ANALYTICAL ARTICLES
Economic Bulletin

1/2022

BANCO DE ESPAÑA
Eurosistema

RECENT DEVELOPMENTS IN LENDING TO NON-FINANCIAL CORPORATIONS: SUPPLY AND DEMAND FACTORS

Roi Barreira, Sergio Mayordomo, Irene Roibás and Manuel Ruiz-García

ABSTRACT

Since summer 2020, resident banks' lending to non-financial corporations has been sluggish. In the wake of the impact of the health crisis, this has been against a backdrop of weak demand, a relatively steady supply of bank lending and an increase in financing obtained through issuance of debt securities. An analysis drawing on the granular information both of firms and banks confirms that this loss of momentum in bank lending is explained essentially by demand factors. In particular, there are signs that some firms have been using part of the liquidity buffers they built up in 2020, and that large corporations have replaced part of their bank lending with issuance of debt securities. The analysis also suggests that supply factors linked to the amount of capital available to banks are not an important factor in explaining the weakness of lending to non-financial corporations during the period considered.

Keywords: credit supply, credit demand, debt securities issuance, non-financial corporations.

JEL classification: E41, E44, E51, G21, G32.

RECENT DEVELOPMENTS IN LENDING TO NON-FINANCIAL CORPORATIONS: SUPPLY AND DEMAND FACTORS

The authors of this article are Roi Barreira, Sergio Mayordomo, Irene Roibás and Manuel Ruiz-García of the Directorate General Economics, Statistics and Research

Introduction

Following the strong surge in bank loans with State guarantee in spring 2020, in response to the health crisis, lending by resident credit institutions to non-financial corporations has been sluggish. Specifically, the outstanding amount of this source of financing has declined almost uninterruptedly, in seasonally adjusted terms, since August 2020, with the exception of a few isolated increases such as that observed in late 2021 (see Chart 1.1). By contrast, financing raised by non-financial corporations through the issuance of debt securities has grown at a good pace since June 2020, up 6.1% quarter-on-quarter in November. Analysis of both these financing flows in gross terms shows similar results. Thus, while at December 2021 flows of new issuances, in cumulative 3-month terms, were approximately 60% above the average levels recorded in 2019, new bank lending flows remained clearly below the 2019 figures (see Chart 1.2).

According to various surveys, this lacklustre performance of lending by resident financial institutions to non-financial corporations was against a backdrop of low demand for, and a relatively steady supply of, bank loans. Thus, according to the Bank Lending Survey[1] (BLS), following the extraordinary surge in loan applications to finance high liquidity needs in 2020 Q2 as a consequence of the restrictions introduced during the pandemic, up to 2021 Q4 (the latest information available), both large corporations' and SMEs' demand for bank loans remained weak (see Chart 1.3). On the supply side, credit standards have remained unchanged or tightened slightly since 2020 Q4.

The results of the ECB's survey on the access to finance of SMEs in the euro area[2] (SAFE) show that the proportion of Spanish SMEs applying for bank loans declined between October 2020 and September 2021, reaching in the period April to September 2021 (the latest information available) its lowest level (23%) since the survey was launched in 2009 (see Chart 1.4). As regards the supply of credit, the SAFE also shows that the percentage of SMEs declaring having had difficulties obtaining bank loans fell slightly, to 9%, between April and September 2021, as it was less difficult to obtain the full amount of loans requested.

1 Menéndez Pujadas and Mulino (2022).

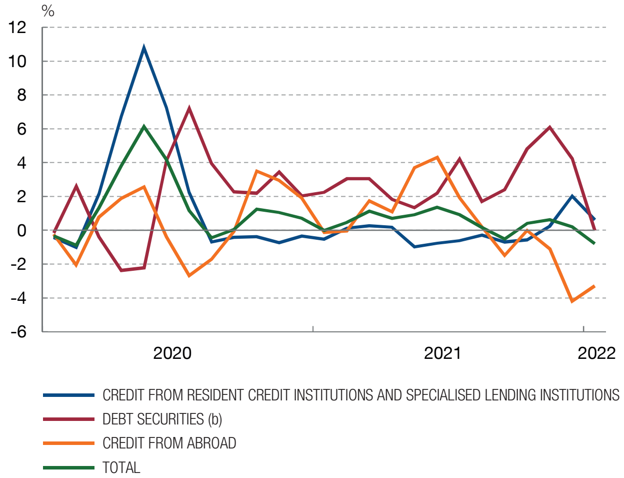
2 Menéndez Pujadas (2021).

Chart 1

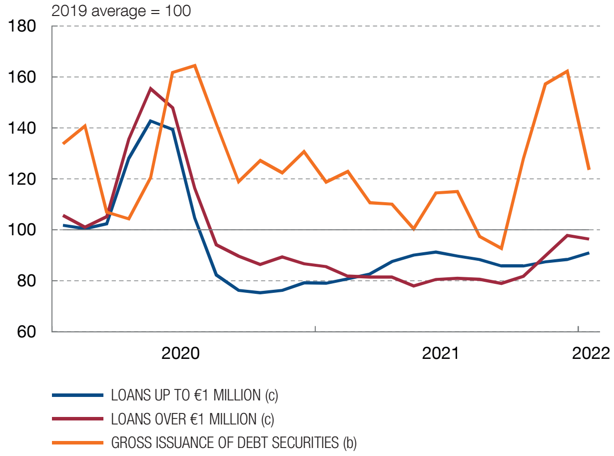
LENDING TO NON-FINANCIAL CORPORATIONS HAS BEEN SLUGGISH AGAINST A BACKDROP OF WEAK DEMAND AND A RELATIVELY STEADY SUPPLY OF BANK LENDING

Following the strong surge in bank loans with State guarantee, lending has been sluggish, against a backdrop of weak demand and a relatively steady supply. At the same time, financing obtained through issuance of debt securities has increased significantly. According to the BLS, loan demand has been weak since July 2020 and credit standards have remained unchanged or tightened slightly since October 2020. The SAFE points to fewer loan applications being made between October 2020 and September 2021 and to a minor decrease in the proportion of SMEs declaring having had difficulties obtaining bank loans between April and September 2021.

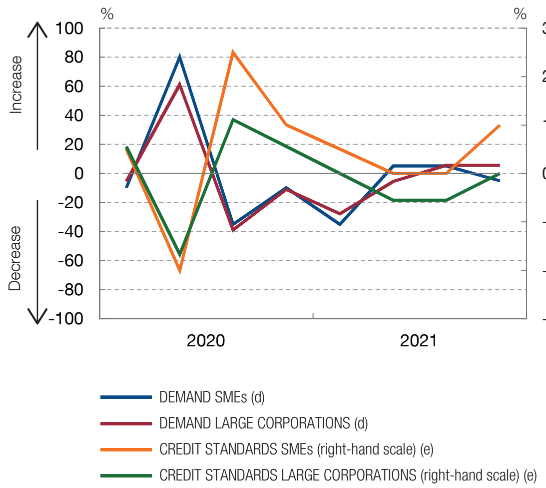
1 OUTSTANDING AMOUNT OF LENDING (a)
Q-o-q change, seasonally adjusted



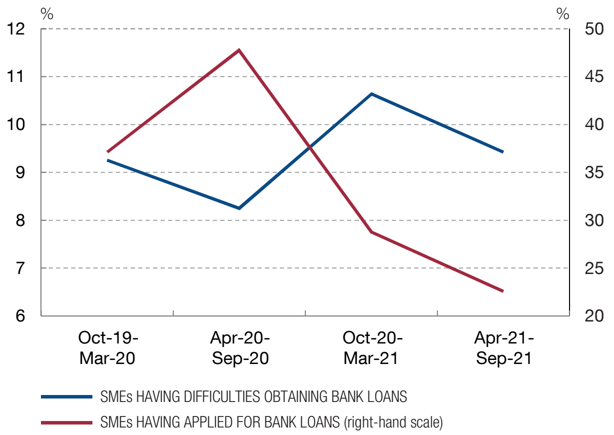
2 NEW LENDING (a)
3-month cumulative seasonally adjusted flows



3 BLS: CHANGES IN DEMAND AND IN CREDIT STANDARDS



4 SAFE: SMEs HAVING DIFFICULTIES OBTAINING BANK LOANS AND SMEs HAVING APPLIED FOR BANK LOANS



SOURCES: Banco de España and ECB.

a The bank lending series (credit or loans) include financing granted by deposit institutions and specialised lending institutions.
b Includes issues made by resident subsidiaries of non-financial corporations.
c Includes renegotiations of previous loans.
d Indicator = percentage of banks reporting a considerable increase × 1 + percentage of banks reporting some increase × 1/2 – percentage of banks reporting some decrease × 1/2 – percentage of banks reporting a considerable decrease × 1.
e Indicator = percentage of banks that have tightened their credit standards considerably × 1 + percentage of banks that have tightened their credit standards somewhat × 1/2 – percentage of banks that have eased their credit standards somewhat × 1/2– percentage of banks that have eased their credit standards considerably × 1.

DOWNLOAD

Drawing on the granular information of firms and banks, the article presents several approaches for a detailed analysis of the possible factors associated with the lack of momentum in resident credit institutions' lending to non-financial corporations in the wake of the sharp surge observed during the first months of the pandemic. The next section focuses on the demand for credit and analyses whether the weakness of this demand may be influenced by the release of the precautionary liquidity buffers built up in 2020. It also examines whether there is a substitution effect behind this weakness, with bank loans being replaced by financing obtained through the issuance of debt securities. The last section analyses the supply of credit to firms operating in the sectors hardest hit by the pandemic.

The results of these analyses suggest that the weak credit demand could be a result of firms' lower borrowing needs, insofar as the progressive decline in uncertainty has enabled a growing number of firms to gradually release part of the liquidity buffers they had built up in 2020.[3] In addition, the growth in issuance of debt securities[4] could be indicative in the case of large corporations of bank lending being replaced by funds raised on the capital markets. On the supply side, the results suggest that banks that had lower solvency levels did not restrict credit to firms in the sectors most severely affected by the COVID-19 crisis more than those that had higher solvency levels. Accordingly, these results seem to indicate that factors linked to the availability of capital did not play an important role in explaining the weakness of bank lending to non-financial corporations during the period analysed.

Demand factors

The release of the precautionary liquidity buffers that firms had built up in 2020, partly with recourse to debt, is one factor that may explain the weakness of credit demand. On the information available in the Banco de España's Central Balance Sheet Data Office integrated database (CBI),[5] part of the increase in corporate indebtedness in 2020 was used to build up liquidity buffers (see Chart 2.1), even in sectors severely affected by the pandemic.[6] The 2021 data obtained from the Central Balance Sheet Data Office Quarterly Survey (CBQ),[7] which draw on a smaller sample of generally large corporations, seem to confirm the hypothesis that liquidity buffers were released in 2021, as they show a higher proportion of corporations whose liquid assets decreased compared with those whose liquid assets increased.

3 Menéndez Pujadas and Mulino (2021).

4 One factor that contributed to the increase in gross issuance in mid-2020 was the high volume of net purchases made under the pandemic emergency purchase programme (PEPP), while the growth observed in late 2021 was influenced by an increase in risk appetite and expectations of interest rate hikes.

5 At the time of preparation of this article, the CBI had data up to 2020 on 465,362 firms. In terms of gross value added (GVA), the sample covers 40.5% of the entire non-financial corporations sector.

6 Sectors severely affected are defined as those whose sales fell by more than 15% in 2020, while sectors moderately affected are those whose sales fell by between 9% and 15%. All others are defined as sectors largely unaffected.

7 Menéndez Pujadas and Mulino (2021).

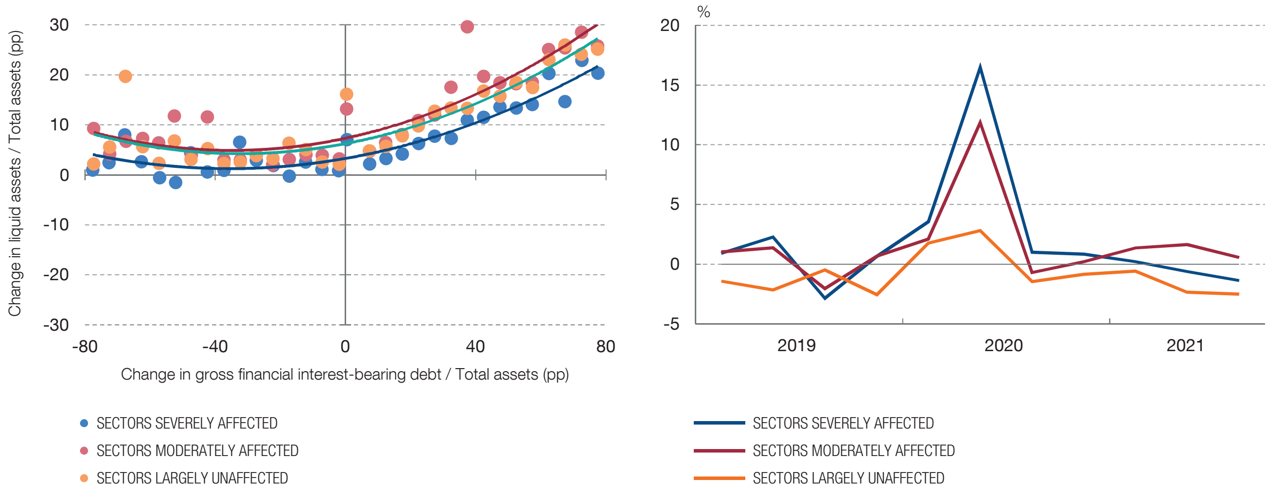
Chart 2

PART OF THE DEBT ACQUIRED IN 2020 WAS USED TO BUILD UP PRECAUTIONARY LIQUIDITY BUFFERS; IT IS LIKELY THAT THESE LIQUIDITY BUFFERS ARE NOW BEING PARTLY RELEASED

The growth in corporate indebtedness in 2020 was accompanied by an increase in precautionary liquidity, even in the sectors most affected by the pandemic. A growing number of firms will probably have gradually released part of the liquidity buffers in 2021. Since the second half of 2020, credit weakness has been most acute in the sectors largely unaffected by the pandemic.

1 CHANGE IN INTEREST-BEARING DEBT TO LIQUID ASSETS IN 2020 COMPARED WITH 2019 (a) (b)

2 LENDING TO NON-FINANCIAL CORPORATIONS BY SECTOR (b)
Q-o-q change



SOURCE: Banco de España.

a Each dot in the chart depicts the average change in interest-bearing debt to total assets and the average change in liquid assets to total assets, obtained in intervals of 5 pp of the change in debt to assets. Only those intervals with more than one firm are considered.

b Sectors severely affected are defined as those whose sales fell by more than 15% in 2020, while sectors moderately affected are those whose sales fell by between 9% and 15%. All others are defined as sectors largely unaffected.

DOWNLOAD

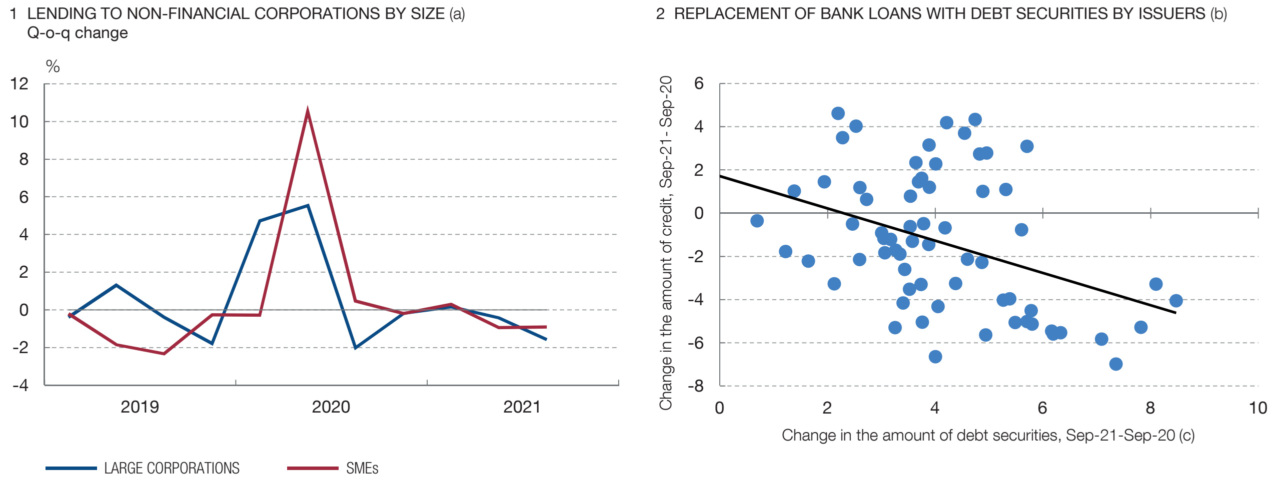
Moreover, the data on lending by sector to non-financial corporations reflect a weaker performance since 2020 H2 for the sectors largely unaffected by the pandemic. Indeed, in those sectors lending decreased, in quarter-on-quarter terms, between September 2020 and September 2021 (the latest information available), when the rate of contraction stood at 2.5% (see Chart 2.2). By contrast, for the sectors moderately affected, lending increased virtually uninterruptedly throughout that period, albeit at a slower pace than during the first months of the pandemic. Lastly, for the sectors severely affected, where credit growth was strongest in 2020 Q2, the small increase between September 2020 and March 2021 has been followed since then by moderate decreases. The least dynamic credit performance in the sectors largely unaffected by the pandemic seems consistent with lower borrowing needs in that segment, as it is likely they are making use of the funds built up in 2020.

Another factor possibly influencing the scant dynamism of firms' demand for credit is the replacement of this source of financing with debt securities issuance.[8] As

8 This same substitution effect occurred following the introduction of the Eurosystem's corporate sector purchase programme (CSPP) in March 2016 (see Arce, Mayordomo and Gimeno, 2021). The results of a regression analysis

Chart 3
MORE WEAKNESS IS OBSERVED IN LENDING TO LARGE CORPORATIONS, WHICH HAVE REPLACED PART OF THEIR BANK FINANCING WITH DEBT SECURITIES ISSUANCE

The fall in resident banks' lending to non-financial corporations has been sharper in large corporations. A substitution effect is observed between financing through bank loans and through debt securities for issuers that are mostly large corporations. This is because those whose outstanding amount of debt securities increased more also reduced their outstanding amount of credit more. A regression analysis shows that this negative relationship is statistically significant.



SOURCE: Banco de España.

a The definition of "size" is in line with Commission Recommendation 2003/361/EC.
b The change in these amounts is expressed in logarithms, taking the natural logarithm of the absolute value of the difference in the amounts between the two dates in million euro and multiplying it by the sign of that change. The data are consolidated at group level and each dot represents a firm.
c Includes promissory notes. The analysis performed excluding these instruments gives similar results.

DOWNLOAD

shown in Chart 3.1, lending to large corporations, which are generally the ones with access to capital market financing, has contracted more than lending to SMEs. Thus, in September 2021 lending to large corporations decreased by 1.6% in quarter-on-quarter terms, while in the case of SMEs it fell by 0.9%.

To assess the possible effect of replacing bank lending with debt securities, information has been taken from the Banco de España's Securities Issuers Database (BEV, by its Spanish abbreviation)[9] relating to the outstanding amount of debt securities issued by Spanish non-financial corporations and their subsidiaries, both resident and non-resident, at September 2020 and September 2021. The data have been consolidated at issuer group level. The information on bank lending was obtained from the Banco de España's Central Credit Register (CCR) for the same periods and for firms belonging to the same issuer groups. Chart 3.2 shows a negative correlation between the change in the amount of financing with debt

show that, as occurred then, the replacement of sources of financing by large issuers has favoured credit supply to smaller firms that do not have access to the debt markets, since the banks whose lending to debt securities issuers fell between September 2020 and September 2021 had increased their credit supply to the SME segment.

9 The BEV is a granular database that contains information on debt securities issuers and issuance.

securities and the amount of bank lending between September 2020 and September 2021[10] for issuers which, as mentioned above, are mostly large corporations. The regression analysis shows that the relationship is statistically significant (significance level of 1%), which appears to support the existence of a replacement effect of bank financing with financing through debt securities issuance.

Supply factors

The analysis performed in the previous section shows that the weakness observed in credit could be explained, at least in part, by demand factors. The more buoyant performance of lending in the sectors hardest hit by the pandemic and in SMEs (in principle, the groups representing a higher risk for credit institutions and, therefore, those most susceptible to restricted access to financing)[11] appears to be consistent with a smaller role for supply factors in the weakness of credit. In any event, this section analyses in depth whether the lack of momentum in bank lending to non-financial corporations might also be explained by certain supply drivers.

As shown by Arce et al. (2018), in the period 2016-2019 the less capitalised banks that were more affected by negative interest rates were the ones restricting to a greater extent the supply of credit to the higher risk firms, whose credit had greater associated risk weights. Based on this evidence, this section analyses whether in the aftermath of the health crisis less capitalised credit institutions have placed greater restrictions on lending to SMEs operating in sectors hard hit by the pandemic, whose default risk would, on average, be higher than at other less affected sectors.

Specifically, Chart 4.1 depicts the relationship between the year-on-year change in credit in 2021 Q3[12] and credit institutions' CET1 capital ratios in February 2020, immediately prior to the onset of the pandemic. The chart shows that credit institutions starting out with lower capital ratios and which could therefore a priori be more influenced by the risk of new lending, have not reduced the amount of their lending to SMEs in the most severely affected sectors more than banks with higher capital ratios.

To supplement the above evidence, several regression analyses were conducted, assessing how lending by Spanish credit institutions to firms operating in the sectors hardest hit by the pandemic changed between September 2020 and September 2021 according to their capital ratios and capital buffers (measured as the distance

10 The change in these amounts is expressed in logarithms, taking the natural logarithm of the absolute value of the difference in the amounts between the two dates in million euro and multiplying it by the sign of that change.

11 Different studies have found that SMEs tend to have more difficulty in accessing bank finance, while the sectors most affected by a crisis tend to face greater tightening of their financing conditions. See, for instance, Kuntchev et al. (2013) and Berg and Schrader (2012).

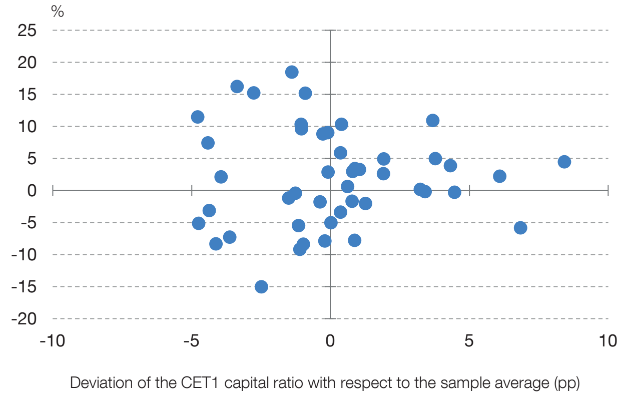
12 The same analysis was conducted for a shorter period (September 2021 and June 2021) with similar results.

Chart 4

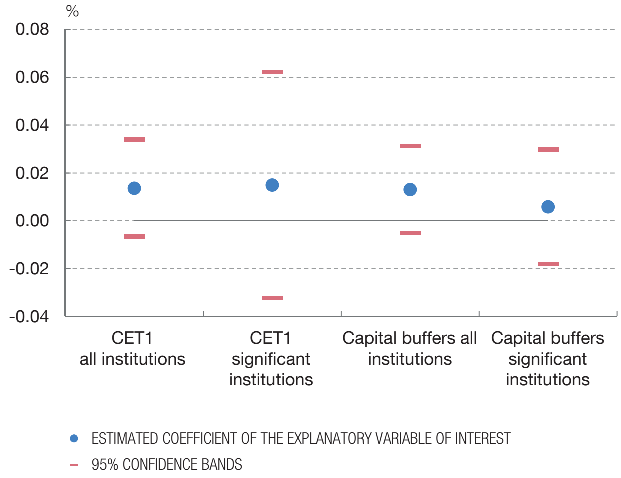
NO DIFFERENCES ARE OBSERVED IN TERMS OF BANKS' CAPITAL LEVELS IN THE SUPPLY OF CREDIT TO SMEs IN THE SECTORS MOST SEVERELY AFFECTED BY THE PANDEMIC

Regardless of whether the capital ratio or capital buffers are used or whether significant institutions or the full universe of credit institutions operating in Spain are considered, banks posting lower levels of solvency did not restrict lending to SMEs in the sectors most affected by the COVID-19 crisis more than those starting out with a higher solvency level.

1 CET1 CAPITAL RATIOS AND CHANGE IN LENDING TO SMEs BETWEEN SEPTEMBER 2020 AND SEPTEMBER 2021 IN SEVERELY AFFECTED SECTORS (a) (b)



2 CHANGE IN THE SUPPLY OF CREDIT TO SMEs BETWEEN SEPTEMBER 2020 AND SEPTEMBER 2021 IN SEVERELY AFFECTED SECTORS (b) (c)



SOURCE: Banco de España.

a Each blue dot in the chart depicts a credit institution.
b Severely affected sectors are those whose sales fell by more than 15% in 2020.
c The explanatory variable of interest is the capital ratio or capital buffer, depending on the specification, of a certain bank immediately before the onset of the pandemic. A series of controls capturing various bank characteristics (size, profitability and risk) are used. Firm-fixed effects are also used to control for credit demand.

DOWNLOAD

between this ratio and the micro and macroprudential CET1 capital requirements for each credit institution) as at February 2020. The dependent variable used in this analysis is the change in the amount of a firm's credit extended by a given bank between September 2020 and September 2021. The explanatory variable of interest is the capital ratio or capital buffer, depending on the specification, of a certain bank immediately before the onset of the pandemic.[13]

To perform the soundest possible analysis, different bank samples were used, as described in Chart 4.2, which shows estimates of coefficients relating to the variable of interest (and their 95% confidence bands). These coefficients approximate the effect which banks' greater or lower capital slack has on their credit supply. Regardless of whether the capital ratio or capital buffers are used, or whether significant institutions or the full universe of credit institutions operating in Spain are considered, banks posting lower levels of solvency did not restrict lending to SMEs

13 A series of controls capturing various bank characteristics (size, profitability and risk) are used. Firm-fixed effects are also used to control for credit demand, as in Khwaja and Mian (2008).

in the sectors most affected by the COVID-19 crisis more than those starting out with a higher solvency level.

Therefore, these results seem to indicate that factors linked to the availability of capital have not played a significant role in explaining the weakness of bank lending to non-financial corporations between September 2020 and September 2021.

15.3.2022.

REFERENCES

Arce, Ó., M. García-Posada, S. Mayordomo and S. Ongena (2018), "Adapting lending policies in a negative-for-long scenario", *Working Paper* No 1832, Banco de España.

Arce, Ó., S. Mayordomo and R. Gimeno (2021), "Making room for the needy: the credit-reallocation effects of the ECB's corporate QE", *Review of Finance,* 25, pp. 43-84.

Berg, G. and J. Schrader (2012), "Access to credit, natural disasters, and relationship lending", *Journal of Financial Intermediation,* Vol. 21, Issue 4, October, pp. 549-568.

Khwaja, A. and A. Mian (2008), "Tracing the Impact of Bank Liquidity Shocks: Evidence from an Emerging Market", *American Economic Review,* Vol. 98 (4), pp. 1413-1442.

Kuntchev, V, R. Ramalho, J. Rodríguez-Meza and J. Yang (2013), "What Have We Learned from the Enterprise Surveys Regarding Access to Credit by SMEs?", *Policy Research Working Paper* No 6670, World Bank.

Menéndez Pujadas. Á. (2021), Recent developments in Spanish SMEs' access to external finance according to the European Central Bank's six-monthly survey, Box 4, "Quarterly report on the Spanish economy", *Economic Bulletin* 4/2021, Banco de España.

Menéndez Pujadas, Á. and M. Mulino (2021), "Economic and financial performance of Spanish firms in 2020 and 2021 according to the Central Balance Sheet Data Office", Analytical Articles, *Economic Bulletin* 4/2021, Banco de España.

Menéndez Pujadas, Á. and M. Mulino (2022), "January 2022 Bank Lending Survey in Spain", Analytical Articles, *Economic Bulletin* 1/2022, Banco de España.