

Box 1

RECENT DEVELOPMENTS REGARDING THE CONSTRAINTS ON SPANISH FIRMS' ACCESS TO BANK FINANCING

Access to bank financing is a major factor determining firms' investment decisions, and one that may also affect other variables such as sales growth or recruitment.¹ In this box, the sample of Spanish SMEs² included in the Survey on the Access to Finance of Enterprises (SAFE), conducted on a six-monthly basis by the ECB, is used to analyse developments in their access to bank lending, with particular emphasis on the most recent period of monetary policy tightening. Against this backdrop, this box examines whether there are more constraints on firms that normally face greater difficulties in gaining access to credit, i.e. smaller, younger and more vulnerable firms.³

A significant proportion of SMEs are highly dependent on bank loans. On average, around 55% of the Spanish SMEs participating in the SAFE consider bank loans to be an important source of financing (see Chart 1). Only a third of these firms, on average, have reported seeking new financing of this type in the last six months. These trends have remained stable since 2014. Given that this box aims to analyse the constraints on firms' access to credit, the sample of firms referred to hereafter is limited to those that consider credit to be an important source of financing, regardless of whether or not they have used it in the last six months.

Based on firms' responses to the SAFE, an indicator of constraints on access to bank financing was constructed. This is a broad indicator which considers that a firm faces constraints if (i) its request for financing was rejected (narrow constraints indicator), (ii) it did not request financing fearing that it would not be granted (discouraged borrowers), (iii) it obtained financing, but received less than 75% of the amount requested, or (iv) it rejected the lender's offer since it considered the interest rate was too high.

The proportion of SMEs facing constraints in accessing bank loans, which are their main source of financing, was

still high in 2014 (above 20%) following the global financial crisis, and moved on a downward path until the first wave of the survey in 2019 (covering the period from October 2018 to March 2019), when it reached a low of 7% (see Chart 2). Subsequently, this ratio remained below 10%, only increasing temporarily during the pandemic. In 2022, coinciding with the ECB's monetary policy tightening, an increase in the percentage of firms with difficulties in gaining access to credit was observed. This proportion is estimated to have exceeded 11% in the latest wave, which covers the period from October 2022 to March 2023, thus reaching the highest level posted since 2016. The moderate rise in this indicator since the second wave of 2021 can be explained by the higher percentage of firms whose requests for financing were rejected (2.3 percentage points (pp)). In addition, both the rise in discouraged borrowers (0.7 pp) and in rejections due to the cost of the financing offered (0.5 pp) remain low.

According to the academic literature, smaller, younger and more vulnerable firms face greater difficulties in obtaining credit.⁴ The data from the SAFE survey for Spanish firms suggest likewise, as can be seen in Chart 3, which shows the correlation between firm characteristics and the probability of facing constraints in accessing bank credit.⁵ This analysis covers two periods. The first runs from the first wave of the survey in 2016 to the second wave in 2019, a period of sustained economic growth and of relative stability for benchmark bank lending rates. The second period covers the two waves of the survey in 2022 and coincides with the monetary tightening phase. As Chart 3 shows, there is generally a negative correlation between a firm's size and the probability of it facing such constraints. In particular, micro enterprises have faced greater restrictions in most of the waves covered by the survey. These difficulties have become somewhat more marked in the most recent period, but

1 See Miguel García-Posada Gómez. (2019). "Credit constraints, firm investment and employment: Evidence from survey data". *Journal of Banking and Finance*, Vol. 99, pp. 121-141, or Banco de España. (2017). *Annual Report 2016*.

2 The analysis is limited to SMEs since the survey does not contain information about the sector in which large firms operate, for confidentiality reasons. This is a significant factor which could help explain the differences between firms regarding the constraints on their access to financing. Moreover, the sample of large firms is very small and greater emphasis is placed on the SME segment, given that it normally faces greater credit constraints.

3 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.

4 Evidence also shows that access to credit is affected by the availability of assets that may be used as collateral in financing operations, by total factor productivity and by possible problems of information asymmetries.

5 The analyses conducted hereafter consider firms' access both to bank loans and new credit lines. Note that Chart 2 cannot take into account both types of lending since the information on the factors determining the constraints on each type of financing is reported separately.

Box 1

RECENT DEVELOPMENTS REGARDING THE CONSTRAINTS ON SPANISH FIRMS' ACCESS TO BANK FINANCING (cont'd.)

Chart 1
SMEs that consider bank loans an important source of financing (a) (b)

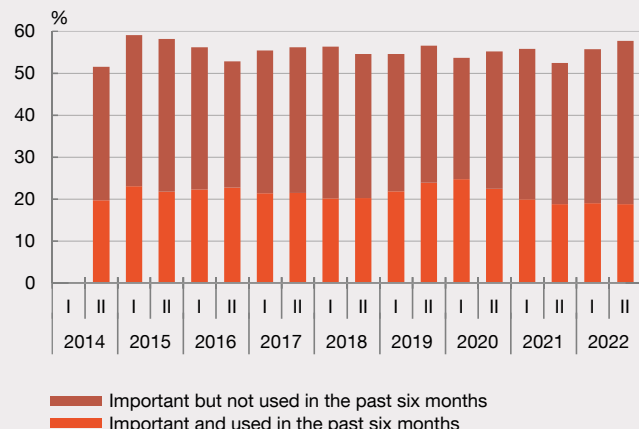


Chart 2
SMEs that have difficulties in obtaining bank loans (a)

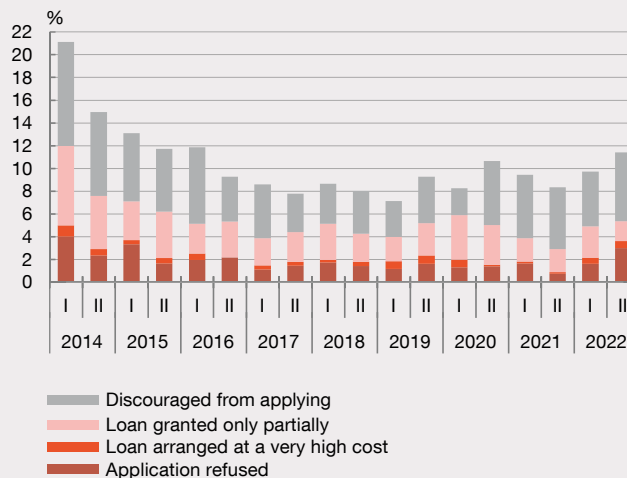


Chart 3
SMEs with bank credit constraints due to firm characteristics (a) (c)

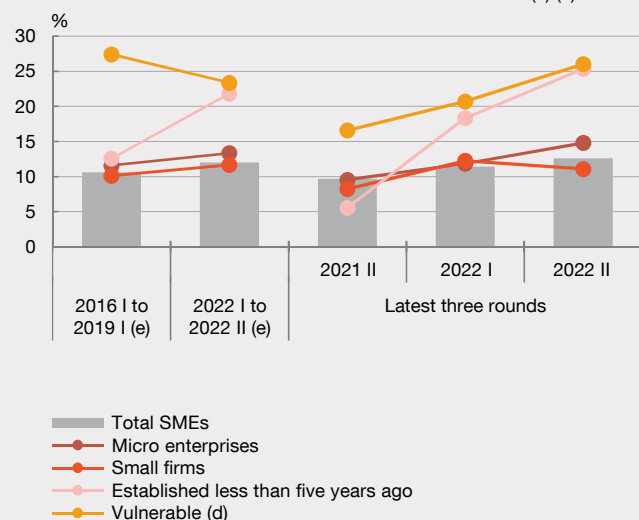
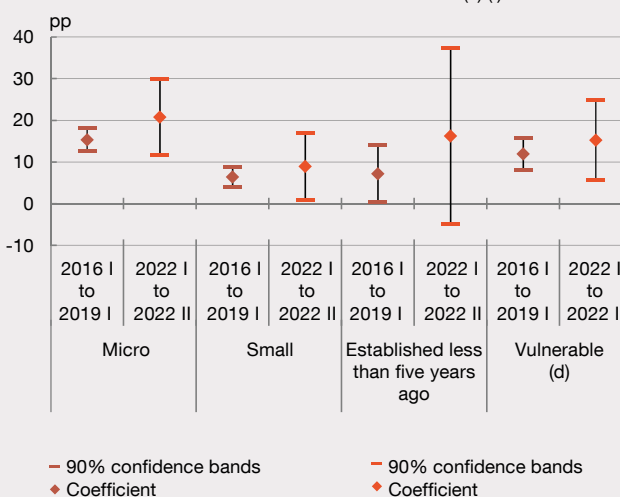


Chart 4
Effect of firm characteristics on bank credit constraints (a) (f)



SOURCES: Banco de España and ECB.



- a "2014 I" denotes the wave from April to September 2014 and "2014 II" the wave from October 2014 to March 2015, and so forth.
- b Classified as "important" if the firm has used this type of financing in the past or plans to use it in the future. This information is available as of the second wave of 2014, as in prior waves firms for which this source of financing was important did not report whether they had used it in the past six months.
- c A firm is considered to be facing bank credit constraints when it is in one of the following situations: it has not applied for a loan or credit line in the past six months because it anticipates it will be refused; it applied for a bank loan or credit line in the past six months and received less than 75% of the amount requested; it rejected the loan or credit line because of the very high cost; or its application was refused by the bank. Both loans and credit lines are taken into account, so a firm may be considered constrained due either to a loan or a credit line application.
- d A firm is considered vulnerable in a particular wave if it simultaneously reports, for the previous six months: lower turnover, decreasing profits, higher interest expenses and a higher or unchanged debt-to-assets ratio.
- e The average of the percentages for the corresponding periods.
- f The diamonds denote the coefficient estimated from a regression analysis for a series of firm characteristics where the dependent variable is a categorical variable indicating whether the firm's access to bank loans or credit lines is constrained (see note c for a detailed description of this indicator). The regressors of interest, whose coefficients are shown in the chart, are categorical variables relating to firm size (micro enterprise or small firm), age (established less than five years ago) and vulnerability (see note d). Additionally, the regression uses time fixed effects and a series of controls proxying a firm's profitability, export capacity, sector of activity and legal structure. The coefficients for a period of stability in benchmark bank lending rates (2016 I to 2019 I), along with their 90% confidence bands, are shown in copper. The estimates for the most recent period (2022), when interest rates have risen, are shown in orange.

Box 1

RECENT DEVELOPMENTS REGARDING THE CONSTRAINTS ON SPANISH FIRMS' ACCESS TO BANK FINANCING (cont'd.)

more so for micro enterprises than for SMEs overall.⁶ In addition, constraints on access to bank financing have been found to be negatively correlated to a firm's age (young firms are proxied as those that are less than five years' old), and positively correlated to a firm's vulnerability or risk. Indeed, vulnerable firms faced the most constraints on their access to bank financing during the period of macroeconomic stability (2016-2019), and have experienced a sustained, albeit moderate, increase in difficulties in accessing credit since late 2021.

In order to fully disentangle the relationship between SME characteristics and financing constraints, a regression analysis controlling for other factors that could also affect access to credit was conducted. The dependent variable in this regression is an indicator showing whether a firm has faced constraints in accessing credit, in line with the broad indicator described in Chart 3. The regressors are categorical variables relating to firm size, age and vulnerability, as mentioned above, and a series of controls for firm-specific characteristics and time fixed effects.

The findings confirm that smaller, younger and more vulnerable firms face greater difficulties in obtaining credit. Specifically, in the period 2016-2019, micro enterprises and small firms in Spain were 15 pp and 6 pp, respectively, more likely to face constraints on access to bank financing than medium-sized firms (represented by

the copper-coloured dots in Chart 4). Moreover, the probability of young firms and the most vulnerable firms experiencing constraints was 7 pp and 12 pp, respectively, higher than for older and less vulnerable firms. In addition, the difficulties faced by these types of firms increased moderately in 2022. Thus, the probability of micro enterprises and small firms suffering constraints rose by 5 pp and 3 pp, respectively (represented by the orange dots in Chart 4). The probability of the most vulnerable firms suffering constraints also increased (by an additional 3 pp).⁷ Although the findings point to a more pronounced increase in constraints for certain types of firms based on the direct comparison of estimated coefficients, the 90% confidence bands suggest that the difference in coefficients estimated for the two periods may not be statistically significant. This is mainly due to the size of the standard errors of the regression analysis for 2022, possibly on account of the lower number of observations used. In order to ascertain whether the differences between the two periods for each type of firm are statistically significant, an additional regression analysis was conducted,⁸ following which it was concluded that only the increase corresponding to micro enterprises would be statistically significant at a significance level of 90%. The increase associated with vulnerable firms would be marginally non-significant in statistical terms.

6 The stratification by size in the SAFE survey comprises three SME categories: micro enterprises (one to nine employees), small firms (10 to 49 employees) and medium-sized firms (50 to 249 employees).

7 The estimated increase for young firms has been more marked in terms of percentage points (9 pp), although the coefficient obtained is not statistically significant. This is because the standard error of estimate is high, given the relatively small number of firms in the sample that were established less than five years ago (under 3%).

8 Specifically, the regression analysis conducted is similar to that shown in Chart 4 but includes the two periods (2016 I to 2019 I and 2022 I to 2022 II) in a single estimate. This new analysis uses as regressors the interaction between a categorical variable that takes the value of one in the two 2022 waves and of zero in the remaining waves, with each of the variables defining the firms that normally face greater constraints in their access to credit. The coefficients estimated for these interaction terms indicate whether there are any differential effects on the constraints faced by each type of firm in 2022.