

## HETEROGENEITY IN DEVELOPMENTS IN THE BANK DEBT OF INDIVIDUALS AND FIRMS DURING THE COVID-19 PANDEMIC

The COVID-19 pandemic is having a highly uneven impact both on firms and on individuals, depending on their links with the economic activities more or less affected by the health situation. However, the differences that existed prior to the crisis, in terms of financial strength (for firms) or income level, wealth and job stability (for individuals), interact with the income shock prompted by the pandemic and could generate differential effects in terms of financing needs and impairment of ability to pay.

Those agents whose income is relatively more impaired may have to resort to more debt to cover their short-term expenses, which would mean, *ceteris paribus*, an increase in the financial exposures assumed by the funding providers, but it would avert second-round effects on economic activity by sustaining consumption and investment, and would increase the likelihood of firms and jobs being preserved.

However, if the deterioration of longer-term expectations for income generation proves sufficiently severe, a contraction of solvent demand for credit, or a more restrictive supply-side response in the face of heightened risk perception, could lead to a reduction of debt in these sectors. *Ceteris paribus*, the credit exposures immediately assumed by financial intermediaries with these counterparties would be lower, but the possibility of business closures and sharp contractions in consumption by some households could increase. Consequently, determining which of these two potential theoretical patterns is predominating is an empirical matter.

Although the support measures, such as payment moratoria and ICO guarantees for business credit (analysed in greater detail in Boxes 2.1 and 2.2), may facilitate access to bank credit for the most affected agents, the ultimate distribution by type of firm and household will again depend on the relative behaviour of supply and demand.

The Banco de España's Central Credit Register (CCR), in combination with other data sources such as the Banco de España's Central Balance Sheet Data Office and the

Mercantile Registries (CBB database), contains sufficiently disaggregated information to conduct a preliminary study on the heterogeneity in the response of the bank debt of different types of individuals and firms to the COVID-19 pandemic.

As Chart 1 shows, there are significant differences in credit growth across the sectors of activity, with the rate of change standing 5.8 pp higher in the most pandemic-sensitive sectors.<sup>1</sup> The use of ICO guarantees appears to be associated with higher growth in lending to firms (close to 30 pp higher both for all sectors and for the most sensitive sectors).<sup>2</sup> The business characteristics assessed were the firms' age, capital ratio (equity-to-assets), average cost of debt, ROA and labour productivity (net revenue per employee).<sup>3</sup> For each of these, the firms were divided into two groups – high and low – pursuant to their position relative to the median of the distribution, calculating the weighted rate of change of the relevant variable for each of the two groups.

It can be observed that the rate of change in credit has been somewhat higher for younger firms; higher also for firms that have a lower average cost of debt and those that are more profitable or more productive; and considerably higher for less indebted firms (see Chart 1). These differences in behaviour across non-financial corporations with different levels of financial strength are more pronounced when only the sectors most sensitive to the effects of the pandemic are analysed. All of which would suggest that, broadly speaking, it was not the most vulnerable firms that increased their bank debt most in the past year; instead priority appears to have been given to containing financial risks, increasing the exposure to stronger firms. Significant demand-side factors are likewise evident in the stronger credit growth in sensitive sectors and among the youngest firms (older firm age appears to be associated with lower growth). These results also suggest that, in the absence of support measures, lending to the more vulnerable firms would have presented a larger negative growth differential.

1 In this study, the following sectors are considered sensitive: manufacturing (excluding the manufacture of food products, beverages and tobacco); retail and wholesale trade; repair of vehicles; transportation and storage; hospitality; and arts, entertainment and recreation. This is an a priori sensitivity classification based on the nature of the activity, rather than an ex-post measure of the degree of impact in 2020.

2 Chart 3 of Box 2.1 examines the differences in the characteristics of the firms that have made use of ICO guarantees relative to the general population of firms, showing that the former generally present a higher risk profile.

3 The CBB database information corresponds to 2018 (the latest date available with a representative sample of firms), but based on the macroeconomic data it seems reasonable to assume that the financial position of firms held stable in 2018-2019. This data availability also means that the study only covers firms that existed prior to 2020.

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Chart 1  
YEAR-ON-YEAR CHANGE IN BANK CREDIT IN 2020  
DIFFERENCES BY CHARACTERISTICS OF FIRMS, ID, Business in Spain (a)

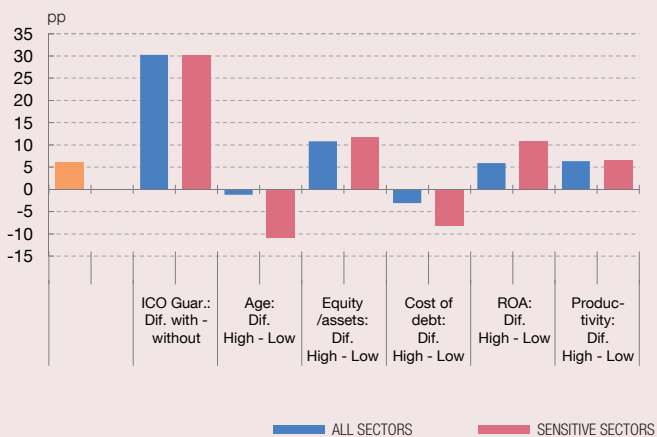


Chart 2  
YEAR-ON-YEAR CHANGE IN PROBLEM BANK CREDIT IN 2020  
DIFFERENCES BY CHARACTERISTICS OF FIRMS, ID, Business in Spain (a) (c)

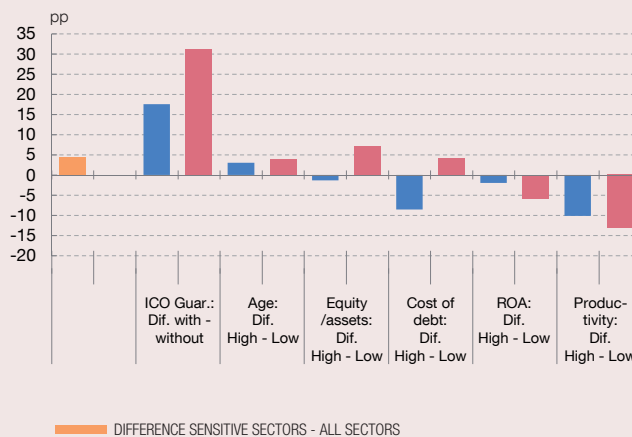


Chart 3  
YEAR-ON-YEAR CHANGE IN BANK CREDIT IN 2020  
DIFFERENCES BY CHARACTERISTICS OF INDIVIDUALS ID, Business in Spain (b)

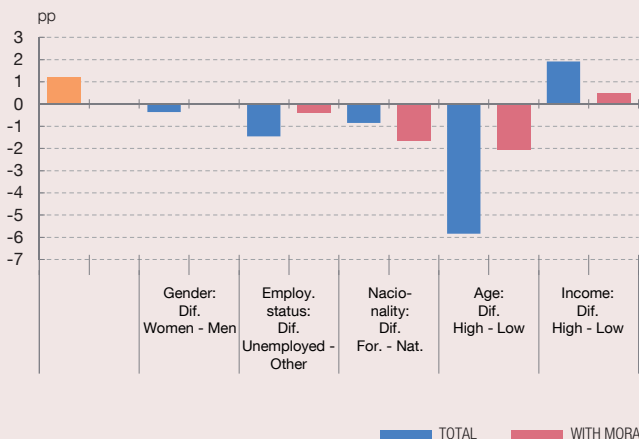
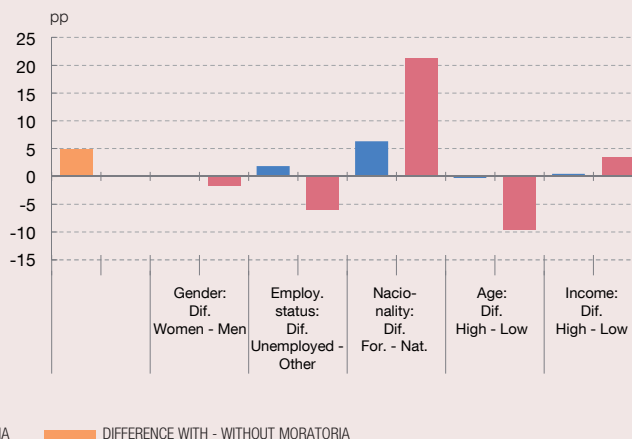


Chart 4  
YEAR-ON-YEAR CHANGE IN PROBLEM BANK CREDIT IN 2020  
DIFFERENCES BY CHARACTERISTICS OF INDIVIDUALS ID, Business in Spain (b) (c)



SOURCES: CIRBE, CBBE, INE y Banco de España.

- a The differences are presented in pp for the rates of change between non-financial corporations classified into two groups (high and low) based on their position relative to the median for each financial variable within the study sample (e.g. high (low) ROA if above (below) the median). The financial characteristics are taken from the CBB database (last complete sample for 2018, meaning that the variables reflect the pre-crisis financial situation). The ICO Guarantee indicator divides the sample firms into those with and those without an ICO-backed loan. For this study, the sensitive sectors are manufacturing (excluding the manufacture of food products, beverages and tobacco); retail and wholesale trade; repair of vehicles; transportation and storage; hospitality; and arts, entertainment and recreation.
- b The differences are presented in pp for the rates of change between individuals classified according to characteristics relating to their income and ability to pay. Each characteristic is dichotomous or allows the individuals to be classified into two groups (high and low) based on their position relative to the median. The Moratoria indicator identifies whether the individual has benefitted from a loan moratorium at any time in 2020. The income of the individual is attributed through matching with INE data on income by postcode. The differences based on the characteristics of individuals are compared both for the overall total and for individuals that have made use of at least one moratorium.
- c Problem assets are those considered non-performing or with past-due payments, even when for less than 30 days. In Chart 2, for the sensitive sectors as a whole, the sample has been corrected for outliers since the sample available is smaller.

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In terms of problem loans, which in this analysis are considered to be non-performing and past-due loans,<sup>4</sup> the growth differences for ROA and productivity stand out, with the better-positioned firms in each of these metrics recording lower rates of change (see Chart 2).<sup>5</sup> It is likewise observed that there has been a greater ex-post materialisation of credit risk among those firms that have made use of ICO guarantees. In the sensitive sectors, the association between greater financial strength (for instance, higher ROA or productivity) and a lower rate of change in problem loans is even more evident than in the overall population of firms. In sensitive sectors, firms with a higher cost of debt show a distinctly poorer performance in terms of loans. However, in some cases the disruption caused by the pandemic could mean that the pre-crisis financial position has less ex-post explanatory power for the credit risk assumed.<sup>6</sup> For example, across all sectors of activity, higher growth in problem loans is observed for firms that had a lower ex-ante cost of debt.

A similar exercise has been conducted for individuals, assessing the effect of age, gender, employment status, nationality and income level (proxied by the average income in the postcode area of residence), since there is previous evidence in the literature that young people, women, foreign workers and, naturally, the unemployed could have experienced the largest reductions in income during this crisis. In some cases, this owes to the type of a large part of the employment contracts among these groups and, in others, to their presence in the most affected sectors.

Chart 3 shows how the unemployed, foreigners, older individuals and lower-income earners have registered a larger decline in total credit. By contrast, there are no significant gender-based differences. The existence of moratoria has been conducive to a more favourable change in the stock of credit (with growth 1.2 pp higher for those individuals benefiting from moratoria). This is particularly true in these more vulnerable groups, where a less negative differential performance is observed, with the exception of foreigners, whose total credit declined to a greater extent among those making use of moratoria.

With regard to developments in non-performing and past-due loans (see Chart 4), relevant growth differences are only observed for the unemployed (with higher rates of change than other individuals) and foreigners. Overall, it seems that the individuals most economically affected by the pandemic have seen their bank credit decrease more than others, while, by contrast, this group has also recorded a smaller reduction in credit risk. Among the individuals who made use of moratoria, it is observed that unemployment and lower income are associated with lower rates of change in problem assets, which would indicate that the moratoria are preventing the emergence of credit problems in some of the more vulnerable segments. By contrast, the rate of change in problem loans among foreigners with access to moratoria has been relatively high.

Certain limitations of this analysis should be acknowledged. First, developments in bank debt do not offer a full picture of changes in the financial situation of households and firms. Further, the entire population of bank loans is not available due to the reporting threshold of €6,000 (cumulative by holder in the CCR) and the need to match the CCR with the CBB database – to which not all firms report – in order to segment credit by the firms' financial positions. However, this sample is sufficiently representative to assess whether any cross-sector imbalances in credit developments exist before they materialise to a significant degree.

The analysis indicates that developments in credit in 2020 would largely be shaped by risk considerations, with relatively weaker credit growth in the more vulnerable segments of firms and individuals, which also registered a poorer performance in terms of growth of problem loans. The analysis in this box, further complemented by Boxes 2.1 and 2.2, indicates that the existence of support programmes, such as the ICO guarantees and credit moratoria, appears to have had a significant effect in containing, but not cancelling out, these trends. In other words, in the absence of the support programmes, the groups of firms and households with a higher risk profile would probably have experienced credit constraints. Going forward, close monitoring is required to identify any potential credit constraints for viable firms, which could affect the path of economic recovery.

4 The identification of Stage 2 credit – a more precise category than past-due for identifying loans whose quality has deteriorated significantly since initial arrangement but are not yet classified as non-performing – was introduced in the CCR in 05/2020. It is therefore not possible to study credit growth in this category with respect to 2019 and a past-due classification is used instead.

5 The finding that troubled assets declined most at those firms with a higher cost of debt appears to owe to the absence of other controls in this stylised analysis, and may be explained by these being the oldest outstanding payments or by the use of support measures to keep these troubled assets in check.

6 In Chart 2, the sample used for the sensitive sectors is corrected for outliers, i.e. large firms with a relatively favourable pre-crisis financial position that became troubled as a result of the crisis. Since aggregate reclassifications to troubled status remain moderate, the influence of the outliers increases. As more quarters of data become available, it will be possible to estimate the differences between the groups more robustly.