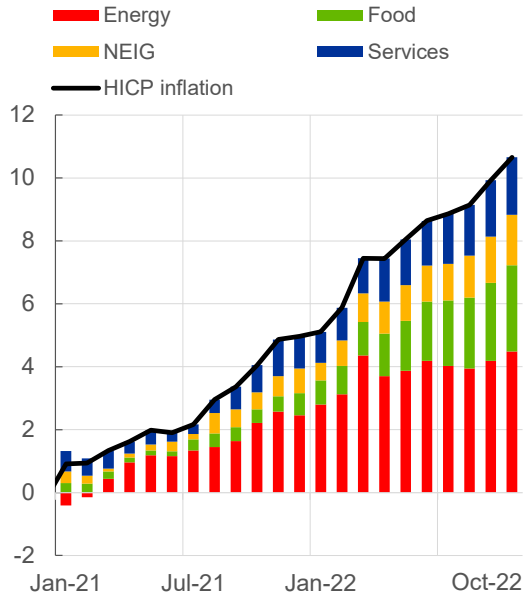
**“Inflation Strikes Back: Drivers and Policy Reactions”**

**Amsterdam, 10 November 2022**

# Inflation on the rise, driven by energy and food, but broadening

## Headline inflation

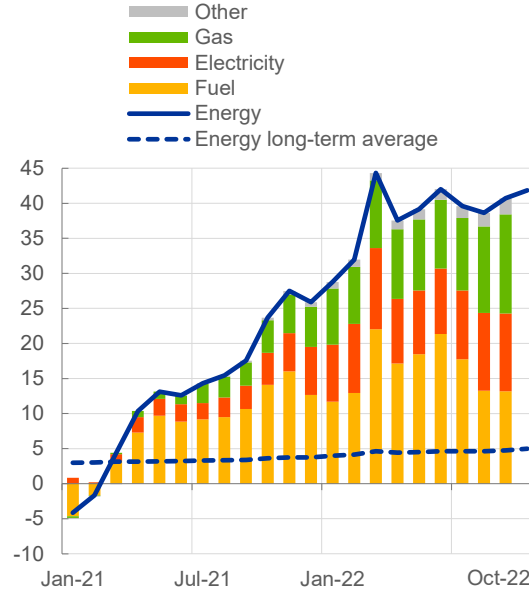
(annual percentage changes; pp contributions)



Sources: Eurostat and ECB staff calculations.  
Latest observations: October 2022 (flash).

## Energy inflation decomposition

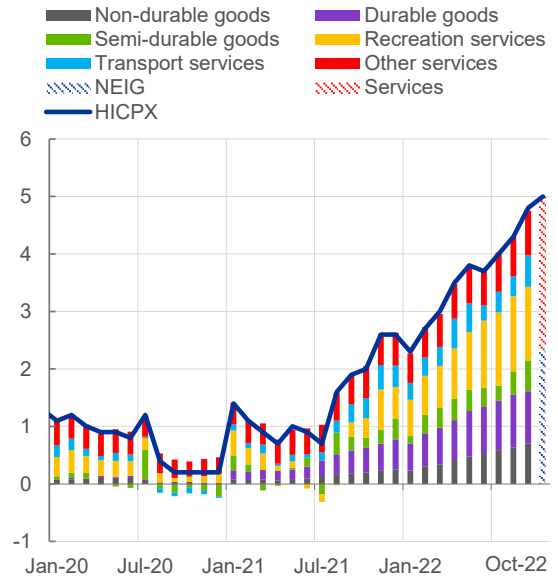
(annual percentage changes; pp contributions)



Sources: Eurostat and ECB staff calculations.  
Latest observations: October 2022 (flash) for energy, September 2022 for the rest.

## Contributions to changes in core inflation

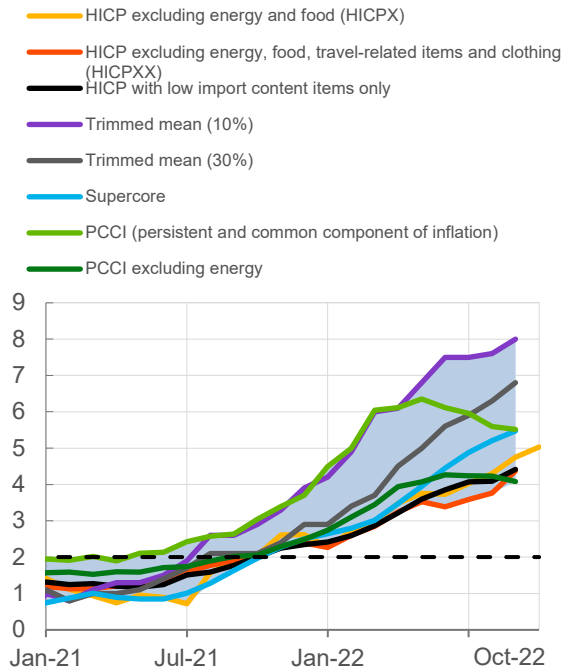
(annual percentage changes; pp contributions)



Sources: Eurostat and ECB calculations.  
Notes: Other services includes communication, miscellaneous and housing services. For September 2022, the sum of recreation services and durable goods is 2.2 percentage points. Latest observation: October 2022 (flash) for HICPX, NEIG and services, September 2022 for the rest

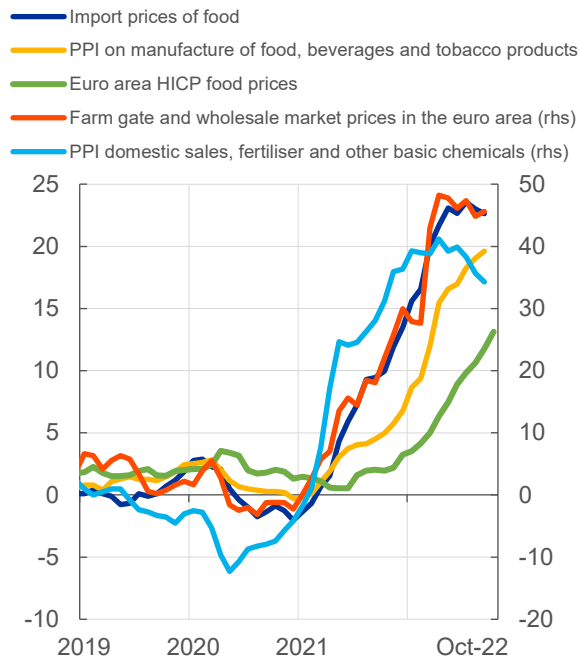
# Pipeline pressures remain extraordinarily high, with some signs of levelling-off

## Indicators of underlying inflation (annual percentage changes)



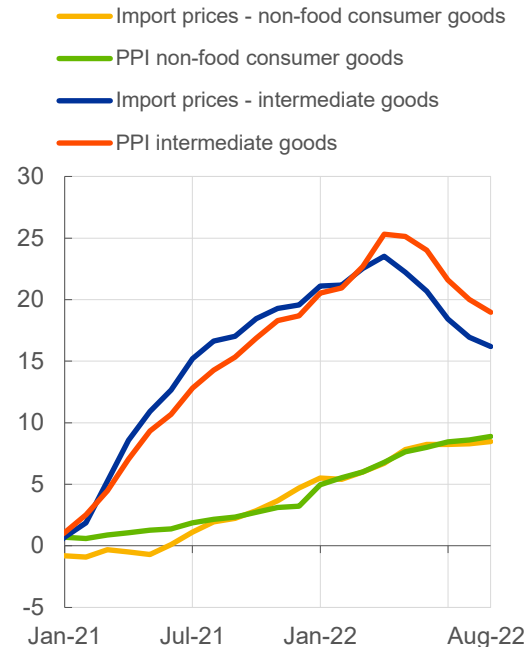
Sources: Eurostat and ECB calculations.  
Latest observation: October 2022 (flash) for HICPX, September 2022 for the rest.

## Pipeline pressures for food prices (annual percentage change)



Source: Eurostat.  
Latest observations: October 2022 (flash) for euro area HICP food prices, September 2022 for the rest.

## Pipeline pressures for HICP NEIG inflation (annual percentage change)

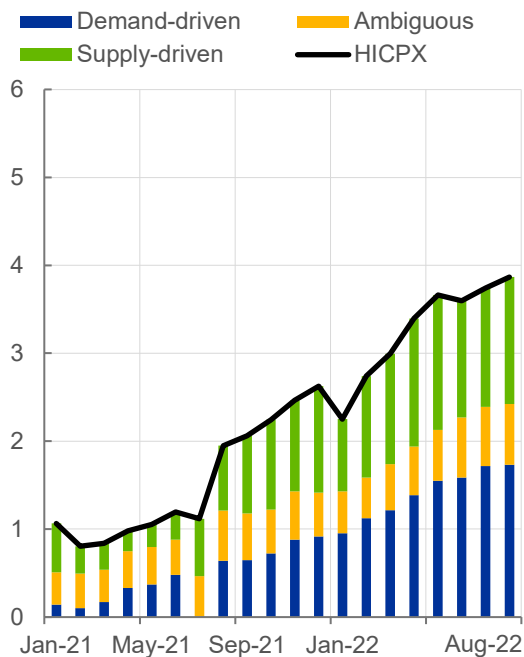


Sources: Eurostat and ECB calculations.  
Latest observations: September 2022.

# Both supply and demand drive core inflation; energy plays a key role also in core inf.

## HICPX inflation – decomposition into supply and demand-driven factors

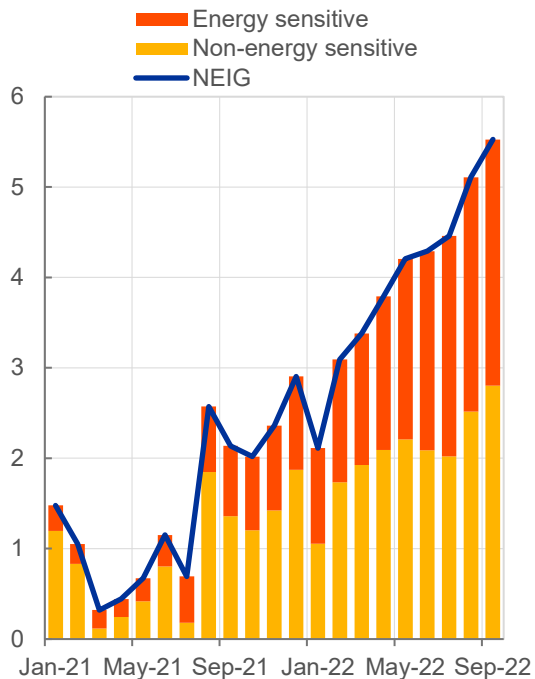
(annual percentage changes)



Sources: Eurostat and ECB calculations. Notes: Seasonally adjusted data. Based on Adam Shapiro (2022). HICPX inflation is the sum of demand-driven, supply-driven and ambiguous components, calculated as the trailing sum of the last 12 monthly contributions. While price data are available for September 2022, the latest observation is for August 2022 as the turnover series used as a proxy for activity are published with some delay. Latest observation: August 2022.

## NEIG inflation

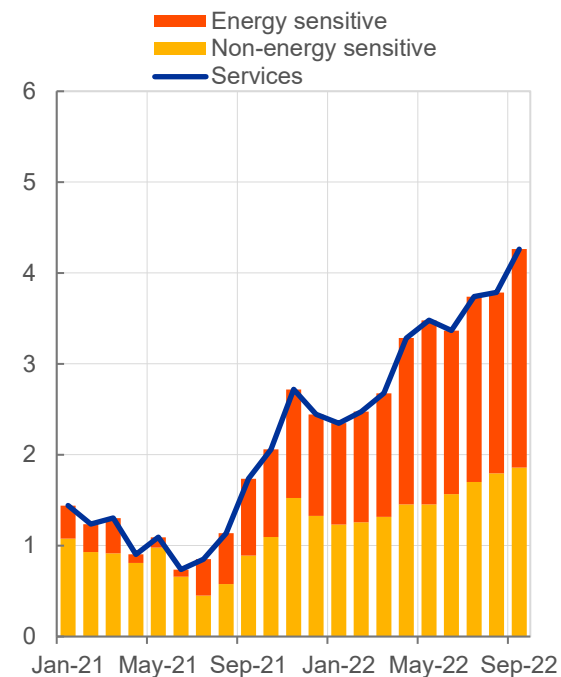
(annual percentage changes)



Sources: Eurostat and ECB staff calculations. Note: Energy sensitive component based on items with a share of energy in direct costs above the average energy share across all services items. Latest observation: September 2022.

## Services inflation

(annual percentage changes and percentage point contributions)

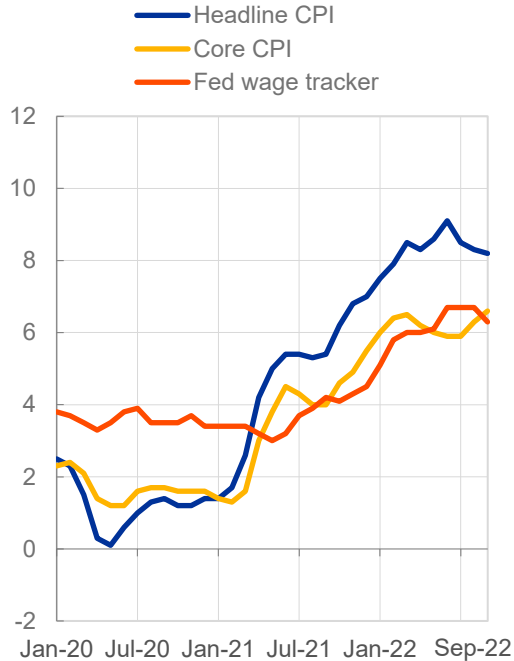


Sources: Eurostat and ECB staff calculations. Note: Energy sensitive component based on items with a share of energy in direct costs above the average energy share across all NEIG items. Latest observation: September 2022.

# Inflation and wage growth: euro area and US

## US: CPI inflation and Fed wage tracker

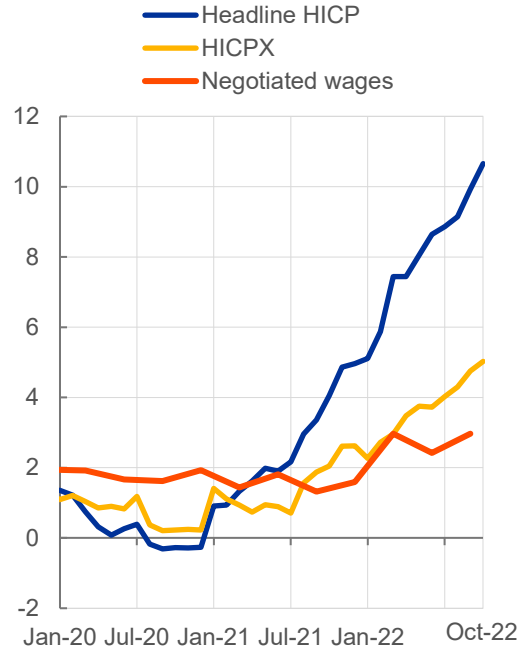
(annual percentage changes)



Sources: Bureau of Labor Statistics and Atlanta Fed.  
Latest observation: September 2022.

## Euro area: HICP inflation and negotiated wages

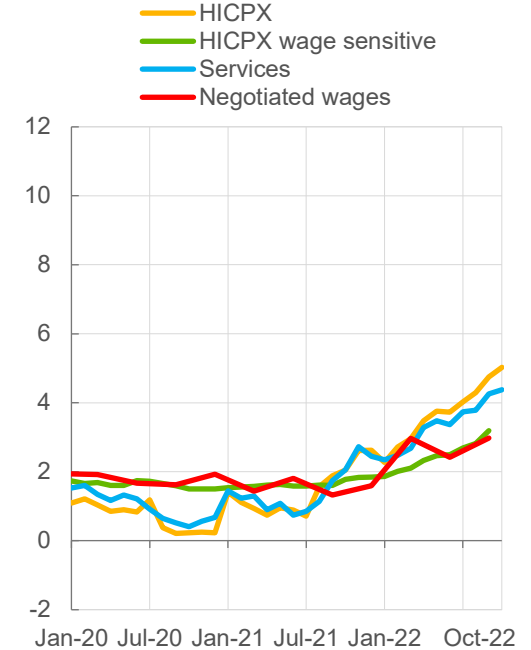
(annual percentage changes)



Sources: Eurostat and ECB calculations.  
Note: Negotiated wages at quarterly frequency.  
Latest observations: October 2022 (flash) for HICP data and 2022 Q3 for negotiated wages (based on July and August data).

## Euro area: inflation of wage sensitive items

(annual percentage changes)



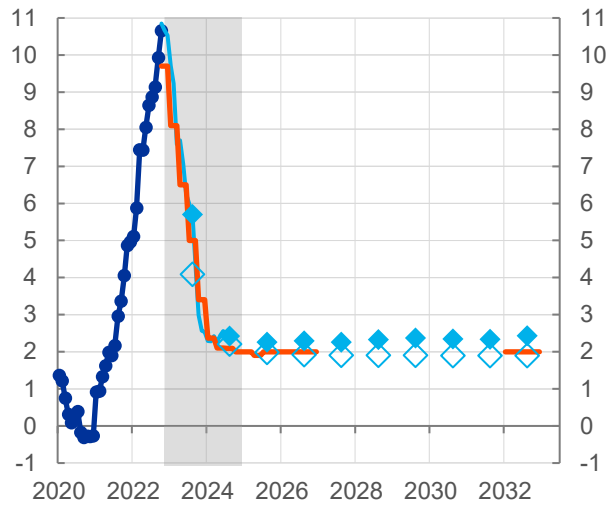
Sources: Eurostat and ECB calculations.  
Note: Negotiated wages at quarterly frequency. HICPX wage sensitive items are a composite measure based on items with a share of wages in direct costs above 40%.  
Latest observations: 2022 Q3 for negotiated wages (based on July and August data), September 2022 for HICPX wage sensitive and October 2022 (flash) for the rest.

# Market & surveys measures of inflation expectations broadly see a return to 2% in 2024

## Market-based measures of inflation compensation and surveys

(annual percentage changes)

- y-o-y HICP inflation
- ◇ Premia-adjusted 1-year forward ILS rates (latest)
- ◆ 1-year forward ILS rates (latest)
- Fixings (latest)
- SMA median (October 22)

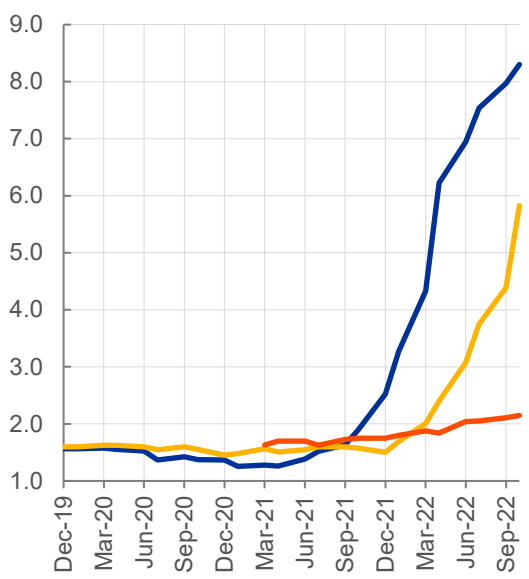


Sources: Bloomberg, Refinitiv and ECB calculations.  
 Notes: Premia-adjusted forward ILS rates are average estimates from two affine term structure models as in Joslin, Singleton and Zhu (2011); see Burban et al. (2022). The grey area refers to the projection horizon ending in December 2024.  
 Latest observation: 4 November 2022.

## SMA: HICP inflation projections over survey rounds

(indices)

- 2022
- 2023
- 2024

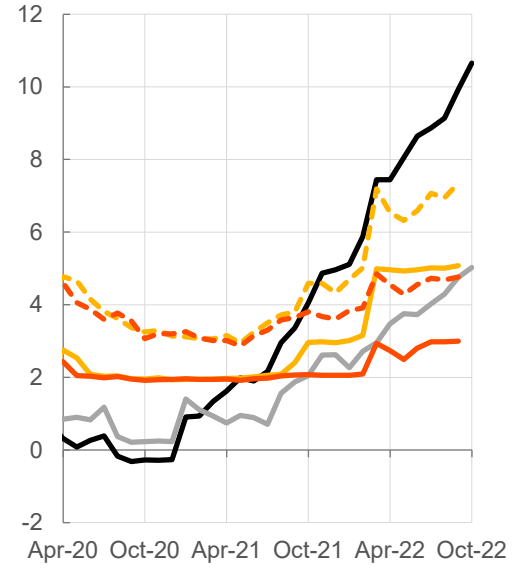


Source: SMA (all vintages from December 2019 until October 2022).  
 Note: Number of respondents in October 2022 SMA is 28.  
 Latest observation: October 2022 SMA.

## ECB consumer expectations survey (CES)

(annual percentage changes)

- Headline HICP
- HICP excluding energy and food (HICPX)
- Inflation exp. one year ahead - median/mean
- Inflation exp. three year ahead - median/mean



Source: ECB Consumer Expectations Survey (CES).  
 Note: Dashed lines represent the mean and solid line the median.  
 Latest observations: October 2022 (flash) for HICP(X). CES data from September 2022 round.

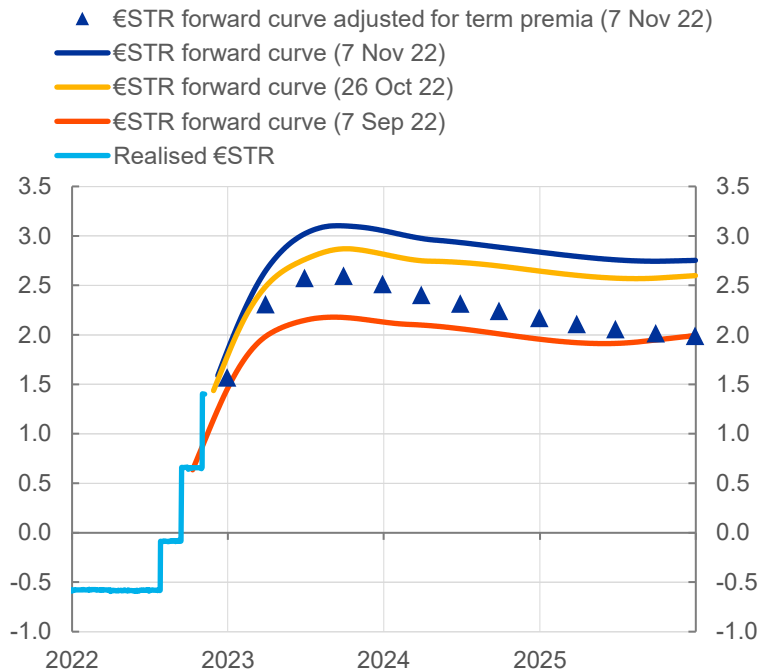
# Recent ECB monetary policy decisions: Ongoing normalization

- December 2021: announcement of end of PEPP net asset purchases
- 31 March 2022: end of PEPP net purchases
- 1 July 2022: end of APP net purchases
- 21 July 2022: first rate increase, by 50bp and introduction of TPI
- 8 September 2022: second rate increase, by 75bp
- 27 October 2022:
  - i) third rate increase, by 75bp
  - ii) change the terms and conditions of TLTRO III to ensure consistency with the MP normalisation process and to reinforce the transmission of policy rate increases to bank lending conditions (recalibrated interest rates and additional voluntary early repayment dates)
  - iii) remuneration of minimum reserves at the ECB's deposit facility rate

- **The GovC expects to raise interest rates further to ensure the timely return of inflation to 2%**
- **The GovC will base the future policy rate path on the evolving outlook for inflation and the economy, following its meeting-by-meeting approach**

## €STR forward curve

(percentage per annum)



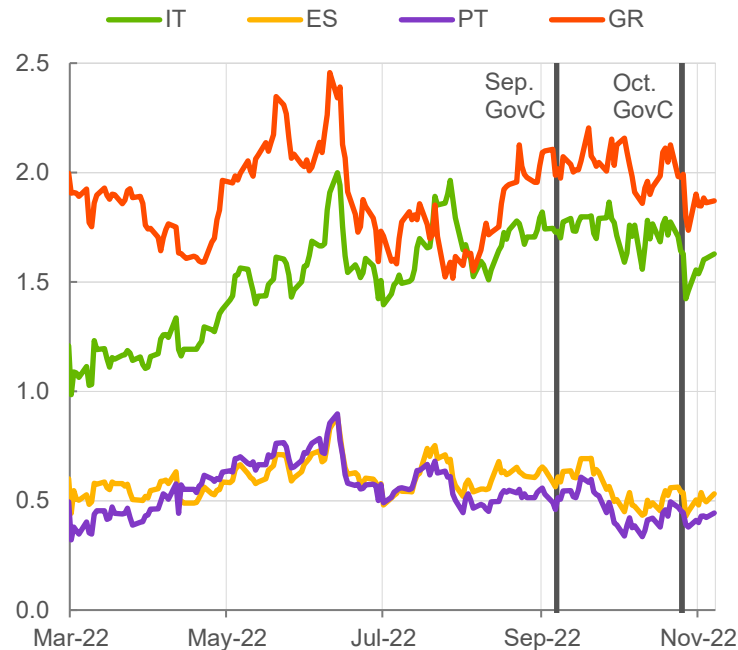
Sources: Bloomberg, Refinitiv and ECB calculations.

Notes: Model estimates are built on the term premium-adjusted forward curve based on an affine and a lower bound term structure model incorporating survey information on interest rate expectations.

Latest observation: 7 November 2022 for realised €STR.

## 10-year sovereign spread vs OIS rates

(percentage per annum)



Sources: Refinitiv, Bloomberg and ECB calculations.

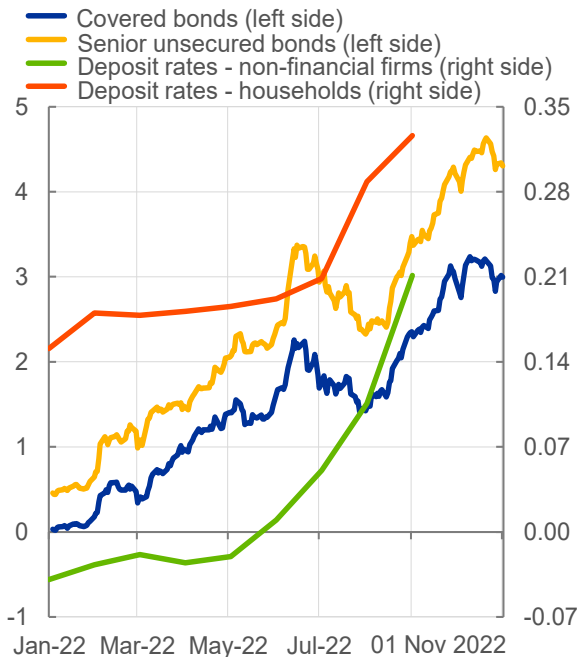
Notes: The spread is the difference between individual countries' 10-year sovereign yields and the 10-year OIS rate. The solid vertical lines refer to the days before the September GovC (7 Sep) and October GovC (26 Oct), respectively.

Latest observation: 7 November 2022.

# Bank funding costs and lending rates to firms and households increasing

## Developments in marginal bank funding costs

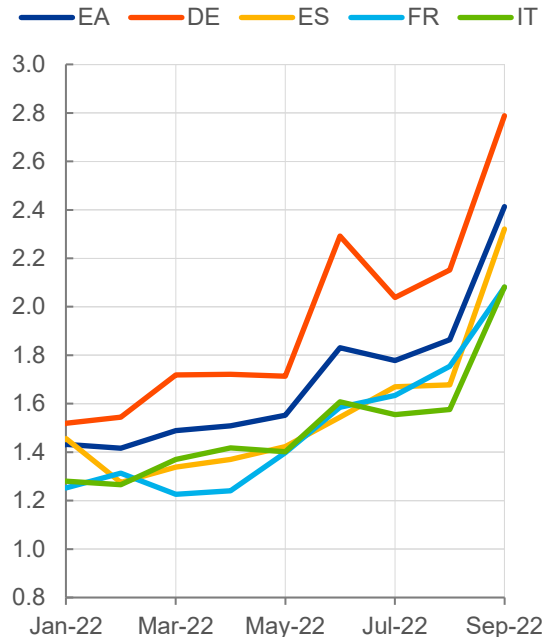
(percentages per annum)



Sources: ECB (BSI, MIR), IHS Markit iBoxx and ECB calculations.  
 Notes: Daily bank bond yields. Monthly deposit rates on new business volumes weighted by outstanding amounts.  
 Latest observations: 01 November 2022 for bank bonds, September 2022 for deposit rates.

## Lending rates to NFCs across countries

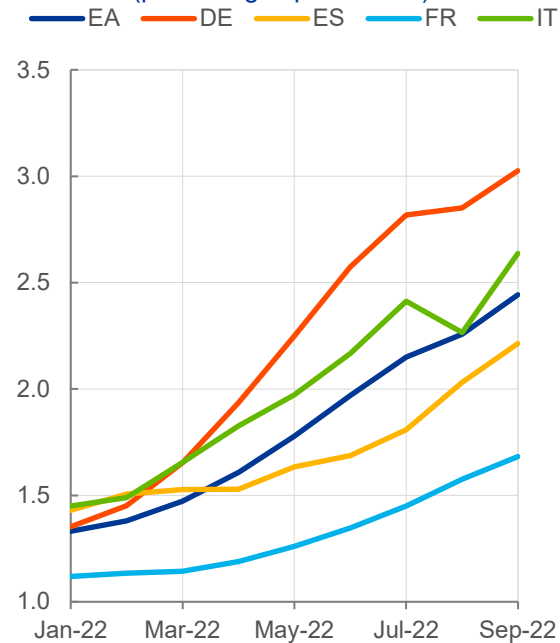
(percentages per annum)



Source: ECB (MIR).  
 Note: The indicator for the total cost of borrowing for firms is calculated by aggregating short-term and long-term rates using a 24-month moving average of new business volumes.  
 Latest observation: September 2022.

## Lending rates to households for house purchase across countries

(percentages per annum)



Source: ECB (MIR).  
 Note: The indicator for the total cost of borrowing for households for house purchase is calculated by aggregating short-term and long-term rates using a 24-month moving average of new business volumes.  
 Latest observation: September 2022.

**Thank you for your attention!**