Energy shocks, inflation and monetary policy

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Capire l'inflazione

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Usual disclaimer applies

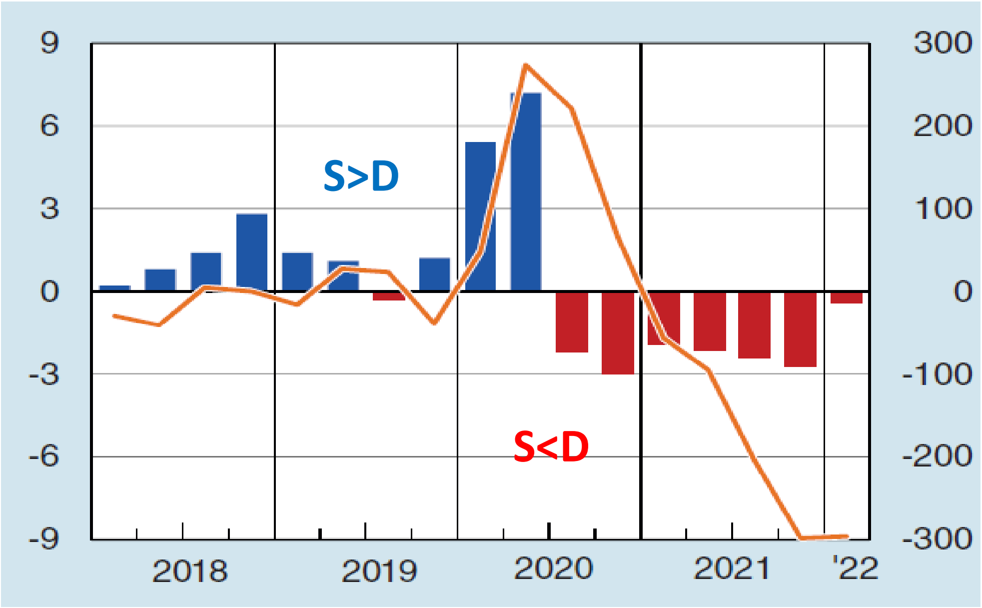
Outline

1. The energy shock
2. The inflation surge
3. The ECB's monetary policy

The energy shock - 1

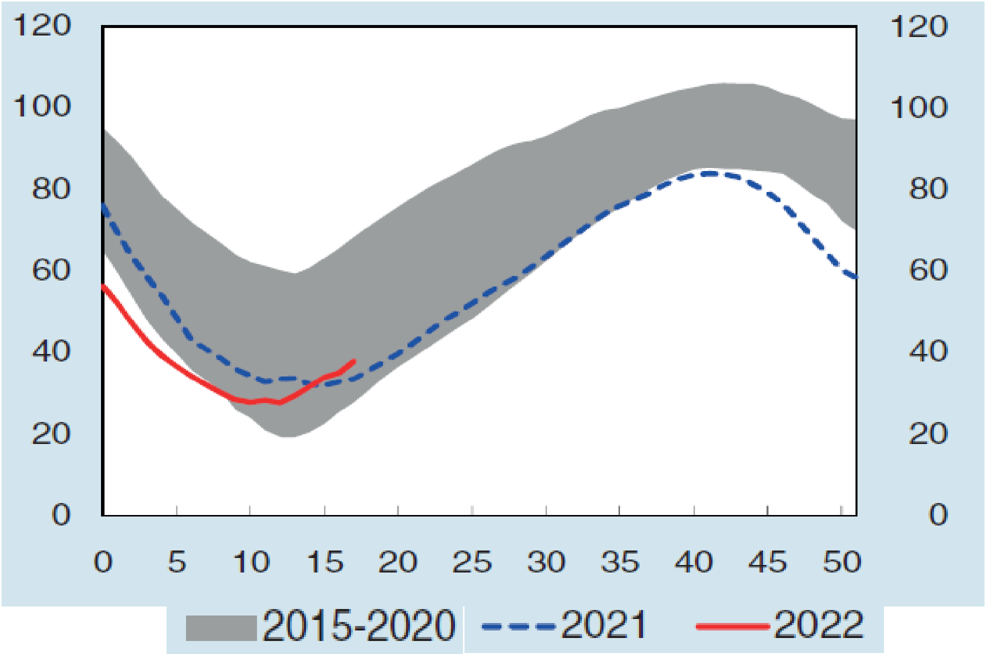
Supply and **demand** imbalance and **inventories**

(million barrels per day and million barrels)



European gas inventories

(billion m^3)



Source: Annual report 2021, Banca d'Italia

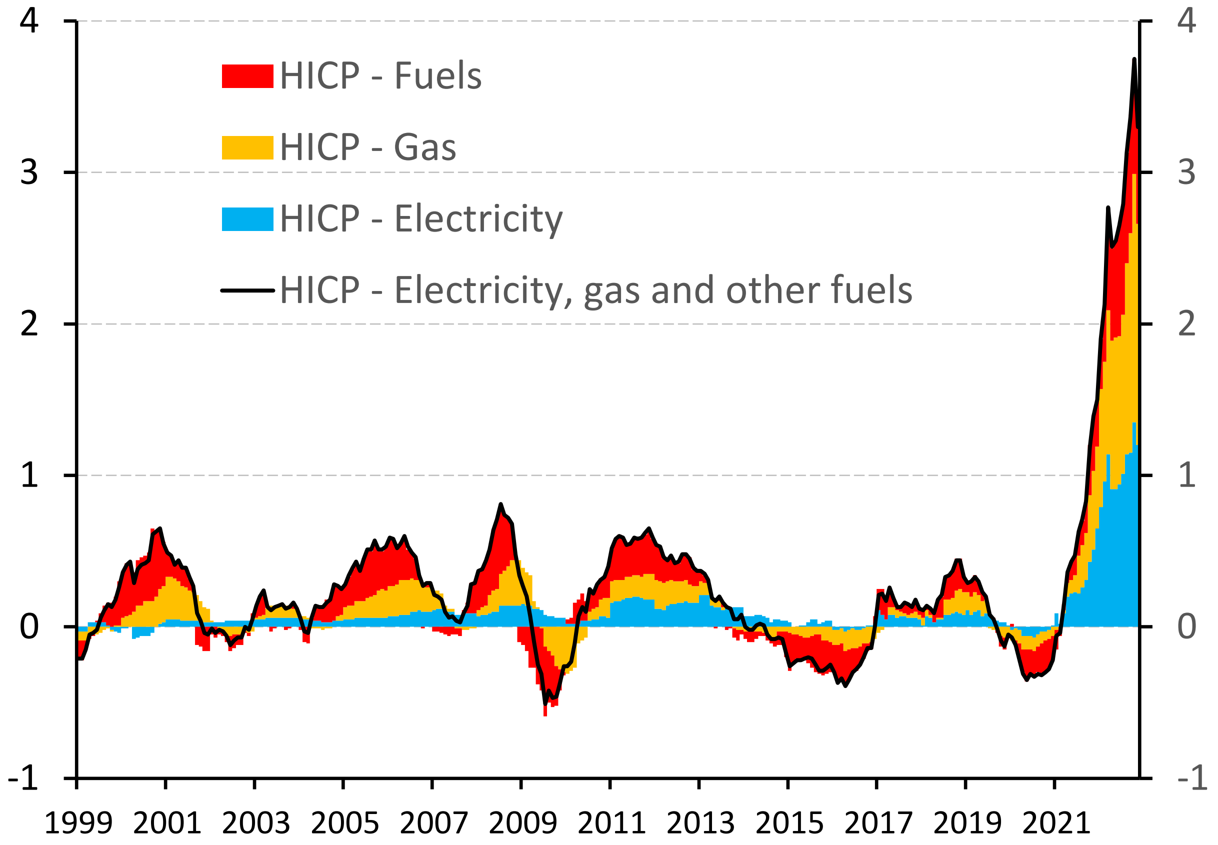
- Strong increase in oil prices in 2021 as global demand increased due to reopening of economies and substitution of natural gas with oil. Supply/demand imbalance led to record low inventories
- Demand for gas increased substantially in 2021 due to re-opening of economies, adverse weather conditions and acceleration of substitution of coal with gas in China
- Tensions between Europe and Russia led to low gas storage and sharply increasing prices

The energy shock - 2

- Surge in energy prices caused a pronounced increase in euro-area energy component of headline inflation in 2021 and 2022
- Russian invasion of Ukraine added further pressure on gas prices
- Spike in energy inflation is unprecedented since beginning of monetary union
- Current situation very different from 70s

Energy contribution to HICP

(percentage point)



Source: ECB Statistical Data Warehouse

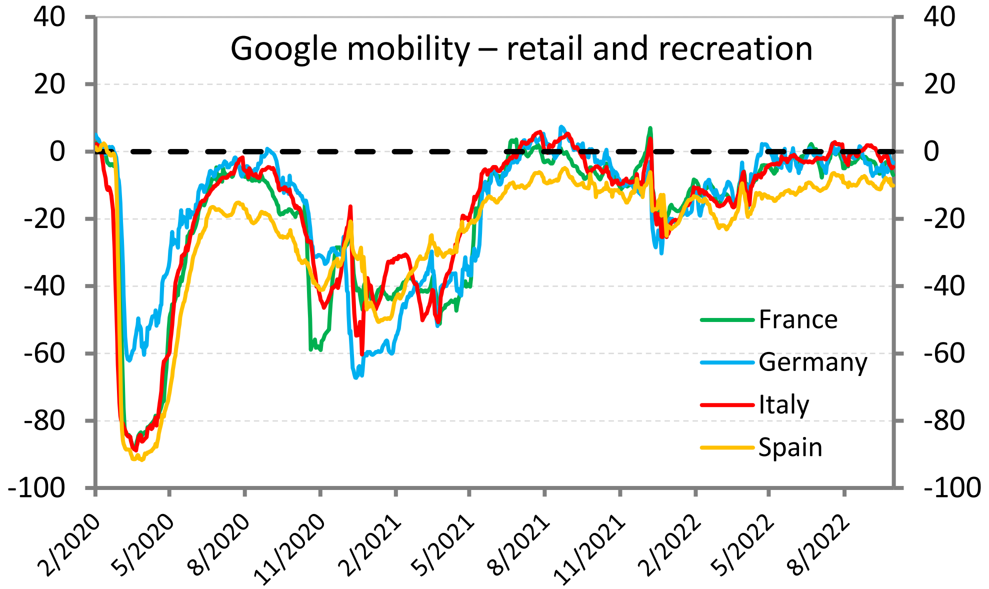
The inflation surge - 1

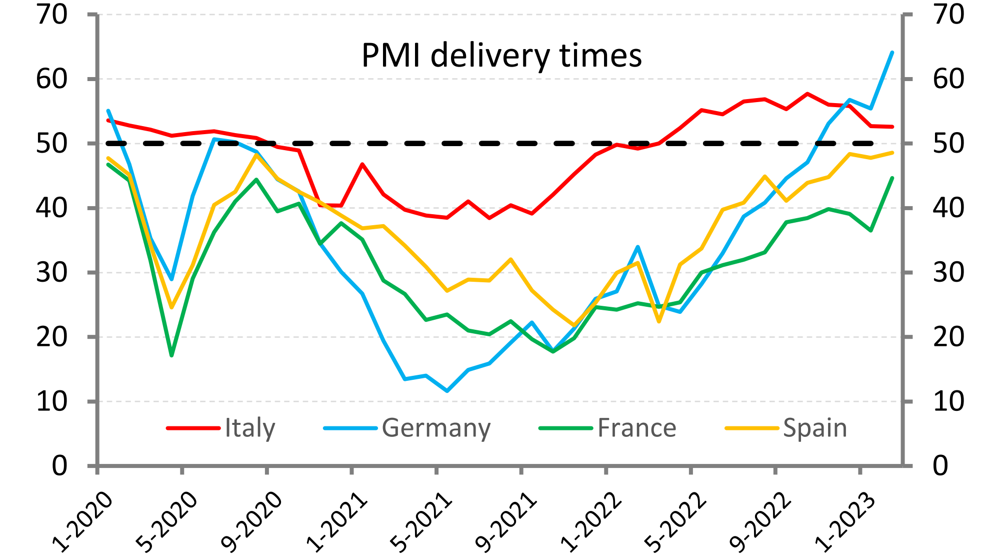
- Inflation surge due to a combination of shocks that affected both demand and supply

   1. reopening after pandemic (pent-up demand and return to social contact)
   2. global supply bottlenecks
   3. energy prices surge

- Unique occasion for raising prices (and margins; Panetta, 2023)

   - Higher input costs
   - Excess savings during pandemic





Source: Google and S&P Global.

The inflation surge - 2

- Assessing relative importance of supply vs. demand shocks in driving inflation is key to set appropriate monetary policy stance
- Forthcoming Banca d'Italia Occasional paper on contribution of shocks to energy prices to headline and core inflation
- Empirical approach
  1. Two VAR models
  2. Phillips curve model
  3. Dynamic factor model

Percentage contribution of energy prices to euro area inflation in 2022

(percentage points)

	Model	Core inflation	Headline inflation
A)	VAR (Cholesky)	20 (30)	60 (60)
B)	VAR (sign+zero restrictions)	21 (22)	57 (43)
C)	Phillips curve	29 (49)	N.A.
D)	Dynamic factor model	25 (27)	N.A.

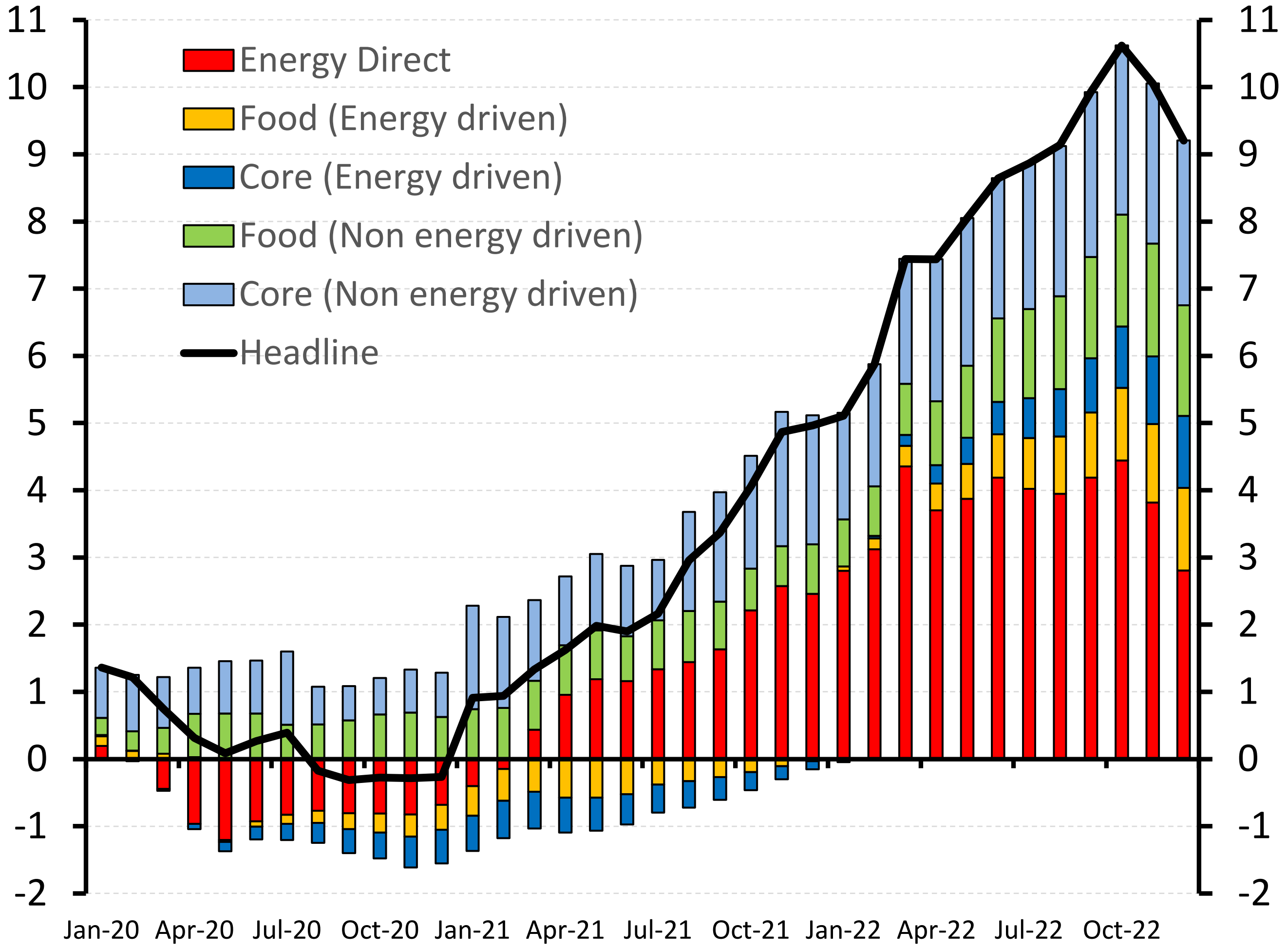
Note: figures in brackets refer to the contribution in 2022:Q4. Row B): core inflation is measured with the headline HICP net of the energy component. The percentage contribution of energy and aggregate supply shocks to core inflation is 68 on average in 2022; the contribution of these shocks to headline inflation is 71, on average in 2022.

The inflation surge - 3

- VAR model (recursive identification)
- In 2022, shocks to energy and food prices directly and indirectly accounted for more than 70% of inflation, on average
- Energy prices significantly affected core inflation: 1.5 p.p. of core inflation in 2022:Q4 (5.1%) are due to indirect effects of energy prices

Direct and indirect contribution of energy shocks to inflation

(percentage point)



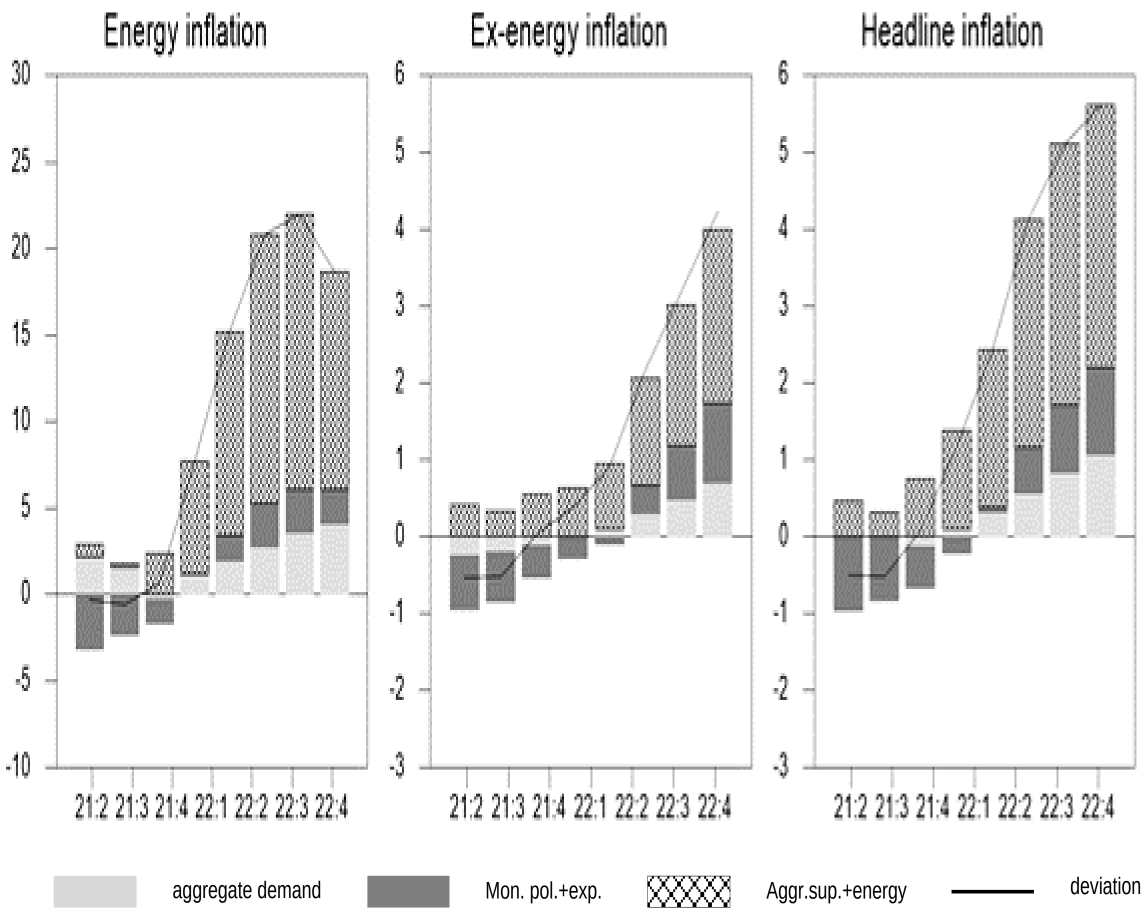
Source:: Corsello and Tagliabracci, Occasional paper, Banca d'Italia.

The inflation surge - 4

- VAR model (sophisticated identification)
- Headline inflation in 2021 and 2022 was driven mainly by shocks to energy prices and to aggregate supply (bottlenecks).
- Aggregate demand and monetary policy shocks have played a smaller, but increasing, role
- Clarification of inflation target in July 2021 may have contributed to raising inflation (Neri, forthcoming)
- Results from Phillips curve and Dynamic Factor models confirm role of energy shocks

Shock decomposition of inflation

(per cent and percentage point)



Source: Neri et al., forthcoming.

The ECB's monetary policy - 1

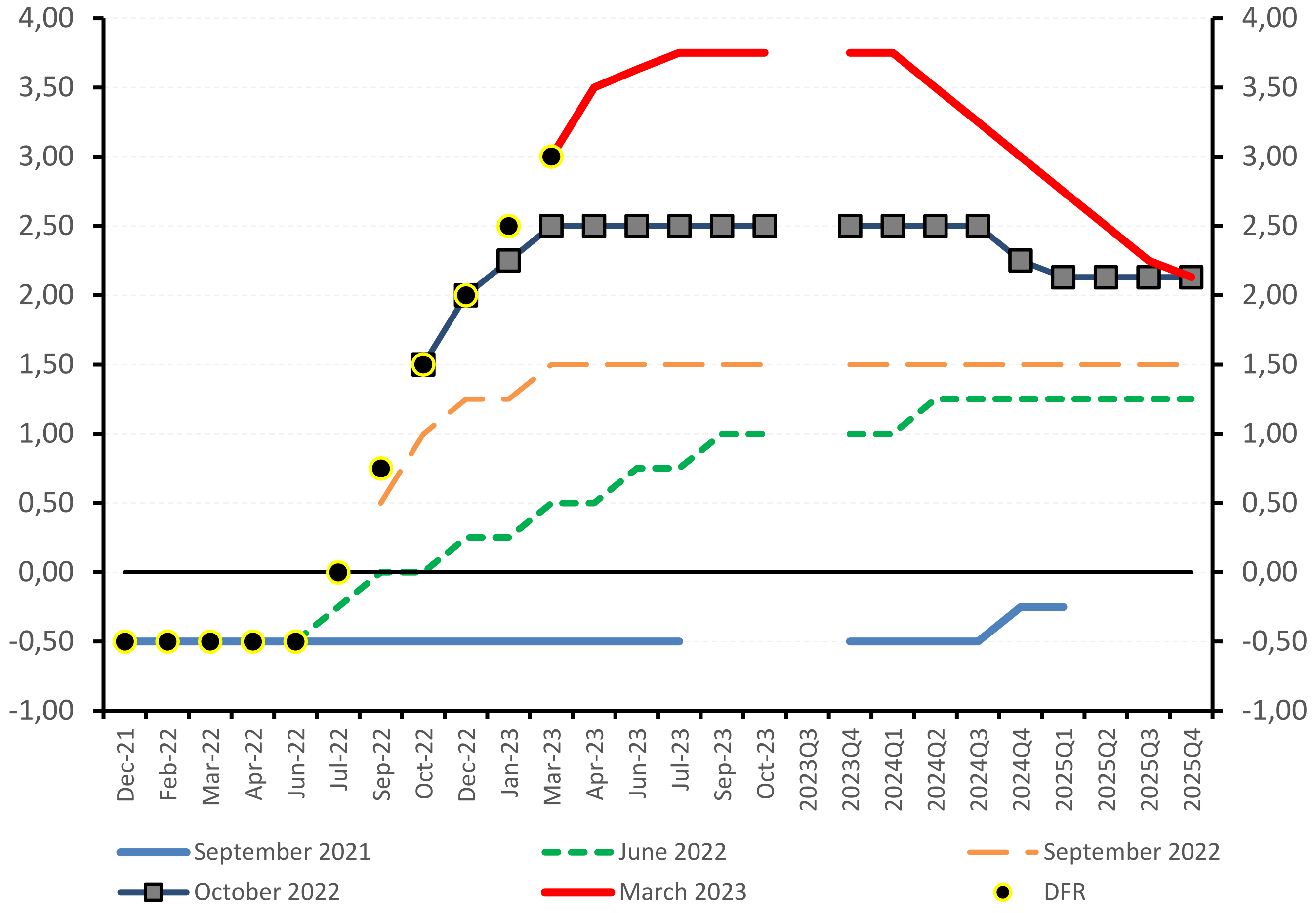
- Assessing relative importance of supply vs. demand shocks in driving inflation key to set appropriate monetary policy stance
- When aggregate supply or energy price shocks hit, central bank faces a trade-off, as countering impact on inflation would amplify negative effects on aggregate demand
- Central bank could soften trade-off by extending horizon at which inflation is expected to return to target (see Review of monetary policy strategy)
- However, risks to medium-term inflation outlook must be taken into account
  - de-anchoring of long-term inflation expectations (see Neri et al., 2022) ↑
  - wage-(profit)-price spirals ↑
  - recession ↓
  - financial stability ↓

The ECB's monetary policy - 2

- Expectations on rate on deposit facility (DFR) revised markedly upward since July 2022
- Analysts expect terminal DFR at 3.75% in July 2023, and to decline at 2 by end-2025
- "*We […] expect to raise them significantly further, because inflation remains far too high and is projected to stay above our target for too long.*" (15/12/2022)
- "*The elevated level of uncertainty reinforces […] a data-dependent approach […], which will be determined by our assessment of the inflation outlook […], the dynamics of underlying inflation, and the strength of monetary policy transmission*" (16/03/2022)
- APP portfolio will decline at a measured and predictable pace (€15 bn/m until end 2023-Q2)

Analysts' expectations about rate on ECB's deposit facility rate

(per cent)



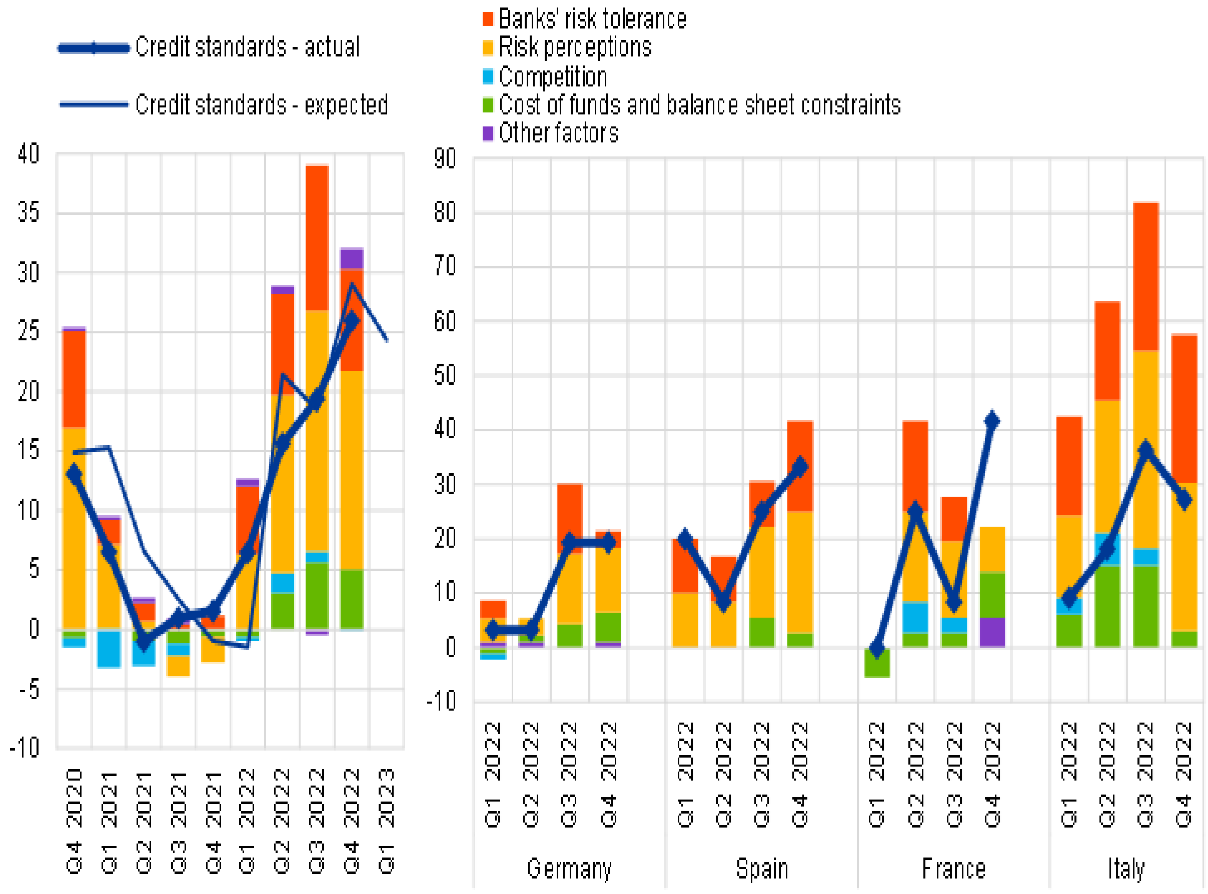
Source: Survey of Monetary Analysts, ECB.

The ECB's monetary policy - 3

- Smooth pass-through from market to lending rates, in line with 2005-07 hiking
- However, risk of excessive tightening of financing conditions is material
- Tightening of credit standards on loans to NFCs and HHs due to banks' increased risk perception and lower risk tolerance
- Tightening of lending standards somewhat stronger than in 2005-2007
- In addition, demand for credit is moderating
- Yet, cost of funds and balance sheet constraints are playing a minor role compared with GFC

Changes in credit standards applied to the approval of loans or credit lines to enterprises, and contributing factors

(net percentages of banks reporting a tightening of credit standards and contributing factors)



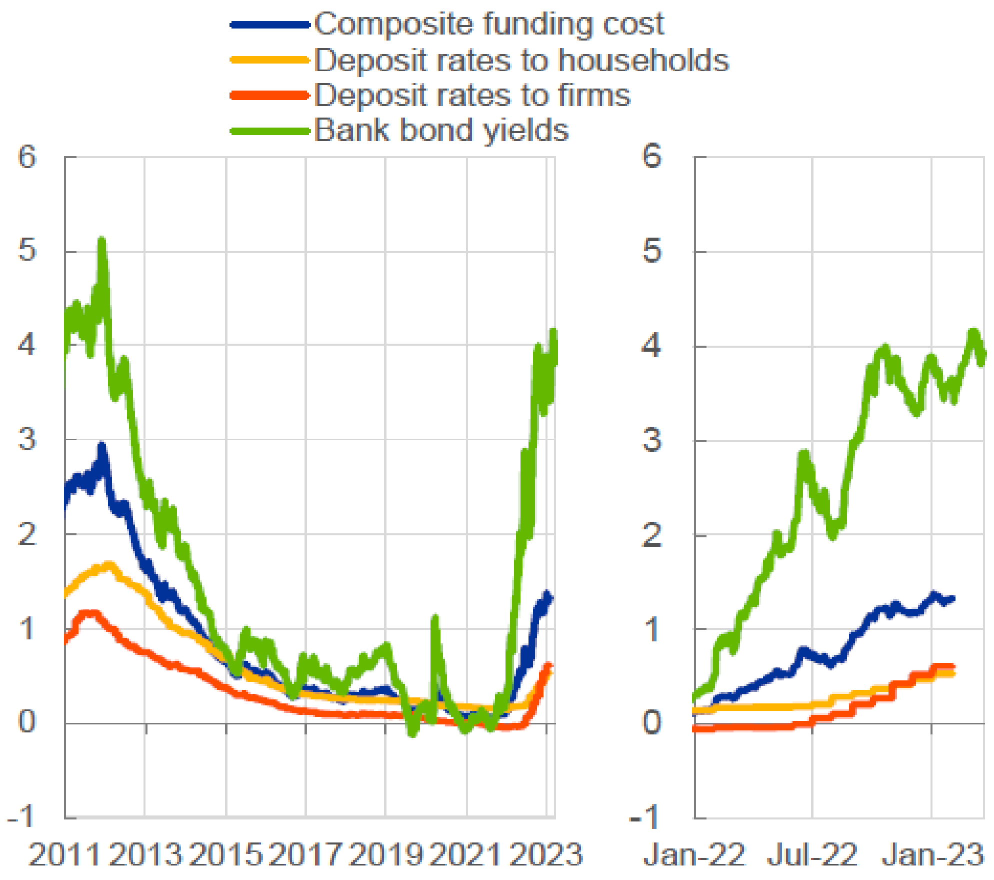
Source: Bank Lending Survey, ECB.

The ECB's monetary policy - 4

- Pass-through of policy rates on remuneration of overnight deposits has been modest and low so far in historical comparison
- Outflows of overnight deposits are gaining momentum, as firms and households are substituting them with other deposits and/or other assets
- Banks are trading-off funding "stability" with wider profit margins

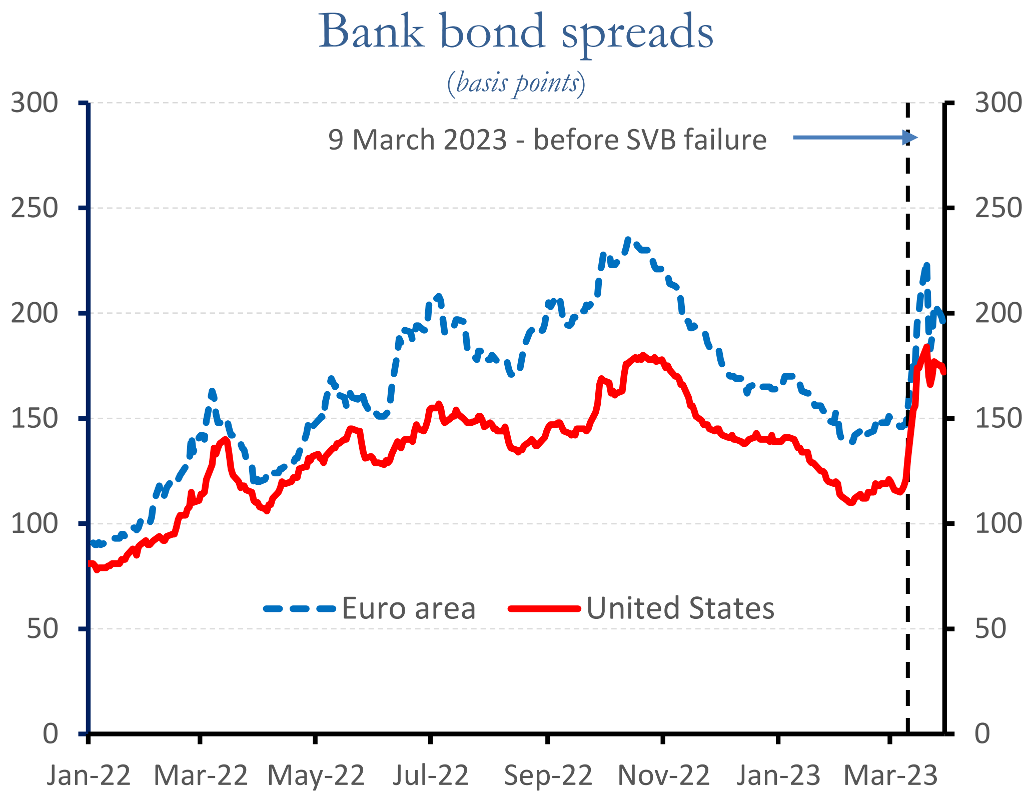
Bank funding costs

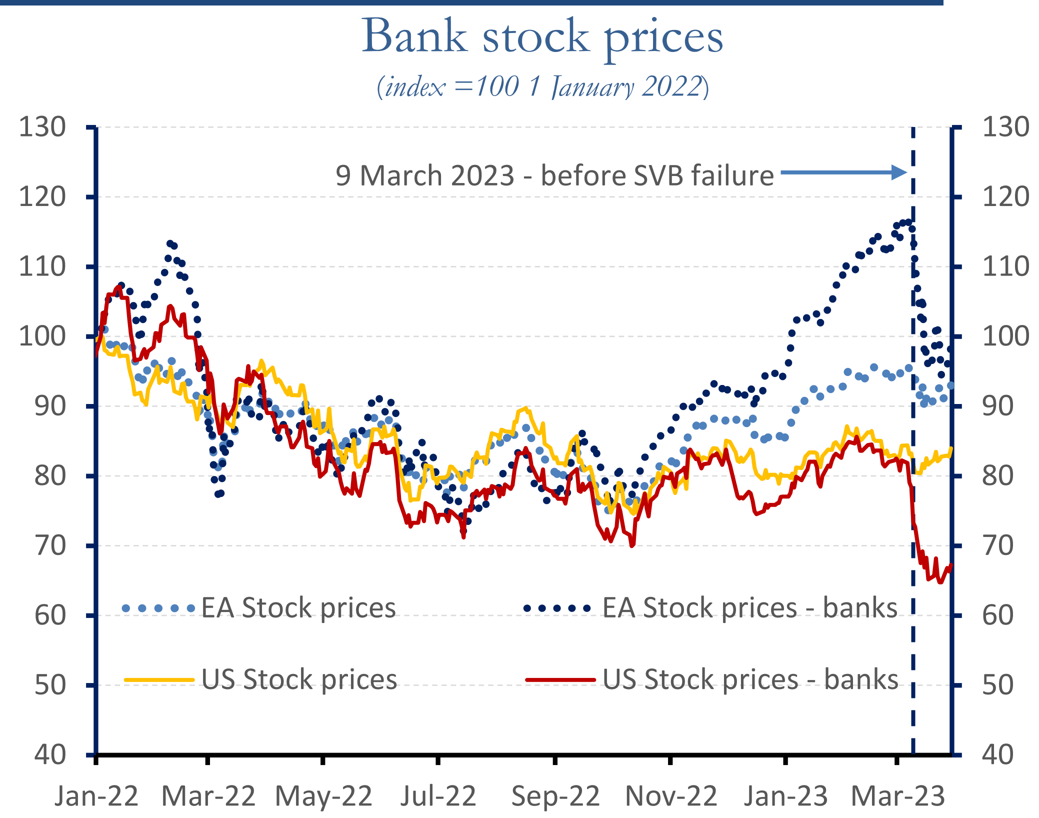
(per cent)



Source: "Inflation and Monetary Policy", Philip R. Lane, 22 March 2023.

The ECB's monetary policy - 5





Source: Refinitiv Datastream.

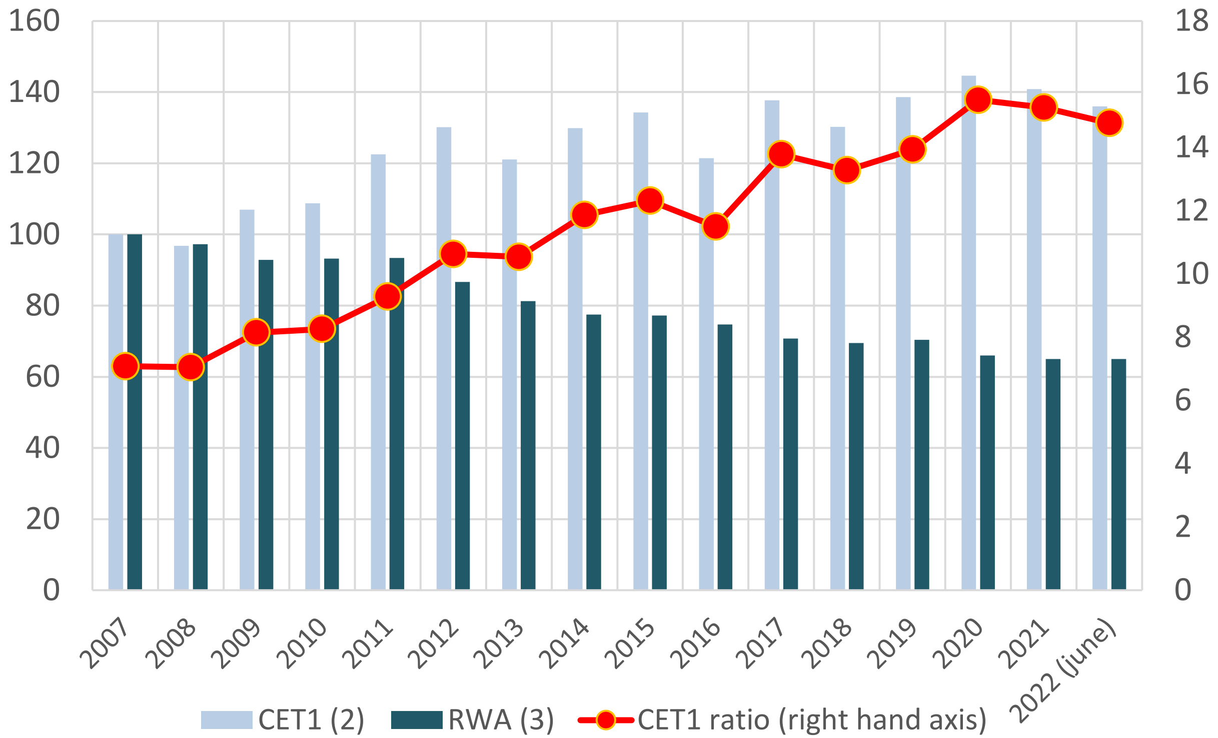
- Bank bond yields have increased sharply since beginning of hiking cycle
- Recent tensions in U.S. and Swiss banking sectors have caused a global re-pricing of risk and an increase in risk aversion. Bank bonds and stock prices have reacted sharply on both sides of Atlantic

The ECB's monetary policy - 5

- ECB stands ready to use all instruments to preserve smooth functioning of monetary policy transmission and financial stability
- Euro-area banking sector is resilient; ROE is high, as NII is increasing. However, looking forward, there are risks of asset quality deterioration
- Liquidity ratios are, on average, above minimum requirements and pre-pandemic levels
- Italian banks are in a much better position compared with period immediately after global financial and sovereign debt crises
- Liquidity ratios are above euro-area averages

Capitalization of Italian banks and banking groups

(indices and per cent)



Sources: Consolidated supervisory reports for banking groups, individual supervisory reports for stand-alone banks.

Notes: (1) Up to December 2013, the highest-quality capital component was the 'core tier 1'; from March 2014 it corresponds to CET1 ('common equity tier 1'). Index: 2007=100. – (2) 'Risk-Weighted Assets'. Index: 2007=100

Concluding remarks

- Inflation is expected to converge to 2% target, with core inflation lagging
- Both upside and downside risks to inflation outlook need to be assessed, taking financial stability considerations into account (see Strategy Review)
- So far, risks of de-anchoring of inflation expectations and wage-price spirals are limited
- ECB's Governing Council stands ready to deploy all instruments to ensure that inflation returns to its symmetric target, and to preserve smooth functioning of monetary policy transmission and financial stability
- Euro-area banking sector is resilient

Thank you for your attention!

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