EUROPEAN CENTRAL BANK

EUROSYSTEM

Financial conditions of euro area enterprises before and after the pandemic

SAFE

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Outline

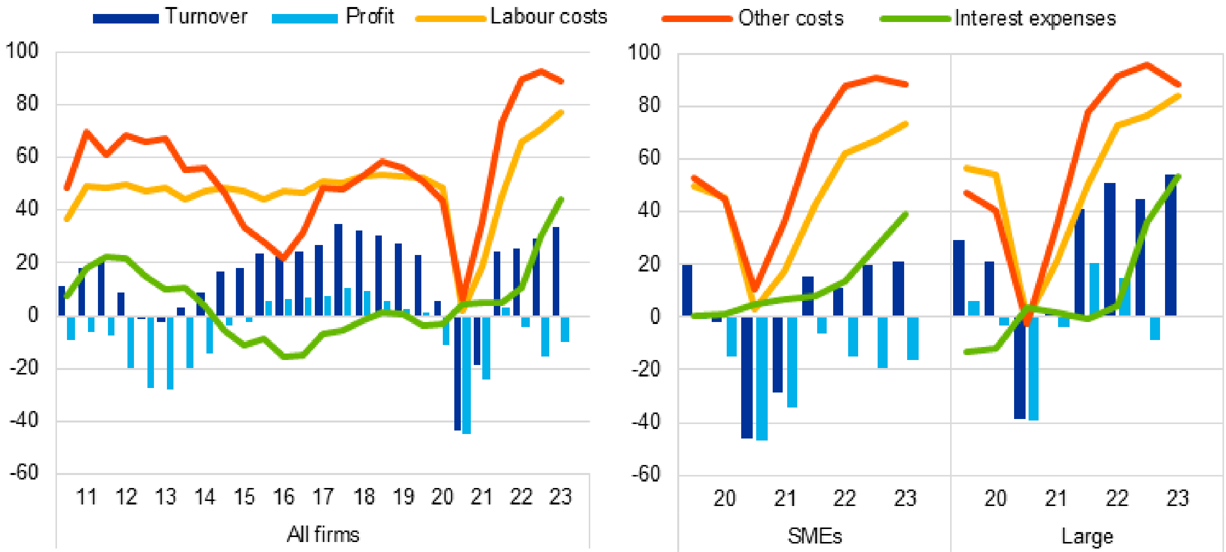
- Overview of the financial situation and financing conditions of euro area firms
  - Looking since the COVID-19 pandemic and beyond (energy shocks, ECB's current policy rate tightening cycle…)
- Focus on the firms' point of view
- Link with financial market data to understand recent developments
  - Survey on the Access to Finance of Enterprises in the euro area (SAFE)
    - 12.000 euro area companies (90% SMEs) , every six months since 2009
    - Latest developments until March 2023

Financial positions

Euro area firms reported a continued increase in turnover

Changes in the income situation

(percentages of respondents)

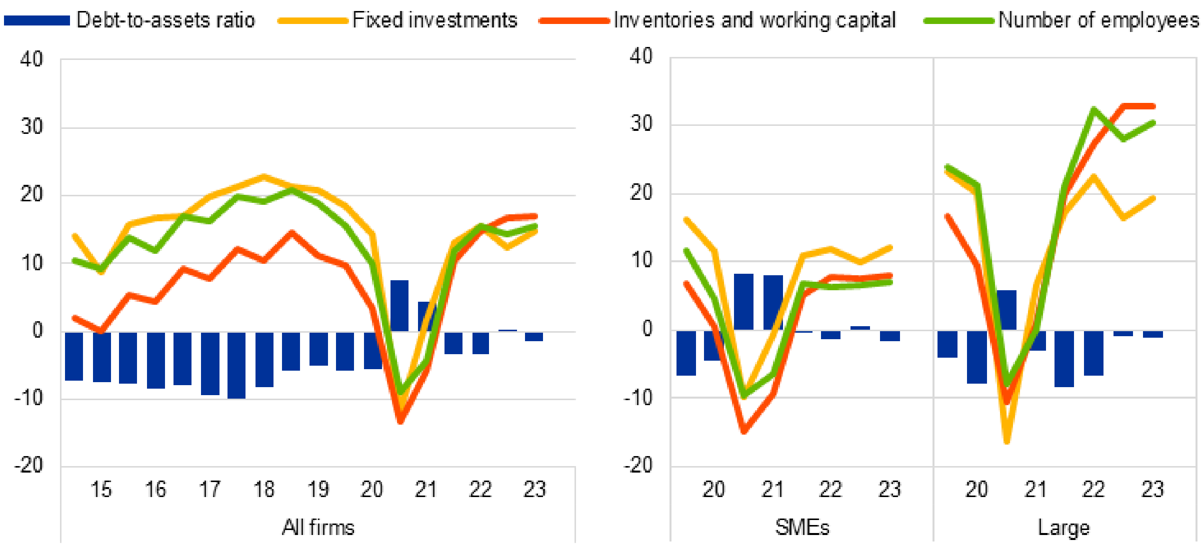


- After the pandemic, strong improvement in turnover
- But lacklustre performance in profits reflects higher commodity prices and labour costs
- Increasing interest expenses represent a further drag on profitability

Source: ECB and EC survey on the access to finance of enterprises (SAFE).
Notes: the net percentages are defined as the difference between the percentage of enterprises reporting that something has increased and the percentage reporting that it has declined.

Recently no major changes in their indebtedness with investment holding up

Changes in the debt situation and real decisions of euro area enterprises
(net percentages of respondents)



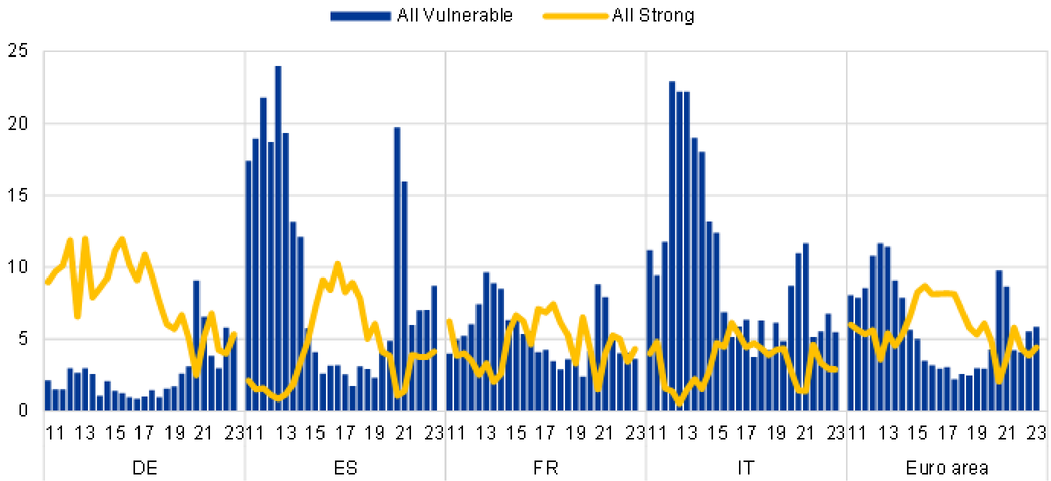
- After the pandemic, normalisation in debt to total assets ratios
- High heterogeneity in terms of investment across size classes

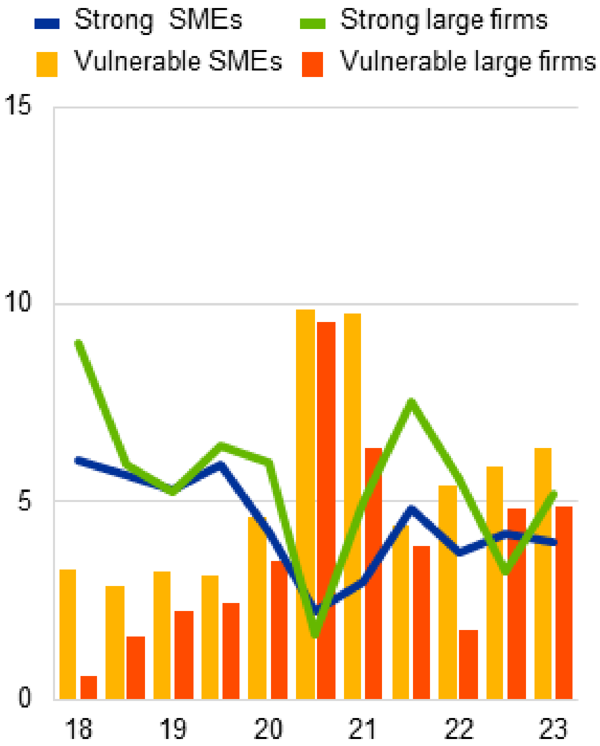
Source: ECB and EC survey on the access to finance of enterprises (SAFE).
Notes: the net percentages are defined as the difference between the percentage of enterprises reporting that something has increased and the percentage reporting that it has declined.

After a post-pandemic reduction, vulnerable firms are on the rise among SMEs

Vulnerable and strong firms

(percentages of respondents)





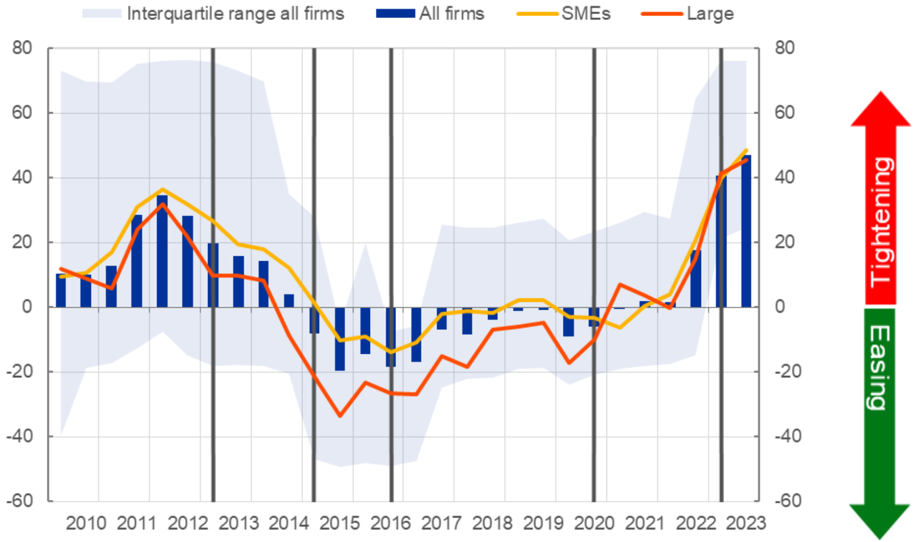
Source: ECB and EC survey on the access to finance of enterprises (SAFE).
Notes: Vulnerable firms are defined as firms that simultaneously report lower turnover, decreasing profits, higher interest expenses and a higher or unchanged debt-to-assets ratio, while strong firms are those that simultaneously report higher turnover and profits, lower or no interest expenses and a lower or no debt-to-assets ratio.

Financing conditions

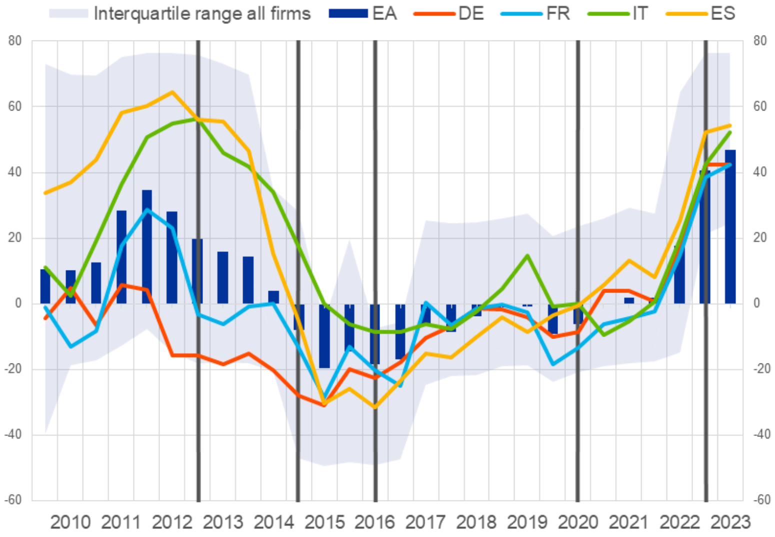
Overall perceived financing conditions have become very tight

Changes in perceived overall financing conditions
(weighted scores)

Across size classes



Across countries

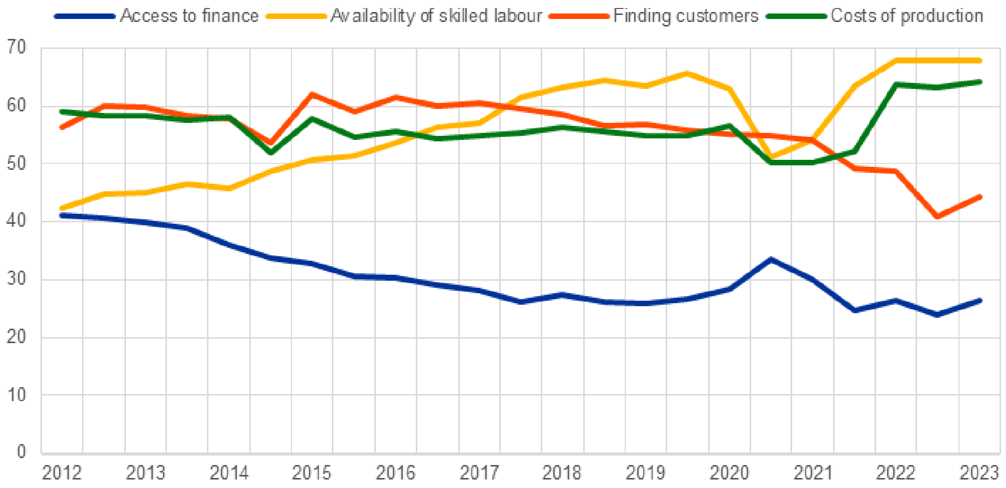


Source: ECB and EC survey on the access to finance of enterprises (SAFE).
Notes: Indicators obtained by factor analysis (A. Ferrando – S. Gori (2022) "Financing conditions through the lens of euro area companies", ECB EB. 8). The individual scores are weighed by size class, economic activity and country to reflect the economic structure of the underlying population of firms. The vertical grey lines denote in order: 1. the announcement of the Outright Monetary Transactions; 2. the start of the first series of targeted longer-term refinancing operations (TLTRO I) and the negative interest rate policy; 3. the start of TLTRO II and the corporate sector purchase programme; 4. the start of the pandemic emergency purchase programme and TLTRO III and 5. the rise of the three key ECB interest rates by 50 basis points and approval of the Transmission Protection Instrument (TPI) in July 2022. Latest observation: October 2022 – March 2023.

Access to finance is not seen as a major problem for euro area firms

Major problems faced by euro area enterprises

(percentages of respondents)



- Availability of qualified workers and rise costs of production

rather than

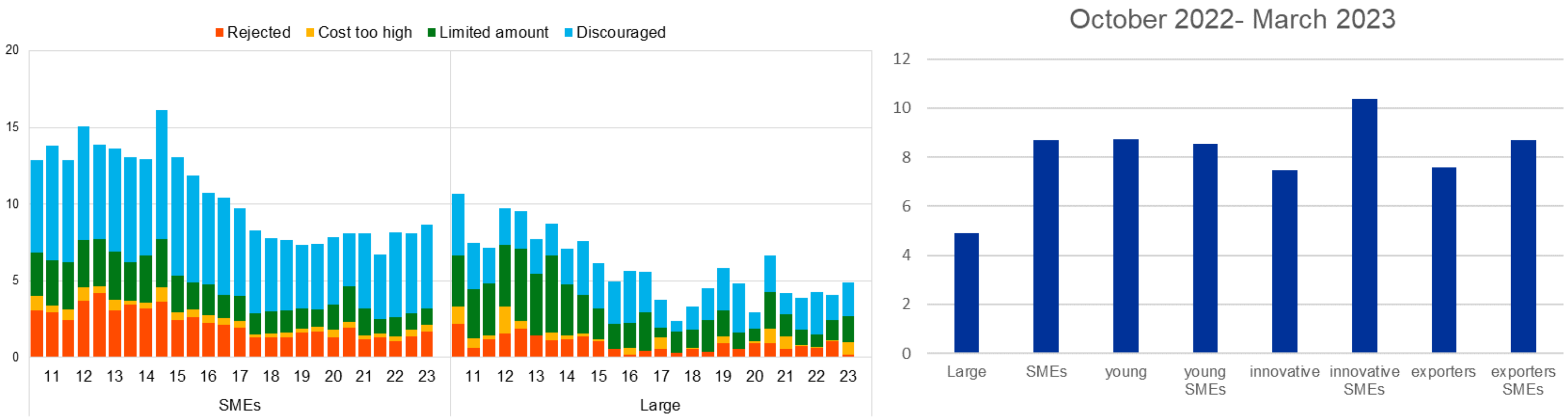
- Access to finance

Source: ECB and EC survey on the access to finance of enterprises (SAFE).
Notes: Enterprises were asked to indicate how important a specific problem was on a scale of 1 (not at all important) to 10 (extremely important). Figures on the chart are the percentages of firms reporting each problem of high importance (scale from 7 to 10).

Financing constraints still muted but with differences across firms

Obstacles of obtaining a bank loan

(percentages of respondents)



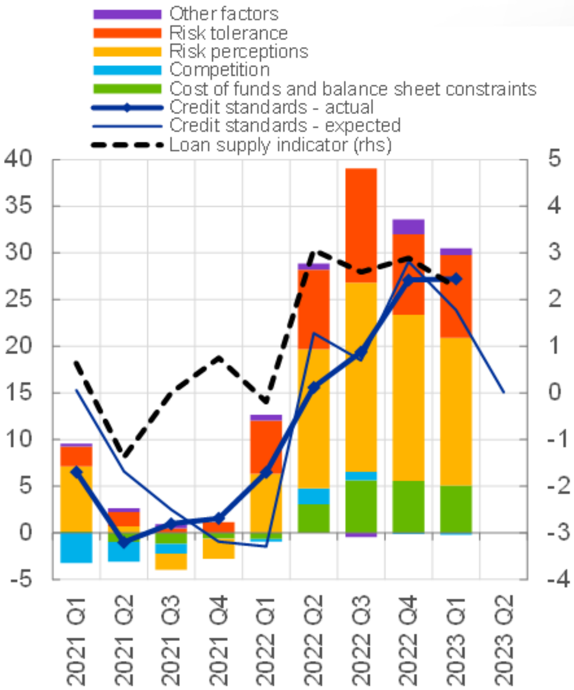
Source: ECB and EC Survey on the Access to Finance of Enterprises (SAFE).
Notes: Financing obstacles are defined here as the total of the percentages of enterprises reporting (i) loan applications that were rejected, (ii) loan applications for which only a limited amount was granted, (iii) loan applications that resulted in an offer that was declined by the enterprise because the borrowing costs were too high and (iv) a decision not to apply for a loan for fear of rejection (discouraged borrowers).

- Persistently higher financing constraints for SMEs

Banks are tightening credit standards to firms …

Changes in credit standards for loans to firms

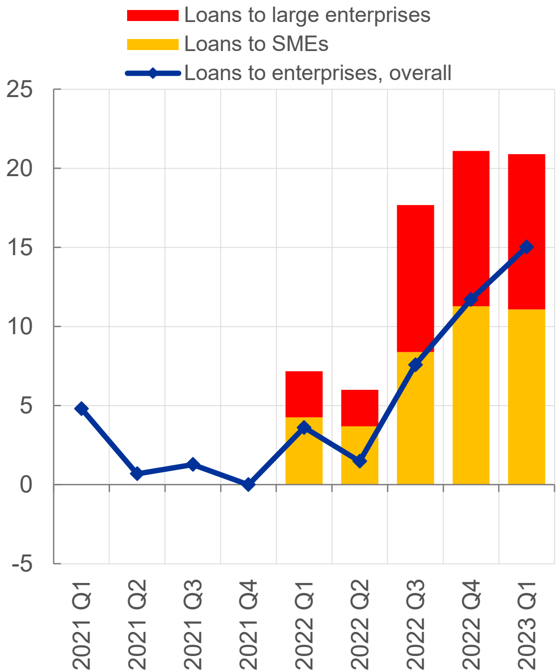
(net percentages of banks reporting a tightening (lhs) and index (rhs))



Source: ECB (BLS), IHS Markit iBoxx, Consensus, Eurostat and ECB calculations. Notes: Net percentages refer to the difference between the percentages of banks reporting tightening and the one of banks reporting easing. Other factors refer to further factors mentioned by banks as having contributed to changes in credit standards. The LSI purges credit standards from changes in loan demand and macroeconomic conditions (Altavilla et al., 2019). Latest observation: 2023Q1 (April 2023 BLS

Changes in the share of rejected loan applications for firms

(net percentages of banks reporting an increase)

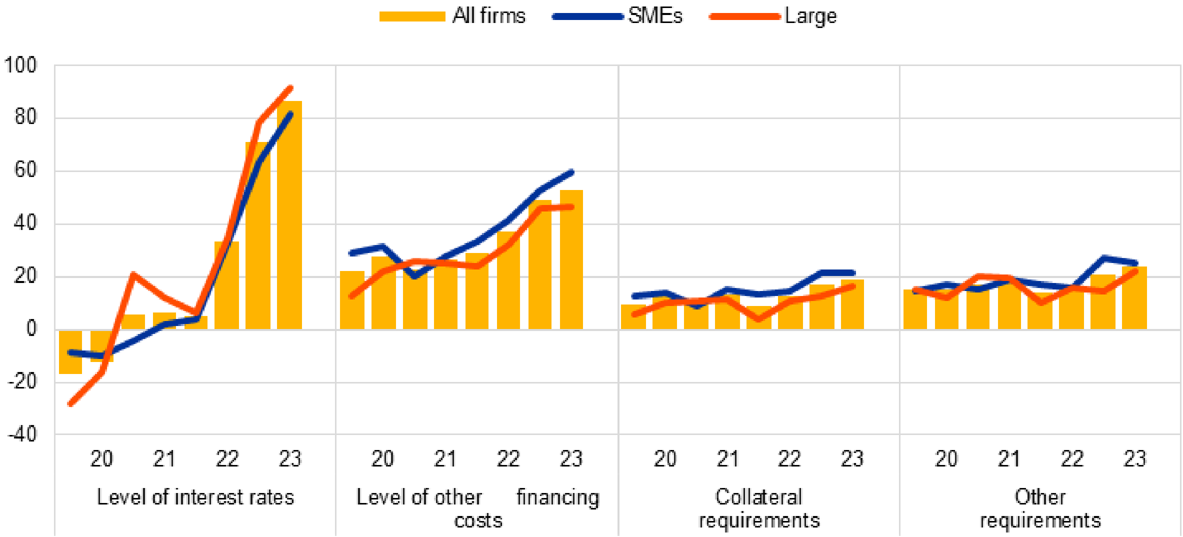


Source: ECB (BLS).
Notes: Share of rejected loan applications relative to the volume of all loan applications in that loan category. The breakdown by firm sizes was introduced in 2022 Q1. Latest observation: 2023 Q1 (April 2023 BLS).

… and firms report higher costs of borrowing

Changes in the terms and conditions of bank financing for euro area enterprises

(net percentages for margins)



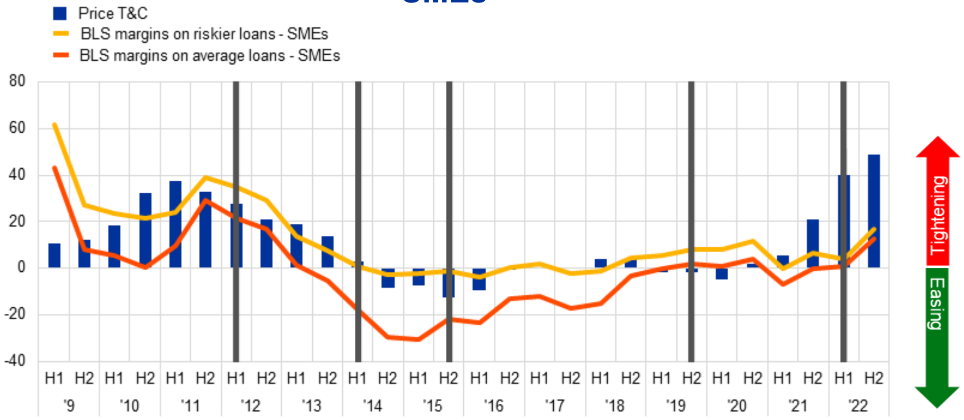
Source: ECB and EC Survey on the Access to Finance of Enterprises (SAFE)

Bank loans' widened margins propagate to firms' financing conditions

Banks' margins applied to loans and firms' composite indicator of financing conditions

(net percentages for margins; weighted scores for price terms and conditions in percentages)

SMEs



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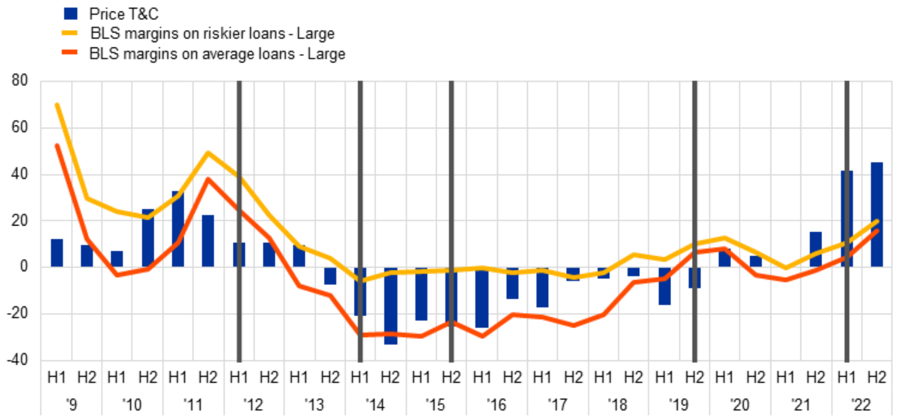


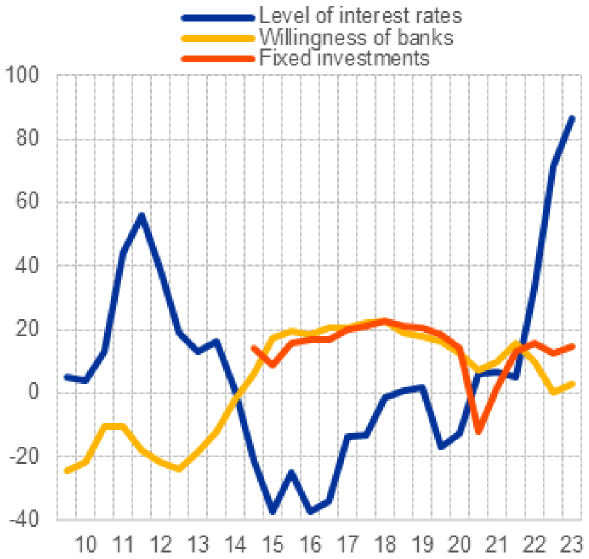
Source: ECB and EC Survey on the Access to Finance of Enterprises (SAFE) and ECB Bank Lending Survey
Notes: see slide 3 for definition of the financing conditions indicator.

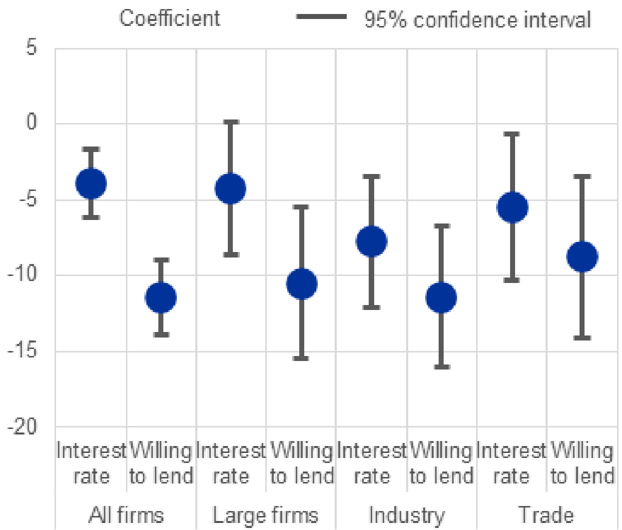
- Historically banks' margins on riskier loans related to SMEs / on average loans to large firms
- Not anymore after COVID-19 pandemic

Historically, banks’ willingness to lend has a stronger impact on investment

Relationship between fixed investment and banks’ interest rates and willingness to lend

(net percentages of respondents and percentage points)





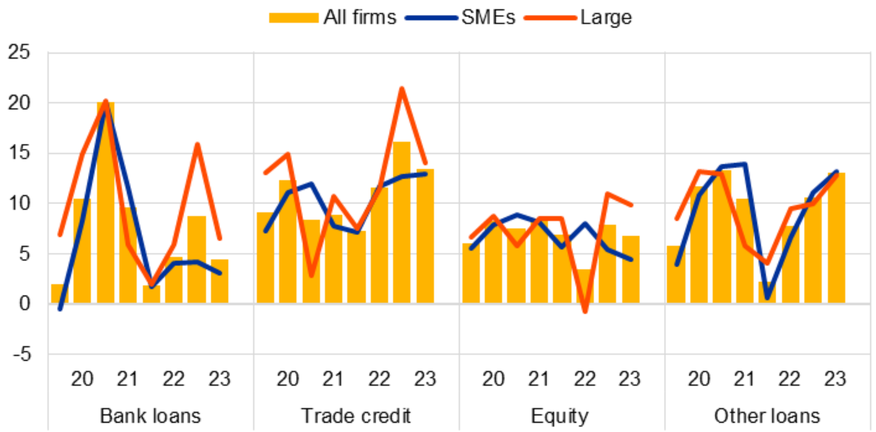
Source: ECB and EC survey on the access to finance of enterprises (SAFE).
Notes: The right panel plots regression coefficients showing the impact of an increase in the level of interest rates and a deterioration in banks’ willingness to lend on the increase in the purpose of using financing for fixed investment (investments in property, plant or equipment). Regressions contain firm fixed effects, and depending on the sample used, country, time, firm size and industry fixed effects. The whiskers represent 95% confidence intervals.

Firms’ perceived financing gap

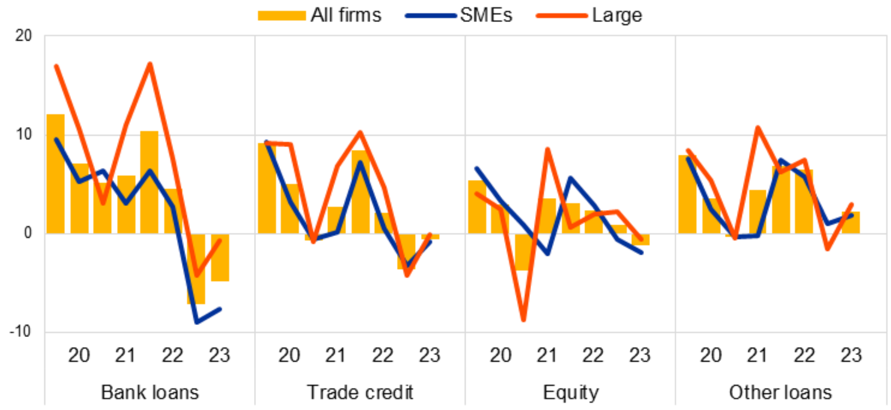
a measure of the interplay between demand and supply of external funds

Last reading: firms’ lower demand is facing reduced availability of external funds

Changes in external financing needs
(net percentages)



Changes in external financing availability
(net percentages)



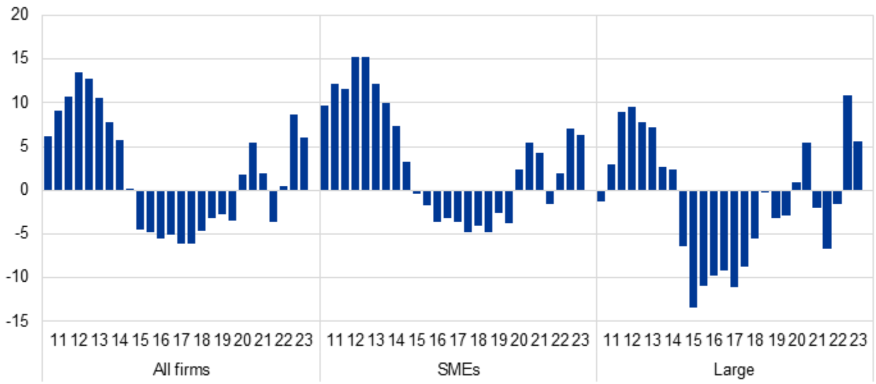
Source: ECB and EC survey on the access to finance of enterprises (SAFE).

- Firms’ replies on bank loans’ needs and availability reflect the recent monetary policy tightening

Change in the financing gap is widening

External financing gap reported by euro area firms

(weighted net balances)



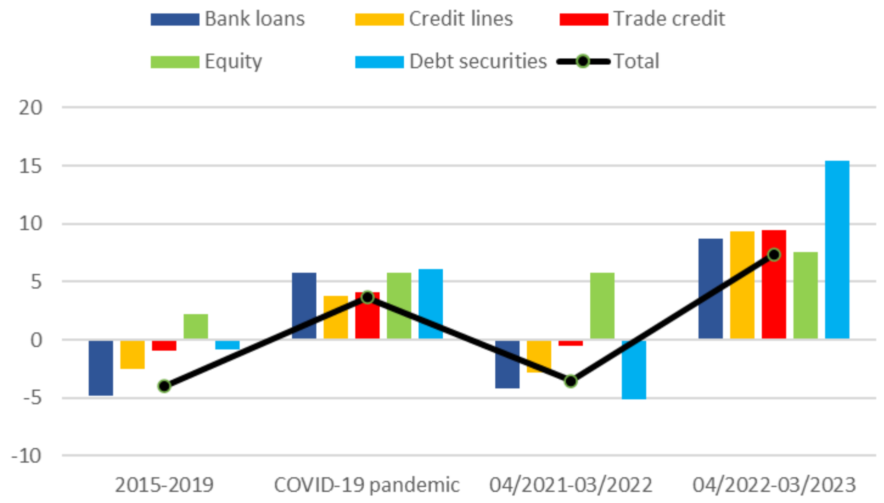
Source: ECB and EC survey on the access to finance of enterprises (SAFE).
Notes: The financing gap indicator combines both financing needs and the availability of bank loans, credit lines, trade credit, and equity and debt securities issuance at firm level. For each of them, the indicator takes a value of 1 (-1) if the need increases (decreases) and availability decreases (increases). If enterprises perceive only a one-sided increase (decrease) in the financing gap, the variable is assigned a value of 0.5 (-0.5). This composite indicator is a weighted average of the financing gaps for the five instruments. A positive value for the indicator points to an increase in the financing gap.

- Times of crises are associated with peaks in the financing gap (sovereign debt crisis, COVID-19 pandemic)
- Latest peak associated to the recent monetary policy tightening

Financing gap is positive across most financial instruments and types of firms

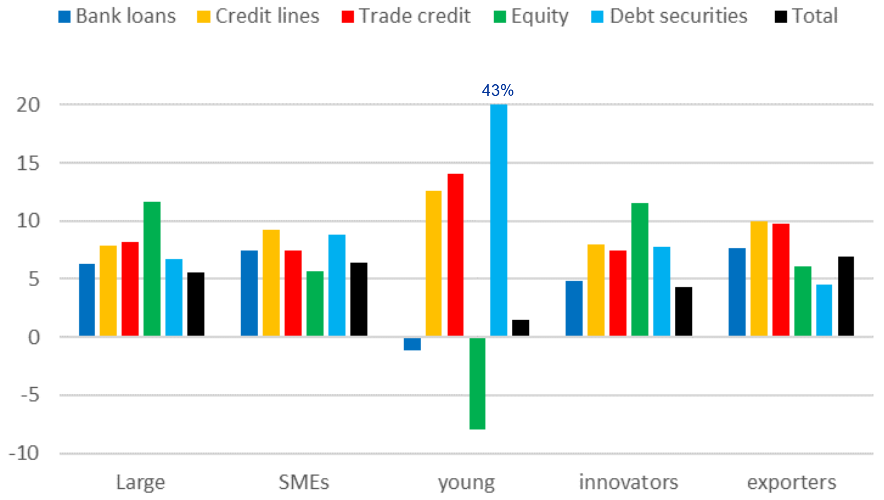
External financing gap reported by euro area firms

(weighted net balances)



External financing gap reported by different types of firms in October 2022- March 2023

(weighted net balances)



Source: ECB and EC survey on the access to finance of enterprises (SAFE).
Note: the financing gap indicator combines both financing needs and the availability of the five financing instruments at firm level. The composite indicator is a weighted average of the financing gaps for the five instruments. A positive value for the indicator points to an increase in the financing gap.

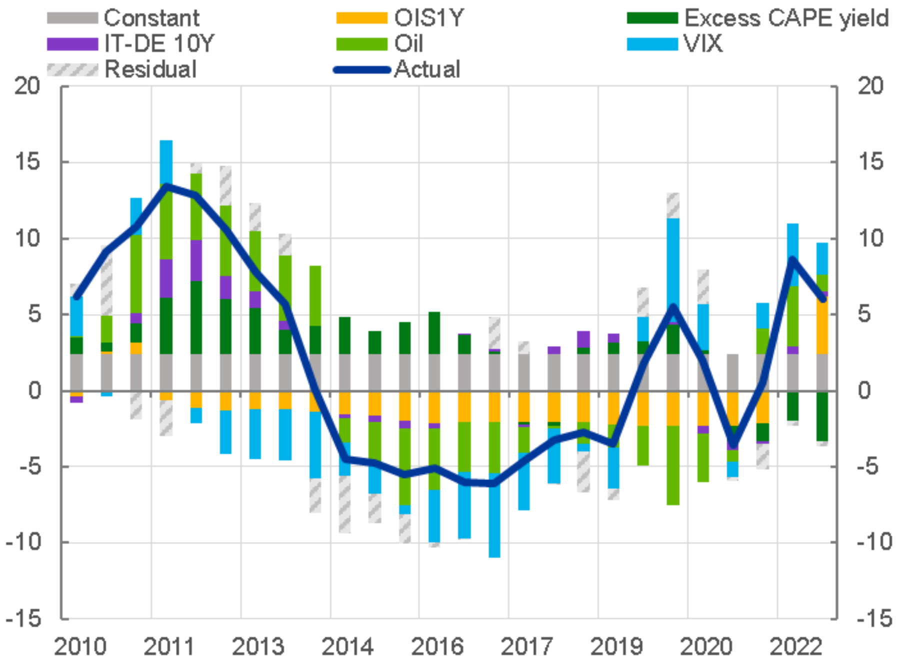
Financial market information and firms’ financing gap

from “upstream” to “downstream” measures of financing conditions

Main financial drivers behind changes in the financing gap

Contributions of financial market variables to the change in the financing gap

(net percentages)

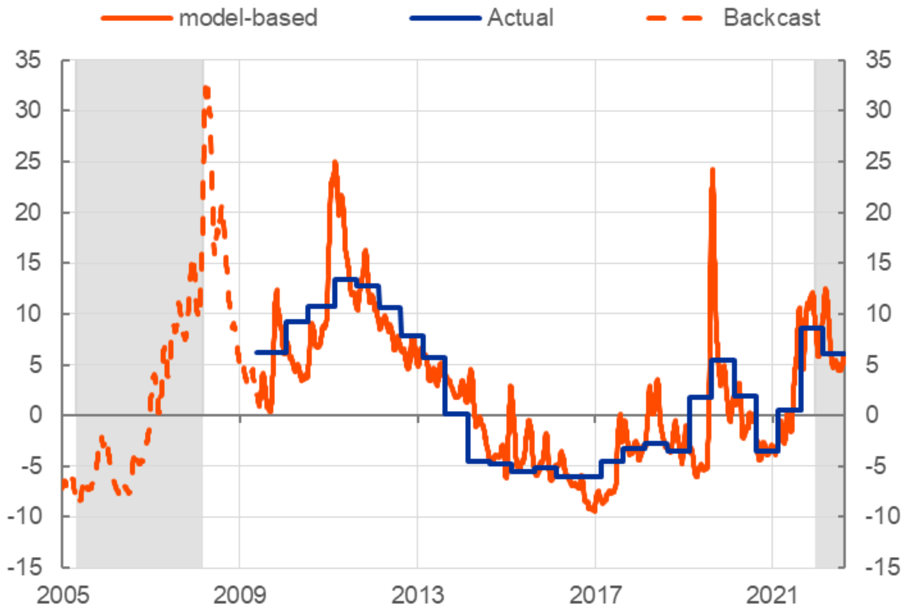


Sources: Refinitiv Datastream, Bloomberg, iBoxx, SAFE, ECB calculations.
Notes: decomposition based on in-sample fit of change in the financing gap from SAFE using financial market variables: the six-month average of OIS1Y, excess CAPE yield on Eurostoxx, VIX, the Brent oil price and the 10-year sovereign spread between Italy and Germany.

- Determinants of past dynamics: uncertainty and oil prices
- During the sovereign debt crisis: higher risk premia (sovereign bond spreads and excess CAPE yield)
- During COVID-19 pandemic: uncertainty
- Latest survey round: risk-free rates
  - ➢ ongoing transmission of monetary policy tightening has started to reach “downstream” stages

Backcast of financing gap to understand future developments

Backcast of change in the financing gap
(net percentages)



Sources: Refinitiv Datastream, Bloomberg, iBoxx, SAFE, ECB calculations

Comparing with past hiking cycle

- current financing gap started higher
- but has not yet reached past levels

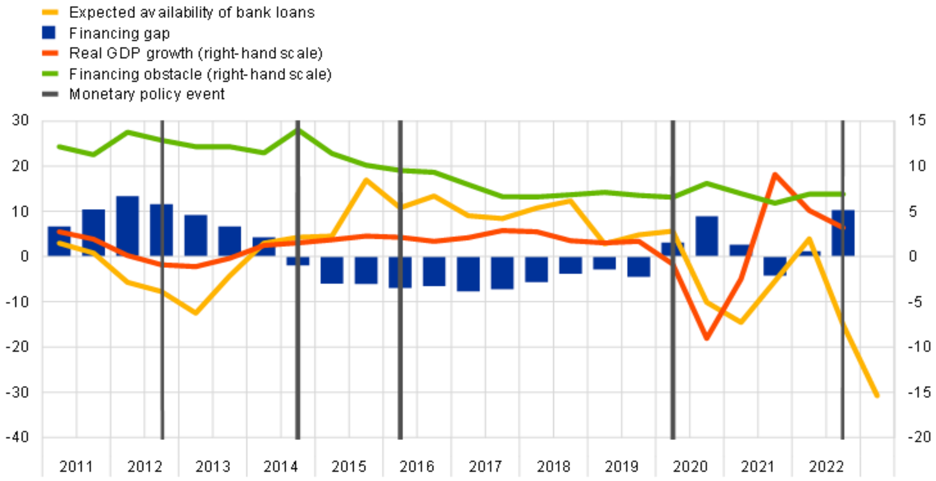
Further nowcast analysis shows that financing gap will be

- moderately higher with risk-free rates as major drivers

Financing gap relates to GDP growth (1)

Changes in SAFE indicators and development of euro area real GDP growth

(net weighted net balances of external financing gap, net percentage changes in the expected availability of finance, annualised percentage changes)



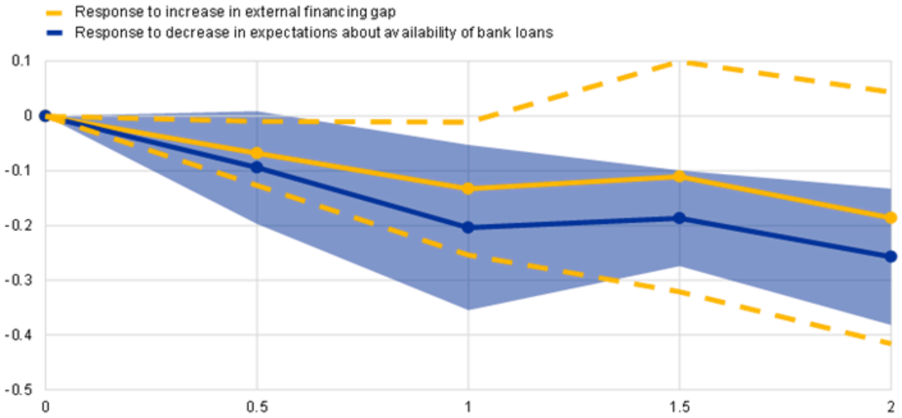
Sources: ECB and EC Survey on the Access to Finance of Enterprises (SAFE) and Eurostat.
Notes: see Durante et al. (2022) "Firms' access to finance and the business cycle: evidence from SAFE", ECB EB 8.

- Historically, inverse relation between changes in the financing gap and expectations about future availability of bank loans
- Expansions of euro area activity usually coincide with declining financing gaps and greater firms' optimism

Financing gap relates to current and future GDP growth (2)

Average evolution of euro area real GDP after a deterioration in financing conditions or in the expected availability of bank loans, relative to no deterioration

(horizontal axis: years after shock, vertical axis: cumulated growth in percent relative to period before the shock)



Sources: ECB and EC Survey on the Access to Finance of Enterprises (SAFE) and Eurostat and ECB calculations.
Notes: Average evolution of euro area real GDP growth in cumulated terms after changes in firms' financing gaps and the net percentage of firms reporting an expected increase in the availability of bank loans. The local projections (Jorda, 2005) include current and past GDP growth as control variables. The shaded and dotted areas are 95% confidence bands based on Newey-West. see Durante et al. (2022) "Firms' a
the business cycle: evidence from SAFE", ECB EB 8.

Our calculations:

- after a 1 pp increase in the financing gap indicator / decrease in the expectations

➢ real GDP declines by 0.2% more in the subsequent year relative to no change in these financing indicators

Conclusions

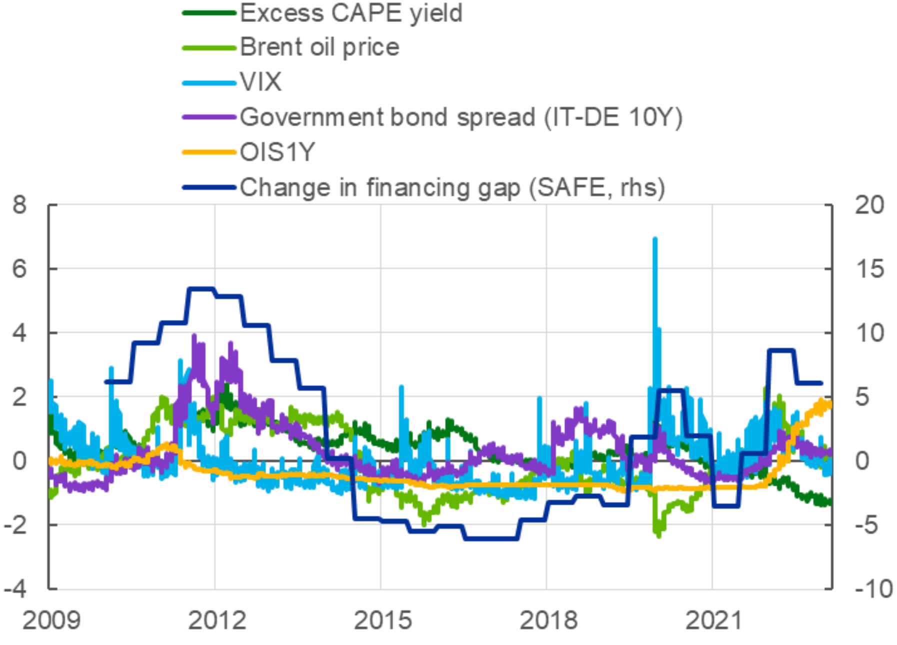
- Firms' assessment of financing conditions is important to inform ECB monetary policy decisions
- After post-pandemic recovery, firms' financial position show some resilience to subsequent shocks
- Access to finance no major problem yet, but financing conditions are tightening, reflected in lower availability and higher cost of finance
    - This could foreshadow lower investment and weaker GDP growth and expose firms to increased vulnerabilities – not yet seen in the survey
- Perceived financing gap still lower than in the peak of the previous hiking cycle
- Next survey round important to evaluate scale and impact of emerging financing constraints

Thank you

Financial markets variables co-move with firms’ perceived financing gap

External financing gap and selected indicators of financial market indicators

(LHS: standard deviation, RHS: net percentages)



Source: ECB and EC survey on the access to finance of enterprises (SAFE), Refinitiv Datastream, Bloomberg, iBoxx, ECB calculations.
Notes: standardised time series for various financial market variables on the left-hand scale.

Three phases in the co-movement:

- During the sovereign debt crisis, GB IT-DE spread, excess cape yield and oil prices
- During COVID-19 pandemic, besides the excess cape yield and oil prices, VIX option-implied indicator of equity volatility
- Recent periods of tightening monetary policy, the risk-free rate and equity financing costs