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THE IMPACT OF THE COVID-19 CRISIS  
ON THE FINANCIAL POSITION OF NON-FINANCIAL  
CORPORATIONS IN 2020: CBSO-BASED EVIDENCE

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and Maristela Mulino

## ABSTRACT

The first part of this article describes developments in the profitability, solvency and liquidity of Spanish non-financial corporations, drawing on the integrated CBSO database, which contains annual information up to 2019. This analysis evidences that, at end-2019, the corporate sector was in a relatively strong position to withstand an adverse shock. This was, however, compatible with the existence of segments that were in a more vulnerable position. It then analyses the impact of the COVID-19 crisis on the firms' financial position, on the basis of Central Balance Sheet Data Office Quarterly Survey data for the first three quarters of 2020, which include a relatively small number of generally large firms. The COVID-19 crisis has triggered steep drops in ordinary earnings, employment and profitability levels in this sample of firms. In addition, extraordinary gains and losses have performed very negatively. This has led this group of firms to record a net loss in the Central Balance Sheet Data Office Quarterly Survey for the first time since 2002. The financial position of these firms has also deteriorated in 2020. The average debt ratios and the average debt burden ratio have risen, caused by both higher corporate debt and, to a greater degree, lower ordinary earnings. However, the firms have increased their liquidity buffers as a precautionary measure. The article also includes two boxes. Respectively, these analyse the impact of the COVID-19 crisis on the profitability and the solvency of the corporate sector in 2020, on the basis of various microsimulations. The findings of Box 1 show that the decline in profitability appears to have been particularly steep in the SME segment and, especially, in the sectors hardest hit by the crisis. Box 2 evidences that the crisis seems to have prompted a sharp rise in the financial pressure borne by the firms, in addition to undermining, albeit more moderately, their solvency.

**Keywords:** activity, earnings, financial position, non-financial corporations, COVID-19.

**JEL classification:** L25, M21, M41.

## THE IMPACT OF THE COVID-19 CRISIS ON THE FINANCIAL POSITION OF NON-FINANCIAL CORPORATIONS IN 2020: CBSO-BASED EVIDENCE

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### The corporate sector up to 2019

Drawing on the integrated CBSO database<sup>1</sup> (CBI by its Spanish abbreviation), the corporate sector's activity grew between 2014 and 2019. This enabled it to record, in aggregate terms, uninterrupted increases in its ordinary earnings and its profitability levels over that period. Thus, the average return on assets was 5.9% in 2019, 0.3 percentage points (pp) higher than 2018 and 2 pp above the minimum value recorded in 2012 (see Chart 1.1). The SME segment underwent a comparatively stronger recovery over those years. As a result, although its profitability levels were always lower than those of the larger firms, the gap between the two groups narrowed.

The positive performance of profitability was accompanied by both an increase in the firms' liquidity buffers and a gradual decline in aggregate debt levels. Thus, the liquidity ratio<sup>2</sup> rose by 4 pp from 2014 to 10.6% in 2019 (see Chart 1.2). This increase occurred mainly in the SME segment, which may partly be due to precautionary reasons since these firms typically find it more difficult to access external financing. As regards the decline in debt levels, Charts 1.3 and 1.4 show uninterrupted drops in the E.1 (debt-to-asset) and E.2 (debt-to-ordinary earnings) ratios in recent years. In 2019 the E.1 ratio was 36.7%, more than 8 pp lower than the peak value recorded in 2009 (45%). The overall E.2 ratio dropped from 683% in 2012 (the peak recorded in the period analysed) to 466% in 2019. This decline was considerably sharper in the SME segment, where it fell from close to 900% in 2012 to 359% seven years later. Both lower debt and, in the case of the E.2 ratio, the positive performance of ordinary earnings (this ratio's denominator) contributed to these developments.

This evidence reveals that, overall, at end-2019 the corporate sector was in a relatively strong position to withstand an adverse shock. This was, however,

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1 The CBI includes information up to 2019. At the date of this article going to press, information for that year on 381,916 firms had been received (further information for that year, bringing the total to around 800,000 firms, is yet to be received). The CBI sample represents 32.5% of the gross value added (GVA) generated by the entire non-financial corporations sector. A more detailed sectoral breakdown of the CBI is available to analysts via the "Sectoral aggregates" application ([https://app.bde.es/asc\\_web/consulta.html#](https://app.bde.es/asc_web/consulta.html#))

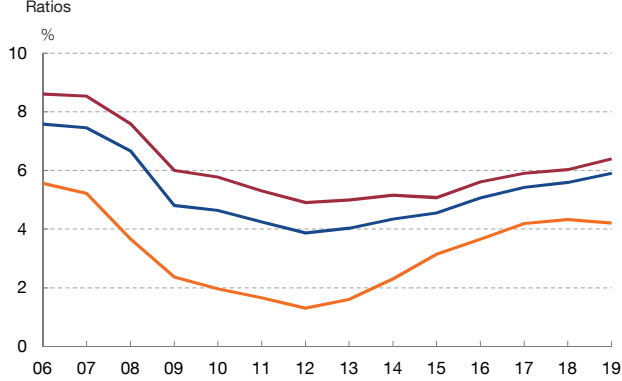
2 This ratio is defined as "Cash and cash equivalents" divided by "Total assets".

Chart 1

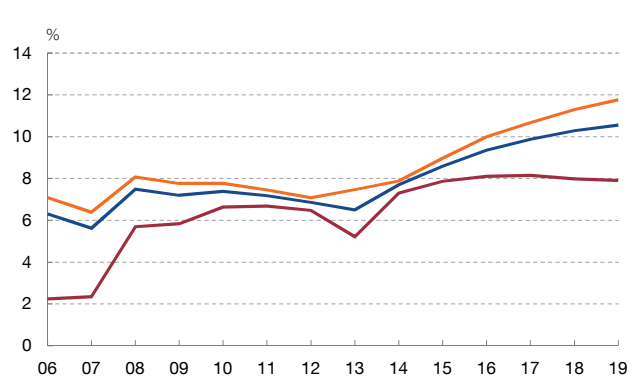
**IMPROVEMENT IN THE PROFITABILITY, LIQUIDITY AND SOLVENCY OF THE NON-FINANCIAL CORPORATIONS SECTOR, IN AGGREGATE TERMS, UP TO 2019**

Overall, the non-financial corporations sector improved up to 2019, with an increase in its profitability levels and liquidity buffers, and a decline in its debt levels. However, these positive developments are compatible with the existence in 2019 of a significant percentage of firms with negative ROA and high debt ratios, which seems to evidence that significant vulnerabilities persisted in 2019.

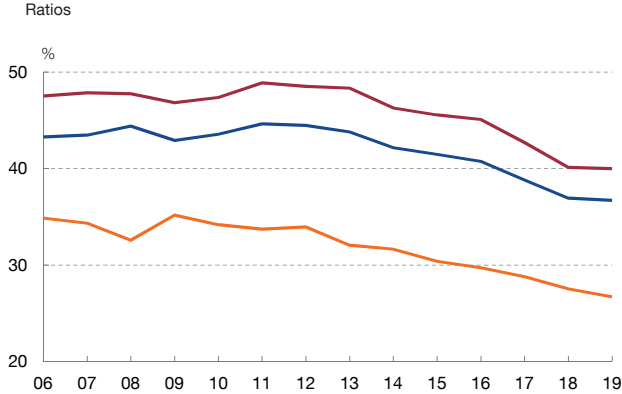
1 RETURN ON ASSETS (R.1)



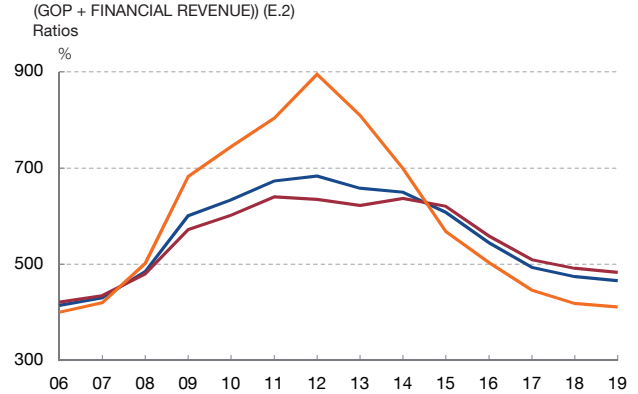
2 LIQUIDITY RATIO (LIQUID ASSETS (a) / TOTAL ASSETS)



3 INDEBTEDNESS (INTEREST-BEARING BORROWING / NET ASSETS) (E.1)

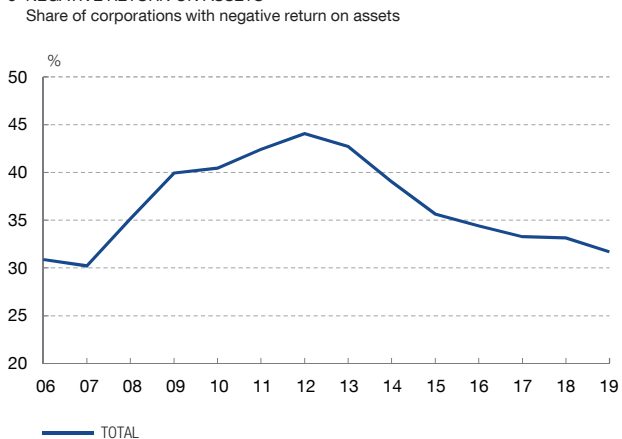


4 INDEBTEDNESS (INTEREST-BEARING BORROWING / (GOP + FINANCIAL REVENUE)) (E.2)

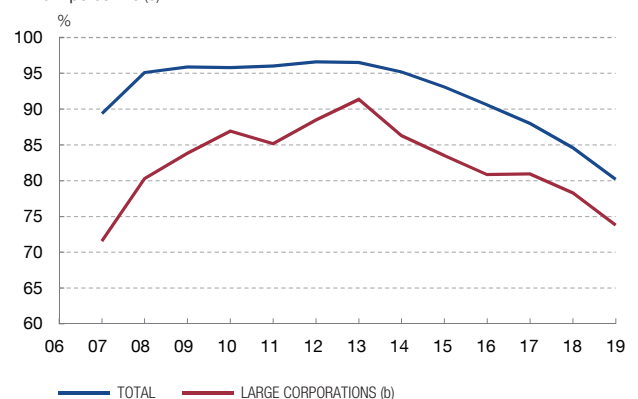


— TOTAL — LARGE CORPORATIONS (b) — SMEs (b)

5 NEGATIVE RETURN ON ASSETS



6 E.1 DEBT RATIO (INTEREST-BEARING BORROWING / NET ASSETS) 75th percentile (c)



SOURCE: Banco de España.

a Liquid assets are cash on hand and other equivalent liquid assets.

b Firm size definitions are consistent with Commission Recommendation 2003/361/EC.

c The 75th percentile of SMEs has not been included since it coincides with that of the total.



compatible with the existence of firms in a significantly more vulnerable position than the aggregate data reflect. For instance, Chart 1.5 shows that in 2019 somewhat more than 30% of firms continued to record negative return on assets. Likewise, a detailed analysis of the distribution of companies by their indebtedness reveals that, despite the deleveraging that has predominated in the sector in recent years, in 2019 one-quarter of firms still had debt-to-asset ratios in excess of 80%. These were somewhat higher in the SME segment than in the large firm segment, where they stood at around 73% (see Chart 1.6).

## The corporate sector in 2020. The impact of the COVID-19 crisis

The COVID-19 pandemic has placed significant constraints on the corporate sector in 2020, prompting an unprecedented contraction in economic activity, significantly undermining the profitability and weakening the financial position of a high percentage of firms. The Central Balance Sheet Data Office Quarterly Survey (CBQ), for which data up to Q3 are available, evidences a sharp drop in ordinary earnings and profitability levels, even leading to the overall sample recording a net loss. This had not been seen in the CBQ since 2002.<sup>3</sup> In addition, debt ratios increased as firms resorted to borrowing to fund operating deficits, and the share of ordinary earnings (gross operating profit (GOP) plus financial revenue) used for interest payments also rose slightly, reversing the downward path of this ratio in recent years. This led to an increase in the sector's debt burden. The microsimulations performed to approximate the impact of the COVID-19 crisis on the overall corporate sector, the results of which are presented in Boxes 1 and 2, suggest that these adverse developments seem to have had a more pronounced impact on the SME segment and, especially, those SMEs engaged in activities in the sectors hardest hit by the crisis.

### Activity, employment and personnel costs

Over the first three quarters of 2020, the CBQ<sup>4</sup> firms' GVA decreased by 22.5% year-on-year. This contrasts with the 0.7% increase recorded a year earlier (see Table 1 and Chart 2). The decline is somewhat larger (23.8%) if calculated by weighting the sectors of the CBQ sample using the National Accounts weights.<sup>5</sup> In addition, Chart 3, which shows the distribution of firms by the rate of change in their GVA,

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3 The net loss for 2002 was affected by severe extraordinary losses linked to the bursting of the dot.com bubble.

4 The CBQ contains information on the 895 firms which had reported their 2020 Q1, Q2 and Q3 data to the CBQ by 23 November 2020. The sample represents 11.1 % of the GVA of the entire non-financial corporations sector (according to the information furnished by National Accounts).

5 The re-weighted figure is obtained by applying, to the aggregate rate of each sector, the weight of such sector in the economy, approximated using National Accounts data. For further information, see Box 1, "Re-weighting of GVA and GOP on the basis of the weight of the different sectors in the national economy", in the article "Results of non-financial corporations in 2018 Q1", *Economic Bulletin*, 2/2018.

Table 1

**ABRUPT DECLINE IN FIRMS' ORDINARY EARNINGS AND PROFITABILITY IN THE FIRST THREE QUARTERS OF 2020, OWING TO THE IMPACT OF THE COVID-19 CRISIS**

Databases	CBI structure	CBI		CBQ (a)		
	2019	2018	2019	2019 Q1-Q4/ 2018 Q1-Q4	2019 Q1-Q3/ 2018 Q1-Q3	2020 Q1-Q3/ 2019 Q1-Q3
Number of corporations		749,530	381,916	1,026	1,044	895
Total national coverage (% of GVA)		55.6	32.5	13.0	13.2	11.1
Profit and loss account (rate of change with respect to same corporations in previous year, %)						
1 VALUE OF OUTPUT (including subsidies)	100.0	5.4	2.2	0.1	0.5	-21.2
<i>Of which:</i>						
<i>Net amount of turnover and other operating income</i>	149.9	6.3	0.7	-1.3	-1.0	-21.8
2 INPUTS (including taxes)	64.1	6.0	1.1	-0.5	0.5	-20.6
<i>Of which:</i>						
<i>Net purchases</i>	41.2	3.8	2.2	-2.5	-1.5	-26.9
<i>Other operating costs</i>	23.0	6.0	3.3	3.8	1.4	-8.8
S.1 GROSS VALUE ADDED AT FACTOR COST [1 – 2]	35.9	4.3	4.1	1.5	0.7	-22.5
3 Personnel costs	22.4	6.2	5.5	3.4	3.2	-4.9
S.2 GROSS OPERATING PROFIT [S.1 – 3]	13.5	1.0	1.8	-0.3	-1.8	-39.5
4 Financial revenue	4.9	5.5	13.1	18.3	5.8	-33.3
5 Financial costs	2.0	-5.1	-3.8	-6.5	-5.7	-8.1
6 Net depreciation, impairment and operating provisions	5.4	1.6	2.6	1.7	1.4	1.9
S.3 ORDINARY NET PROFIT [S.2 + 4 – 5 – 6]	10.9	3.9	7.4	8.4	-0.3	-71.2
7 Gains (losses) from disposals and impairment	1.0	—	-60.3	-57.5	—	—
7' As a percentage of GVA (7 / S.1)		5.2	2.8	6.3	-2.8	-22.6
8 Changes in fair value and other gains (losses)	-0.8	-26.8	-11.7	-34.0	-71.3	66.7
8' As a percentage of GVA (8 / S.1)		-1.7	-2.2	-5.0	-6.1	-2.9
9 Corporate income tax	1.3	3.3	-10.7	-28.3	-9.0	-41.8
S.4 NET PROFIT (LOSS) [S.3 + 7 + 8 – 9]	9.8	47.2	-6.8	-12.4	-43.1	—
S.4' As a percentage of GVA (S.4 / S.1)		24.4	27.3	38.2	19.4	-16.1
RATES OF RETURN						
	Formulas (b)					
R.1 Return on assets (before tax)	(S.3 + 5.1) / NA					
		5.6	5.9	7.1	4.5	2.2
R.2 Interest on borrowed funds/ interest-bearing borrowing	5.1 / IBB					
		2.4	2.2	2.0	2.0	1.8
R.3 Return on equity (before tax)	S.3 / E					
		7.5	8.0	10.9	6.3	2.4
R.4 ROA – cost of debt (R.1 – R.2)	R.1 – R.2					
		3.2	3.7	5.1	2.5	0.3
MEMORANDUM ITEM: TOTAL SAMPLE REWEIGHTED						
S.1 GROSS VALUE ADDED AT FACTOR COST [1 – 2]		4.4	4.2	1.2	1.1	-23.8
S.2 GROSS OPERATING PROFIT [S.1 – 3]		1.4	1.7	-3.2	-2.7	-48.3

**SOURCE:** Banco de España.

**NOTE:** In calculating rates, internal accounting movements have been edited out of items 4, 5, 7 and 8.

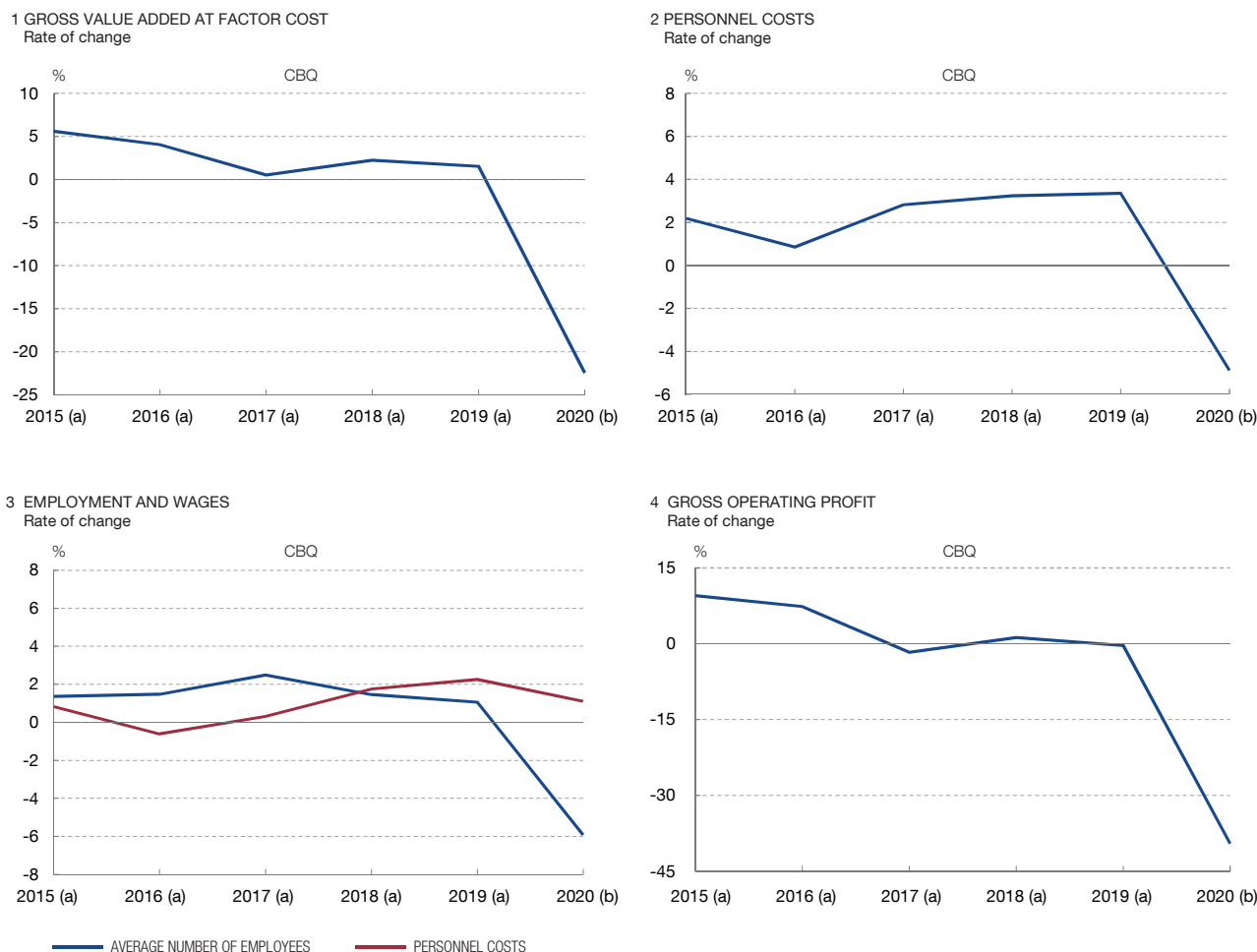
**a** All the data in this column have been calculated as the weighted average of the quarterly data.

**b** NA = Net assets (net of non-interest-bearing borrowing); E = Equity; IBB = Interest-bearing borrowing; NA = E + IBB. The financial costs in the numerators of ratios R.1 and R.2 only include the portion of financial costs that is interest on borrowed funds (5.1).

Chart 2

**SHARP DECLINE IN BUSINESS ACTIVITY AND EARNINGS AS A RESULT OF THE COVID-19 CRISIS**

The lockdown measures introduced in the context of the COVID-19 pandemic triggered an abrupt fall in firms' activity, resulting in an unprecedented decline in ordinary earnings. Personnel costs also fell, mainly as a result of the drop in employment, albeit much more moderately than GVA.



SOURCE: Banco de España.

- a The average data of the four quarters of 2015, 2016, 2017, 2018 and 2019 with respect to the previous year.
- b Data to 2020 Q3 with respect to the same period in 2019.

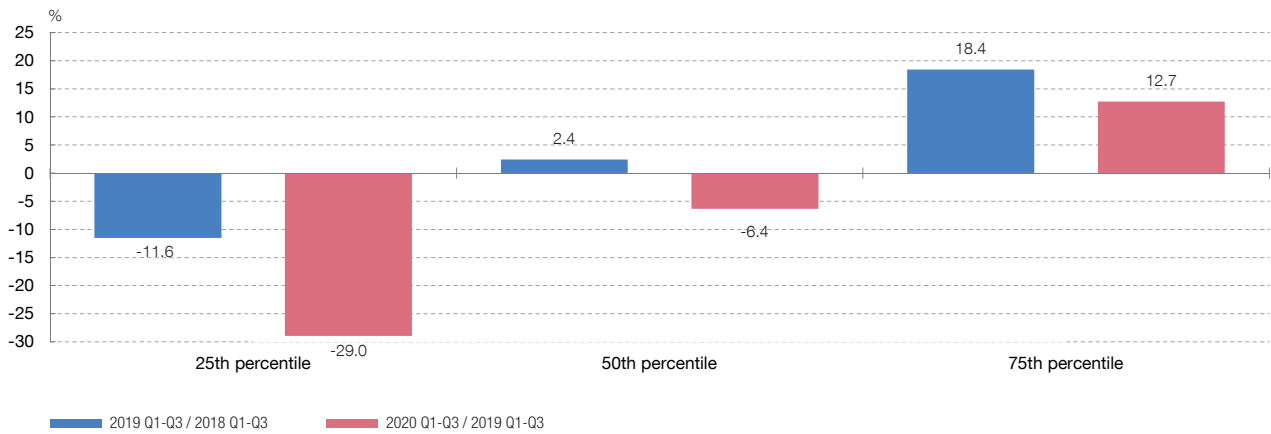


evidences a widespread downturn in GVA, albeit noticeably sharper for the 25th percentile, which groups together the firms whose activity has fared worse. This chart also depicts an increase in the dispersion of the activity indicator, approximated by the interquartile range, defined as the distance between the 25th and 75th percentiles, which indicates a more uneven change in GVA across the firms. The course of GVA over the first nine months of the year for the overall sample reveals that, after the sharp contraction between January and June, it recovered in Q3, albeit remaining below the level for the same period of 2019.

Chart 3

**WIDESPREAD DECLINE IN GVA, WHICH WAS STEEPER IN THE 25th PERCENTILE**

The distribution of firms according to the rate of change of GVA evidences an across-the-board worsening of activity in the first three quarters of 2020, which was more acute in the 25th percentile (where the firms with the largest declines in GVA are concentrated).



SOURCE: Banco de España.



The breakdown by sector shows that GVA declined across all of the sectors of activity assessed in this article, which are the most representative of the sample (see Table 2). The decline in industry was particularly severe (33.6%), with all sub-sectors contributing to this fall-off, although the decreases in the manufacture of refined petroleum products, of transport equipment and of chemicals and chemical products stand out. Also particularly adversely affected was the sector dubbed “other activities” (encompassing firms not assigned to any of the assessed sectors), with a decline in GVA of 34.5%. Notable within this group was the especially adverse change in transport sector firms, down 48.1%. There was also a marked fall-off in the wholesale and retail trade and hospitality sector (18.1%), which was severely affected by the lockdown measures. Relatively more moderate contractions were seen in the energy (6.8%) and information and communication (13.8%) sectors.

Personnel costs fell by 4.9%, explained by the slowdown in compensation and, particularly, by the decrease in the average actual workforce.

In period average terms, actual employment fell 5.9% in the first three quarters. It should be noted that, unlike National Accounts data, this employment information does not include workers subject to furlough schemes. This decrease is more moderate than the 8.5% contraction in actual Social Security registrations (total registrations less workers subject to furlough schemes), owing to the CBQ sample essentially comprising large firms, which, broadly speaking, appear to have destroyed fewer jobs than SMEs.



Table 2

**THE DECLINE IN GVA WAS SHARP AND WIDESPREAD ACROSS SECTORS. CONVERSELY, THE DROP IN PERSONNEL COSTS WAS MORE MODERATE**

Rate of change with respect to same corporations in previous year, %	GVA at factor cost				Employees (average for period)				Personnel costs				Average compensation			
	CBI	CBQ (a)			CBI	CBQ (a)			CBI	CBQ (a)			CBI	CBQ (a)		
	2019	2019 Q1-Q4	2019 Q1-Q3	2020 Q1-Q3	2019	2019 Q1-Q4	2019 Q1-Q3	2020 Q1-Q3	2019	2019 Q1-Q4	2019 Q1-Q3	2020 Q1-Q3	2019	2019 Q1-Q4	2019 Q1-Q3	2020 Q1-Q3
<b>TOTAL</b>	<b>4.1</b>	<b>1.5</b>	<b>0.7</b>	<b>-22.5</b>	<b>3.8</b>	<b>1.1</b>	<b>1.0</b>	<b>-5.9</b>	<b>5.5</b>	<b>3.4</b>	<b>3.2</b>	<b>-4.9</b>	<b>1.6</b>	<b>2.3</b>	<b>2.2</b>	<b>1.1</b>
<b>Size</b>																
Small	6.5	—	—	—	5.6	—	—	—	7.8	—	—	—	2.1	—	—	—
Medium	5.9	3.3	0.1	-13.8	4.1	3.4	3.1	-5.1	6.4	4.5	4.8	-7.0	2.2	1.1	1.6	-2.0
Large	3.0	1.5	0.7	-22.5	2.5	1.0	0.9	-5.9	4.2	3.3	3.2	-4.9	1.6	2.3	2.2	1.1
<b>Breakdown by activity</b>																
Energy	5.1	5.3	6.2	-6.8	0.5	-1.8	-1.7	-1.8	1.4	0.5	0.4	-1.7	0.9	2.4	2.2	0.0
Industry	0.0	-7.8	-9.3	-33.6	2.2	-0.3	-0.5	-5.8	3.8	2.6	2.0	-5.6	1.6	2.9	2.5	0.2
Wholesale & retail trade and hospitality	5.4	5.3	3.1	-18.1	3.8	1.7	1.6	-7.4	5.4	3.1	3.3	-4.7	1.6	1.4	1.7	3.0
Information and communication	3.0	1.2	-0.2	-13.8	4.5	3.2	3.7	-3.5	4.9	3.5	4.1	-4.1	0.3	0.3	0.4	-0.6
Other activities	5.9	3.0	2.9	-34.5	4.6	1.2	0.9	-5.9	7.0	4.7	4.3	-5.7	2.3	3.5	3.4	0.2

SOURCE: Banco de España.

a All the data in these columns have been calculated as the weighted average of the quarterly data.

Temporary workers bore the brunt of the fall-off in employment, down 19.5%. Permanent staff levels also declined, but by a more moderate 3%.<sup>6</sup> The percentage of firms destroying employment rose 14 pp on the previous year, to stand at 50.6% (see Table 3).

The breakdown by sector shows that the decrease in employment was broad-based, affecting all of the sectors of activity assessed, albeit to varying degrees. The most pronounced fall-offs were recorded in wholesale and retail trade and hospitality (7.4%), industry (5.8%) and “other activities” (5.9%) (see Table 2). In the other sectors, the average number of workers was down somewhat more moderately, falling 3.5% in information and communication and 1.8% in energy, which is consistent with their smaller decline in activity.

Average compensation presented a moderate increase of 1.1% between January and September 2020, compared with the 2.2% rise a year earlier. The breakdown by

<sup>6</sup> This moderate decrease in permanent employment in the first nine months of the year was the result of a sharp contraction in the second quarter and a robust recovery in the third.

Table 3

**MARKED RISE IN THE PROPORTION OF FIRMS DESTROYING EMPLOYMENT**

Percentage of corporations in certain situations	CBI (a)		CBQ (b)			
	2018	2019	2018 Q1-Q4	2019 Q1-Q4	2019 Q1-Q3	2020 Q1-Q3
Number of corporations	534,539	271,869	1,031	1,026	1,044	895
Personnel costs	100	100	100	100	100	100
Falling	32.2	32.5	32.3	33.0	32.9	51.7
Constant or rising	67.8	67.5	67.7	67.0	67.1	48.3
Average number of employees	100	100	100	100	100	100
Falling	28.9	29.8	33.4	36.8	36.3	50.6
Constant	26.4	26.8	14.9	14.2	14.2	14.2
Rising	44.7	43.4	51.7	49.0	49.5	35.3

**SOURCE:** Banco de España.

- a** The calculation of these percentages does not include firms that have no employees in either year.  
**b** Weighted average of the relevant quarters for each column.

sector shows small changes across practically all sectors of activity. Compensation costs rose the most in wholesale and retail trade and hospitality (3%), whereas the other sectors saw changes range from a decrease of 0.6% (information and communication) to an increase of 0.2% (industry and “other activities”).

### Rates of return, liquidity and debt

In keeping with the severe contraction in activity and the comparatively moderate decline in personnel costs, GOP fell sharply (by 39.5%) in the first three quarters of 2020. The rates calculated by weighting the sectors according to their relative weight in the economy as a whole show a more pronounced downturn in GOP in 2020 to date (48.3%), owing to the hardest-hit sectors being under-represented in the CBQ sample.

Financial revenue also fell sharply (33.3%) as a consequence of lower dividends received (contracting 37.1%) and interest income (down 20.1%). Financial costs continued to fall (8.1%), owing above all to the lower average cost of borrowing borne by firms (see Table 4).

All of which led to a sharp contraction in ordinary net profit (ONP),<sup>7</sup> down 71.2% between January and September (see Chart 4). Extraordinary costs and revenue had an additional adverse bearing on net profit/loss, primarily due to the impairment

<sup>7</sup> ONP equals GOP less financial costs and operating depreciation, plus financial revenue.

Table 4

**FINANCIAL COSTS TO SEPTEMBER CONTINUED TO DECLINE, CHIEFLY OWING TO LOWER COST OF DEBT**

%	CBI		CBQ	
	2019 / 2018	2019 Q1-Q4 / 2018 Q1-Q4	2020 Q1-Q3 / 2019 Q1-Q3	
Change in financial costs	-3.8	-6.5	-8.1	
A Interest on borrowed funds	-2.7	-6.4	-7.8	
1 Change owing to cost (interest rate)	-5.9	-9.7	-7.6	
2 Change owing to interest-bearing borrowing	3.2	3.3	-0.1	
B Other financial costs	-1.1	-0.1	-0.3	

SOURCE: Banco de España.

recognised on financial investments. Together with corporate income tax payments,<sup>8</sup> this resulted in the quarterly sample as a whole recording a net loss for the first time since 2002. As a percentage of GVA, the net loss stood at -16.1%, compared with net profit of 19.4% in the same period of the previous year (see Table 1).

Against this backdrop, the rates of return fell dramatically, ending the upward path of previous years. Through to September the return on assets (ROA) fell by more than 2 pp to 2.2% and the return on equity (ROE) by nearly 4 pp to 2.4%. Similarly, the median values for these indicators reflect a very marked decline, both in ROA (down by nearly 3 pp to 2.4%) and in ROE (down from 7.5% to 3%) (see Table 5). This table also evidences the high percentage of firms reporting negative values for these indicators (36% for ROA and 38.4% for ROE), up nearly 10 pp on the data recorded a year earlier.

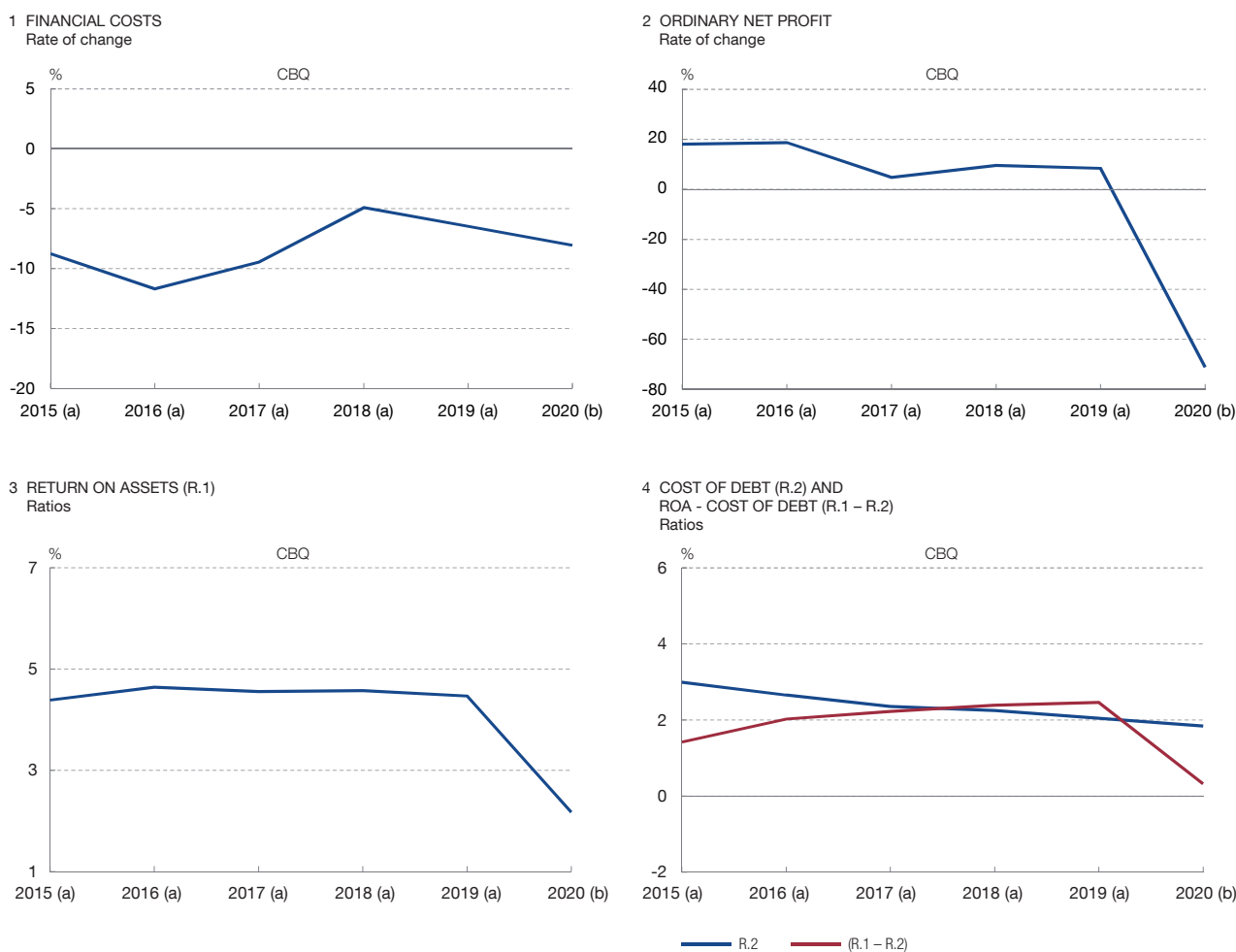
The breakdown of ROA by sector reveals that the deterioration was widespread but uneven. The steepest decreases were recorded in industry (reaching a negative value of -1.6%), in wholesale and retail trade and hospitality (falling nearly 6 pp to 3.1%) and in information and communication (down from 14.9% to 9.4%). In the energy sector, the decline in ROA was more moderate (0.8 pp to 4.3%). Lastly, in the sector comprising all other activities, ROA fell by just over 1.5 pp to 1.1% (see Table 6). The microsimulations projecting macroeconomic developments in 2020, based on the CBI firms' 2019 starting position, indicate returns deteriorating most severely for those firms starting out at lower levels and that were hardest hit by the COVID-19 crisis, particularly in the SMEs segment, and, above all, in the hospitality and leisure sector and the motor vehicles sector (see Box 1).

<sup>8</sup> Although the aggregate total was a loss between January and September 2020, an expense continues to be recognised under corporate income tax, albeit much less than the previous year, on account of the firms within this sample that have generated profit.

Chart 4

**SHARP FALL IN PROFIT AND RETURNS ON ORDINARY ACTIVITIES**

Although financial costs continued to fall, the strong contraction in activity triggered a sharp decline (of more than 70%) in ordinary net profit, which led to a very pronounced decrease in return on assets. As a result, the spread between this indicator and the cost of borrowing became almost negligible (0.3 pp).



SOURCE: Banco de España.

a The average of the four quarters of 2015, 2016, 2017, 2018 and 2019. The rates are calculated with respect to the previous year.  
b Data to 2020 Q3. The rates are calculated with respect to the same period of 2019.



The average cost of debt continued the downward path of recent years, decreasing by 0.2 pp in the first three quarters of 2020, according to the CBQ, to 1.8%. The spread between ROA and the cost of debt narrowed considerably during the period, holding in positive territory but at a very low value (0.3 pp), down by more than 2 pp on the level reached a year previously.

At the same time, between January and September 2020 a significant increase was observed in the liquidity buffers of the firms in the sample. Amid the current

Table 5

**SHARP DECLINE IN ORDINARY PROFITABILITY LEVELS AND RISE IN THE PERCENTAGE OF FIRMS WITH NEGATIVE RETURNS**

		CBQ			
		Return on assets (R.1)		Return on equity (R.3)	
		2019 Q1-Q3	2020 Q1-Q3	2019 Q1-Q3	2020 Q1-Q3
Number of corporations		1,044	895	1,044	895
Percentage of corporations by profitability bracket	R ≤ 0%	26.0	36.0	28.2	38.4
	0% < R ≤ 5%	23.4	23.0	15.7	16.1
	5% < R ≤ 10%	14.4	12.8	11.3	9.8
	10% < R ≤ 15%	9.2	7.3	8.8	7.0
	15% < R	27.0	20.9	35.9	28.7
MEMORANDUM ITEM: Median return (%)		5.2	2.4	7.5	3.0

SOURCE: Banco de España.

Table 6

**THE DECLINE IN RETURNS WAS WIDESPREAD ACROSS SECTORS, ALBEIT MOST ACUTE IN INDUSTRY, IN WHOLESALE AND RETAIL TRADE AND HOSPITALITY AND IN INFORMATION AND COMMUNICATION**

Rate of change with respect to the same corporations in the previous year and ratios, % and pp	Gross operating profit				Ordinary net profit				Return on assets (R.1)				ROA - cost of debt (R.1 - R.2)			
	CBI		CBQ (a)		CBI		CBQ (a)		CBI		CBQ (a)		CBI		CBQ (a)	
	2019	2019 Q1-Q4	2019 Q1-Q3	2020 Q1-Q3	2019	2019 Q1-Q4	2019 Q1-Q3	2020 Q1-Q3	2019	2019 Q1-Q4	2019 Q1-Q3	2020 Q1-Q3	2019	2019 Q1-Q4	2019 Q1-Q3	2020 Q1-Q3
<b>TOTAL</b>	<b>1.8</b>	<b>-0.3</b>	<b>-1.8</b>	<b>-39.5</b>	<b>7.4</b>	<b>8.4</b>	<b>-0.3</b>	<b>-71.2</b>	<b>5.9</b>	<b>7.1</b>	<b>4.5</b>	<b>2.2</b>	<b>3.7</b>	<b>5.1</b>	<b>2.5</b>	<b>0.3</b>
Size																
Small	2.9	—	—	—	2.7	—	—	—	3.7	—	—	—	1.4	—	—	—
Medium	4.7	0.9	-8.5	-27.3	3.2	0.0	-11.8	-44.1	7.0	6.9	6.5	3.9	4.8	5.1	4.9	2.4
Large	1.4	-0.3	-1.8	-39.6	8.5	8.5	-0.2	-71.4	6.4	7.1	4.5	2.2	4.2	5.1	2.5	0.3
Breakdown by activity																
Energy	6.6	6.9	8.2	-8.4	43.7	40.8	37.8	-11.7	6.5	6.6	5.1	4.3	4.3	4.5	3.1	2.6
Industry	-5.6	-19.6	-21.7	-70.7	-5.9	-26.4	-29.6	—	8.1	7.4	5.9	-1.6	5.4	4.7	3.6	-3.5
Wholesale & retail trade & hospitality	5.5	8.8	2.6	-38.9	-6.5	-11.2	3.7	-66.3	7.8	13.6	9.0	3.1	5.5	11.6	7.1	1.2
Information and communication	0.9	-0.3	-2.9	-19.2	0.0	0.4	-2.4	-41.3	11.3	16.0	14.9	9.4	9.3	14.8	13.7	8.1
Other sectors	3.4	0.1	0.6	-80.8	17.9	31.9	-11.2	-98.0	4.6	5.9	2.7	1.1	2.4	3.8	0.7	-0.8

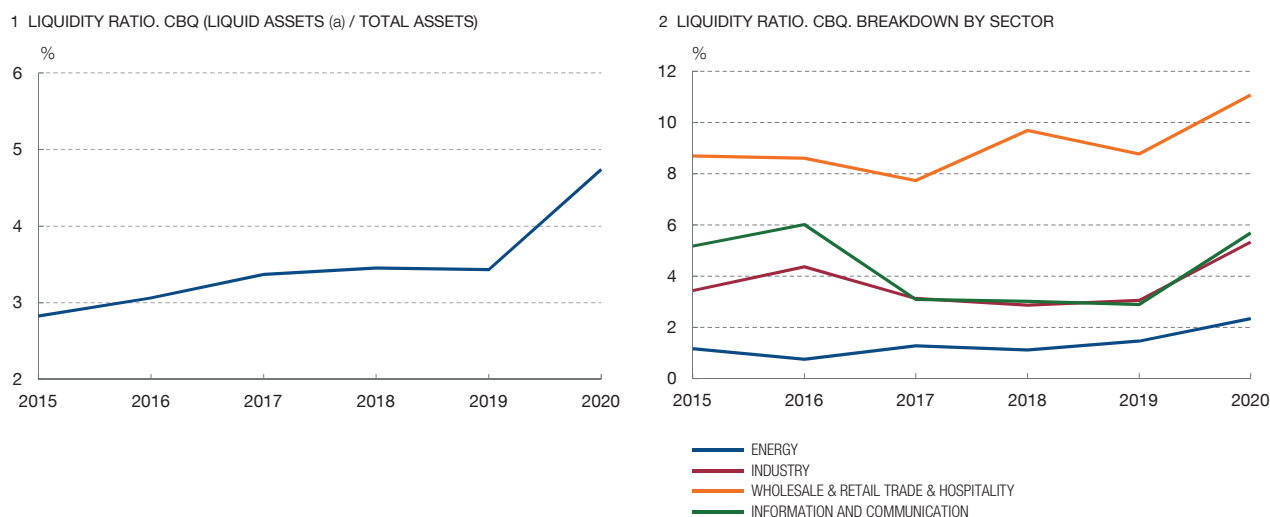
SOURCE: Banco de España.

a All the data in these columns have been calculated as the weighted average of the quarterly data.

Chart 5

**FIRMS INCREASED THEIR LIQUIDITY BUFFERS FOR PRECAUTIONARY REASONS**

The liquidity buffers of the firms in this sample grew markedly between January and September 2020. In the context of the current heightened uncertainty, this may owe to precautionary reasons, with a view to addressing potential future needs. The increase in liquidity was broad-based across all sectors of activity, although the most pronounced rise came in industry, wholesale and retail trade and hospitality, and information and communication.



SOURCE: Banco de España.

a Liquid assets are cash on hand and other equivalent liquid assets.



heightened uncertainty, this may owe to precautionary reasons – with a view to addressing potential future needs – or the decline in fixed capital investment, prompting profit-making firms to accumulate surpluses in the form of liquid assets (see Chart 5). This rise in liquidity took place across all sectors of activity, although the most pronounced increases came in industry, the wholesale and retail trade and hospitality sector and information and communication.

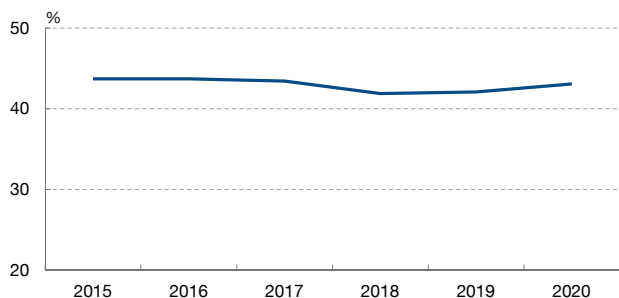
Lastly, in the first nine months of 2020 firms accumulated further debt, partly for the reasons set out above (to build up liquidity) and also to cover the increased needs against the backdrop of the COVID-19 pandemic. This led to a higher average debt-to-asset ratio, which stood at 43.1% in September 2020, just over 1 pp above the December 2019 figure. The debt-to-ordinary earnings ratio (calculated as the sum of GOP and financial revenue) rose more robustly owing to the heavy fall-off in earnings, reaching 675% (490% at end-2019). The breakdown by sector shows increases in both indicators in practically all sectors of activity (see Chart 6). Finally, the interest burden ratio also rose, interrupting the downward path recorded by the indicator since 2015. The increase of nearly 3 pp (to 13.9%) owed to ordinary earnings declining far more than financial costs. The breakdown by sector of the latter ratio shows increases in industry and the wholesale and retail trade and hospitality sector, and a practically stable performance in the other sectors.

Chart 6

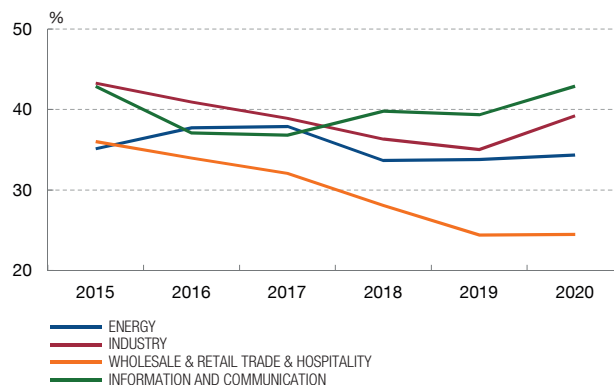
**DETERIORATION OF FIRMS' FINANCIAL POSITION, WITH GROWING INDEBTEDNESS AND DEBT BURDEN**

Firms' debt levels rose in the first three quarters of 2020, both in the debt-to-asset ratio and especially the debt-to-ordinary earnings (GOP+ financial revenue) ratio. In both cases, the breakdown by sector shows that the growth was widespread across practically all sectors of activity. The debt burden ratio likewise rose, ending the downward path observed in this ratio since 2015. In this case, industry and, to a lesser degree, wholesale and retail trade and hospitality recorded the clearest increase.

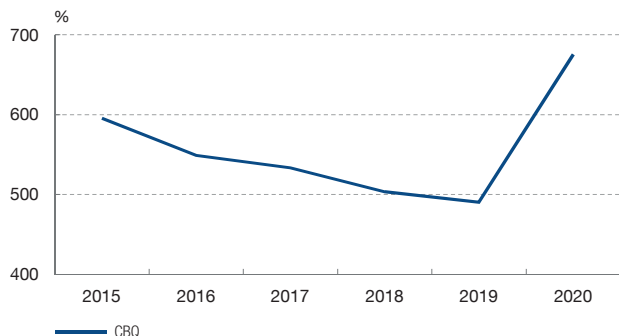
1 E.1. INTEREST-BEARING BORROWING / NET ASSETS (a)  
TOTAL CORPORATIONS. CBQ  
Ratios



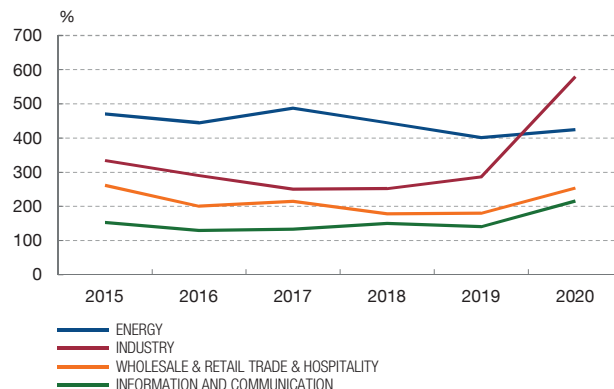
2 E.1. INTEREST-BEARING BORROWING / NET ASSETS (a)  
BREAKDOWN BY SECTOR. CBQ  
Ratios



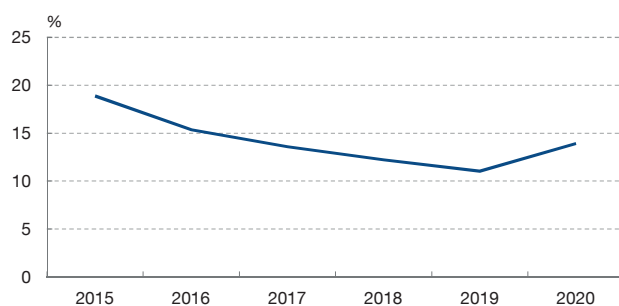
3 E.2. INTEREST-BEARING BORROWING (b) / (GOP + FINANCIAL REVENUE) (c)  
TOTAL CORPORATIONS. CBQ  
Ratios



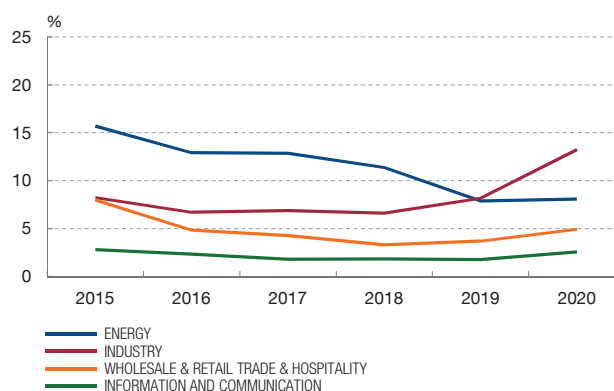
4 E.2. INTEREST-BEARING BORROWING (b) / (GOP + FINANCIAL REVENUE) (c)  
BREAKDOWN BY SECTOR. CBQ  
Ratios



5 INTEREST BURDEN.  
TOTAL CORPORATIONS. CBQ  
(INTEREST ON BORROWED FUNDS) / (GOP + FINANCIAL REVENUE) (c)



6 INTEREST BURDEN  
BREAKDOWN BY SECTOR. CBQ  
(INTEREST ON BORROWED FUNDS) / (GOP + FINANCIAL REVENUE) (c)



SOURCE: Banco de España.

- a Ratio calculated from final balance sheet figures. Equity includes an adjustment to current prices.
- b Calculated from final balance sheet figures. Includes an adjustment to eliminate intra-group debt (approximation of consolidated debt).
- c The expenditure and revenue included in these ratios are calculated on the basis of cumulative four-quarter amounts.



The microsimulations projecting macroeconomic developments in the full-year 2020, based on the CBI firms' 2019 starting position, also point to a notable increase in the financial pressure borne by firms and a deterioration, albeit more moderate, of their solvency situation (see Box 2). The breakdown by sector and size likewise shows that this deterioration would be more severe for smaller sized firms and those operating in the sectors hardest hit by the pandemic.

1.12.2020.



## IMPACT OF THE COVID-19 CRISIS ON FIRMS' PROFITABILITY

The measures to contain the COVID-19 pandemic, together with the drop in demand, led to an unprecedented fall in business activity and a significant decline in profit for a very high proportion of Spanish firms. The main text of this article reviews the changes in profitability, based on the latest available information provided by the Central Balance Sheet Data Office Quarterly Survey (CBQ) up to 2020 Q3, for a sample of nearly 900 mainly large corporations. This box complements that analysis with micro-simulations that extend the scope of the exercise to the entire corporate sector for the year as a whole. Specifically, the return on assets is simulated using information from the Central Balance Sheet Data Office integrated database (CBI) for 2019 (with data on nearly 400,000 firms at the cut-off date for this article) and from the changes associated with the projected economic developments based on the latest macroeconomic scenarios published in September by the Banco de España,<sup>1</sup> and by extrapolating the results obtained to the entire corporate sector.<sup>2</sup>

Based on the results of the simulations performed, and despite the apparent sharp fall in corporations' revenue, approximately half of them maintained positive returns on assets (see Chart 1). This result reflects: firstly, the firms' strong starting positions, enabling them in many cases to have sufficient capacity to absorb the impact of the shock; and secondly, their flexibility to cut general operating expenses, particularly staff costs, in a scenario of a temporary sharp fall in activity, largely favoured by the high weight of temporary employment and the intensive use of furlough schemes. In any event, the decline in profitability appears to be highly significant, affecting most firms, with a greater impact on the lower part of the

distribution, which includes less profitable firms. As shown in Chart 1, the 25th percentile (indicating the value below which 25% of the firms with the lowest profitability stand) would have declined from -2.3% in 2019 to around -11% in 2020.

The breakdown by firm size evidences that the fall in profitability seems to be somewhat sharper in the SME segment, affecting to a greater extent the 75th and 25th percentiles of the distribution; the most and the least profitable firms are concentrated above and below these percentiles, respectively. Thus, while the decline in profitability in the aforementioned percentiles would be around nine percentage points for smaller firms, the fall would be more moderate in the case of large corporations (around four percentage points in the case of the 25th percentile and seven in that of the 75th percentile).

Finally, Chart 2 analyses the impact of the COVID-19 crisis on the profitability of firms by sector of activity. This information reveals that the sectors recording the most pronounced deterioration would be transport and storage, motor vehicles and, above all, hospitality and leisure. Thus, in transport and storage median profitability, which reflects the situation of the average representative firm, would decrease by nearly six percentage points, to -2.1%. Median profitability in the motor vehicles sector would fall by slightly more, from 3.5% to -5.6%. Finally, the greatest decline would be posted in the hospitality and leisure sector, which started out from the lowest pre-crisis median profitability level (2.4%), dropping abruptly to -12.4% as a result of the pandemic. Also, 75% of the firms in this sector would post negative profitability in 2020.

1 In particular, scenario 1 was used, since it is deemed to be the most likely scenario for 2020 as a whole. See Banco de España (2020), "Quarterly report on the Spanish economy", *Economic Bulletin*, 3/2020.

2 Given that these firms represent a sub-sample of the universe of the Spanish economy's corporate sector, the results are adjusted using weights, calculated on the basis of the information on the number of firms available in the Central Companies Directory of the National Statistics Institute (INE, by its Spanish abbreviation), to estimate a representative figure for the overall non-financial corporations sector. For further details on the methodology used, see R. Blanco, S. Mayordomo, Á. Menéndez and M. Mulino (2020), "Spanish non-financial corporations' liquidity needs and solvency after the COVID-19 shock", Occasional Paper No 2020, Banco de España.

Box 1

**IMPACT OF THE COVID-19 CRISIS ON FIRMS' PROFITABILITY (cont'd)**

Chart 1  
DISTRIBUTION OF RETURN ON ASSETS (a). BREAKDOWN BY SIZE

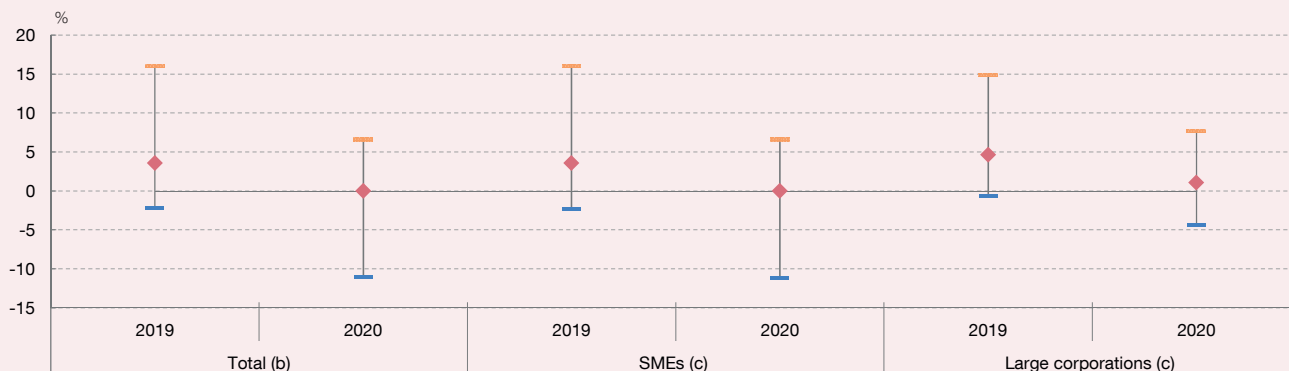
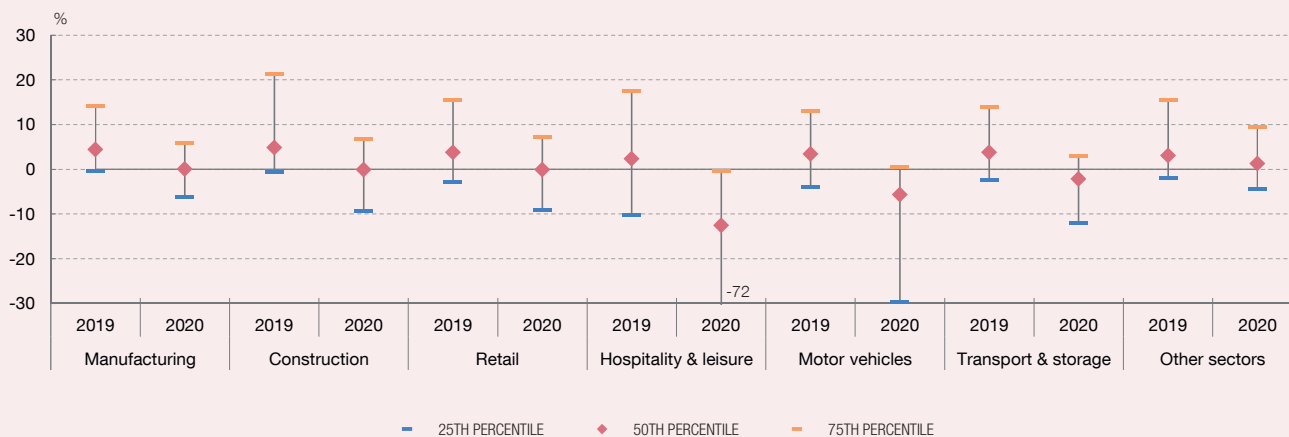


Chart 2  
DISTRIBUTION OF RETURN ON ASSETS (a). BREAKDOWN BY SECTOR



SOURCE: Banco de España.

- a Return on assets (ROA) = (Ordinary net profit + Financial costs) / Assets net of non-interest bearing borrowing.
- b Excluding holdings and firms in the financial services, real estate development and buying and selling of own real estate industries.
- c Definition of firm size as per European Commission Recommendation 2003/361/EC.

## IMPACT OF THE COVID-19 CRISIS ON THE FINANCIAL PRESSURE BORNE BY NON-FINANCIAL CORPORATIONS AND THEIR SOLVENCY

The decline in firms' activity caused by the COVID-19 crisis has prompted an increase in the proportion of firms whose income is not sufficient to cover their debt-servicing costs. This has triggered a liquidity shortfall. In some cases, their income is also insufficient to cover their operating expenses, such as personnel costs or rentals. There are various ways that firms in this situation may cover these liquidity shortages: they may dispose of or sell assets – especially their more liquid ones – or they may increase their liabilities, such as debt. The latest data show that the consolidated financial debt of the business sector (bank loans and debt securities) rose by almost 5% between February and October, with the increase concentrated in March, April and May. This suggests that firms stepped up their debt to cover part of their higher liquidity needs. And this increase in debt, together with the possible decline in expected future profits in some companies, appears to have impaired their solvency, understood as their ability to repay their debts with future profits.

It is important to quantify the weight and importance of the firms that are facing a difficult financial situation, be it on account of liquidity or solvency problems, owing to the potential economic and financial implications. These firms will generally be less well-placed to make productive investment and to hire employees, which will affect the macroeconomic momentum. In addition, some of these firms could default on part of their debts and, in extreme cases, could be wound up. In the short term, this would destroy employment, damage the productive system and give rise to losses for their creditors. Quantifying these difficulties is also important, as the design of any policies introduced to resolve these problems should be adapted to the nature of the problems. In particular, firms with temporary liquidity problems could address these difficulties with the help of public income-support measures. Incentives for financial institutions to grant funding with more flexible maturity structures could also help solvent firms. Firms that have solvency difficulties but whose business models are viable would require support in the form of capital, or debt restructuring

(reductions in the nominal amount of their debt or debt-to-equity swaps). Lastly, measures should be put in place to ensure that insolvent firms whose business is non-viable can be wound up swiftly and efficiently.

This box presents estimates, based on simulations, of the change in 2020 in the percentage of companies with liquidity- and solvency-related financial difficulties. For the purpose of these simulations, firms were divided into groups according to their financial situation. The first group comprises firms subject to high financial pressure and whose ordinary earnings<sup>1</sup> are not sufficient to cover their financial costs. These companies face liquidity difficulties but they are not necessarily insolvent. The second group contains insolvent firms, i.e. those whose net debt (financial and trade debt, less liquid assets and trade debts pending collection) is positive and is more than 12 times their expected long-term earnings, understood to be the level at which ordinary earnings<sup>2</sup> will converge in the near future. This threshold has been set assuming that firms can fund their debt with a 15-year loan at the market interest rate.<sup>3</sup> The insolvent firms are divided into two groups according to whether or not they are viable. Non-viable firms are deemed to be those whose expected long-term earnings are negative, i.e. firms whose income cannot cover their operating expenses in the long term. It is important to note that the group of firms classified as solvent in these exercises includes firms that might have difficulties repaying their debts owing to a maturity structure comprising shorter terms than those considered in the definition of solvency. In this case, these financial difficulties could be addressed by means of grace periods or extensions of debt repayment terms, with no need for a reduction in the nominal amount of debt. All these classifications must be understood as a mere approximation, since accurately identifying the firms in each group is an extremely complex task that would require more information.

To simulate the financial situation of firms at end-2020, these exercises draw on the position observed in the

1 Ordinary earnings are defined as gross operating income plus interest income.

2 For 2019, expected long-term earnings are approximated as the highest ordinary earnings of the last three years (2017, 2018 and 2019). In the case of firms that are less than ten years old, an adjustment is also made to take into account the fact that earnings generally increase over time. Specifically, this age factor is estimated and the hypothetical earnings level of these companies if they were all at least ten years old is projected. For 2020 two alternative assumptions, specified below, are used to approximate this figure.

3 A 15-year loan at 3% interest (the average market interest rate for firms at that term) for an amount equal to 12 times earnings has an annual repayment instalment equal to earnings. Accordingly, a firm that has net debt less than 12 times its earnings funded by a 15-year loan at 3% interest will be able to repay its debt out of its earnings.

## IMPACT OF THE COVID-19 CRISIS ON THE FINANCIAL PRESSURE BORNE BY NON-FINANCIAL CORPORATIONS AND THEIR SOLVENCY (cont'd)

Central Balance Sheet Data Office Integrated Database (CBI) for 2019 (with data on almost 400,000 firms), and on the changes associated with the economic developments projected under the most likely of the Banco de España's latest macroeconomic scenarios,<sup>4</sup> extrapolating the results obtained to the entire business sector.<sup>5</sup> Two alternative simulations were considered to approximate expected long-term earnings in 2020: in simulation 1 it is assumed they are identical to 2019 earnings, i.e. that the crisis has no permanent impact on corporate profit; in simulation 2 it is assumed that future earnings will be permanently affected and that only 75% of the decline observed in 2020 compared with the long-term pre-crisis level will be recovered.

Chart 1 shows that, in accordance with these simulations, the percentage of firms subject to high financial pressure has increased very significantly as a consequence of the COVID-19 crisis. Specifically, by almost 27 percentage points (pp) between 2019 and 2020, up to 40%. The breakdown by firm size reveals that the impact is most severe on SMEs and, especially, on those in the sectors most affected by the crisis, such as hospitality and leisure. In an aim to approximate the potential impact of these hypothetical changes on the economy overall and on the financial system, Chart 1 depicts the share of firms subject to high financial pressure in terms of employment and corporate debt issuance. The chart also reflects a significant, albeit somewhat more moderate, increase especially in the case of debt (16 pp). This shows that, on average, firms subject to high financial pressure are small firms, with few employees and low debt.

As regards the analysis of firms' solvency, Chart 2 shows that, in simulation 1 (where it is assumed that the COVID-19 crisis has no permanent impact on firms' earnings), the proportion of insolvent firms would increase relatively moderately, by 4 pp, to almost 15%. This is because the increase in corporate debt would generally be quite limited compared with firms' earnings. In simulation 2 (where it is assumed that the COVID-19 crisis has a permanent negative impact on firms' earnings), the increase would naturally be higher, amounting to somewhat more than 8 pp.

The deterioration in solvency would also be most significant among SMEs and firms in the sectors most affected by the crisis. In terms of the share of insolvent firms in total employment and debt, the increases would be lower, reflecting once again the fact that the deterioration would be concentrated on smaller firms. The chart also shows that the share of insolvent firms in the level of employment in 2020 would be lower than their share of debt. This suggests that the potential implications of insolvency could be more important from the standpoint of financial stability, through potential losses assumed by creditors, than from the standpoint of the direct macroeconomic impact on employment.

Chart 3 shows the results of dividing the insolvent firms between viable and non-viable firms: in simulation 1, the majority would be viable, whereas in simulation 2 the proportion would be evenly balanced. In terms of employment and, especially, of debt, viable firms would account for the largest proportion. In addition, Chart 4 shows that viable insolvent firms are concentrated in sectors that have a comparatively higher level of demand for inputs than the other sectors of the economy, as the distribution of the indicator used to estimate this has higher values than those for the corporate sector overall.<sup>6</sup> This means that were those firms to be wound up, the impact would be comparatively higher for the economy, and for the financial system. This highlights the need for these firms' difficulties to be resolved swiftly and efficiently.

The results of these simulations take no account of any further deterioration of firms' solvency beyond the end of 2020. Such deterioration would occur if, as the result of an incomplete recovery in their activity, some companies were to continue recording operating shortfalls which they cover by increasing their debt.

To date, most public measures have been focused on addressing firms' liquidity problems. Specifically, between March and mid-November, the public guarantee lines managed by the Official Credit Institute (ICO) have seen €108 billion granted in new lending, with average maturity verging on five years and, in most cases, a grace period of one year. In addition, Royal Decree 34/2020, approved on 17 November, allows the maturity of these loans to be

4 See footnote 1 to Box 1.

5 See footnote 2 to Box 1.

6 This indicator is calculated drawing on the input-output tables as the analogue of the Katz-Bonacich centrality measure but based on the importance of the different sectors as customers in the production chain rather than suppliers. A total of 64 sectors are considered.

**IMPACT OF THE COVID-19 CRISIS ON THE FINANCIAL PRESSURE BORNE BY NON-FINANCIAL CORPORATIONS AND THEIR SOLVENCY (cont'd)**

Chart 1  
FIRMS SUBJECT TO HIGH FINANCIAL PRESSURE (a)

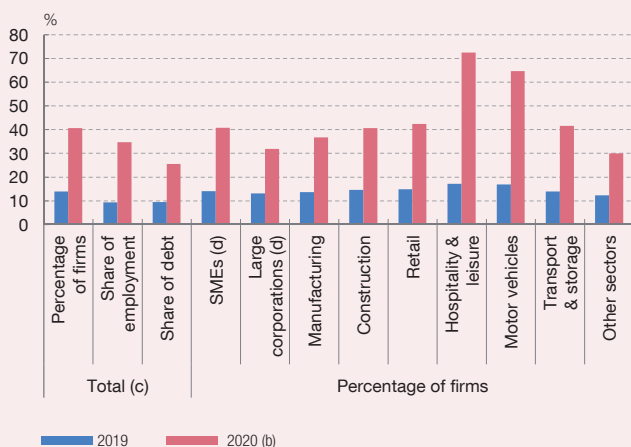


Chart 2  
INSOLVENT FIRMS (e)

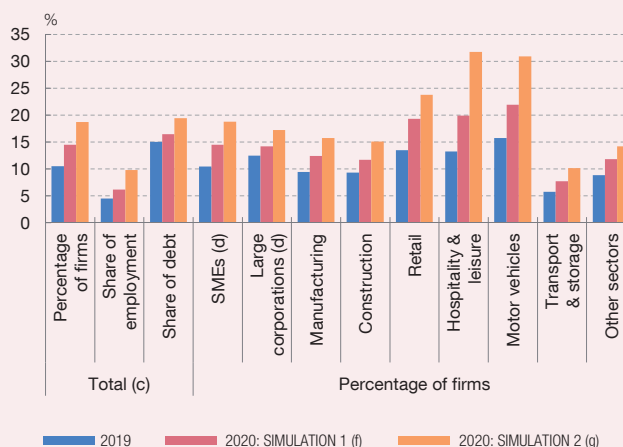


Chart 3  
VIABILITY OF INSOLVENT FIRMS IN 2020 (e)

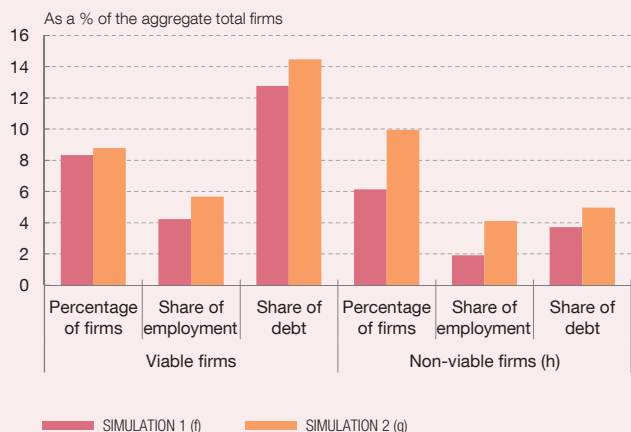
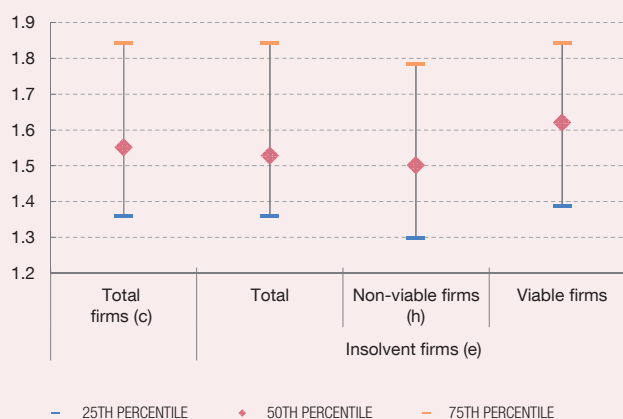


Chart 4  
DISTRIBUTION OF DEGREE OF INFLUENCE OF A SECTOR ACCORDING TO ITS DEMAND FOR INPUTS FROM OTHER SECTORS (i)



SOURCE: Banco de España.

- a Understood as firms with financial debt whose ordinary earnings, defined as gross operating profit + financial revenue, are below their financial costs.
- b Simulation consistent with the Banco de España's latest macroeconomic projections for 2020.
- c Excludes holding companies and financial service sector firms, real estate development and buying and selling of own real estate.
- d Definition of firm size in accordance with European Commission Recommendation 2003/361/EC.
- e Insolvent firms are defined as firms that have positive net debt and a debt ratio, calculated as net debt/long-term expected earnings, over 12. Net debt is defined as liabilities (financial and trade debt) less liquid assets and debts pending collection (customers). The highest ordinary earnings of the last three years (2017, 2018 and 2019) are used to approximate long-term expected earnings for 2019. In the case of firms under ten years old, an adjustment is made to take into account the time factor. Ordinary earnings are defined as gross operating income plus interest income.
- f In this simulation it is assumed that long-term expected earnings for 2020 are the same as for 2019.
- g In this simulation it is assumed that long-term expected earnings are a weighted average of long-term expected earnings for 2019 and ordinary earnings for 2020, using weightings of 0.75 and 0.25, respectively.
- h Non-viable firms are deemed to be those whose expected long-term earnings are negative.
- i This indicator is calculated drawing on the input-output tables as the analogue of the Katz-Bonacich centrality measure but based on the importance of the different sectors as customers in the production chain rather than suppliers. A total of 64 sectors are considered.

**IMPACT OF THE COVID-19 CRISIS ON THE FINANCIAL PRESSURE BORNE BY NON-FINANCIAL CORPORATIONS AND THEIR SOLVENCY** (cont'd)

extended by three years and the grace period by 12 months. By contrast, the solvency-support measures have been more limited. Thus, for example, the €10 billion fund managed by SEPI (the State industrial holdings corporation) provides for the injection of public capital into strategic firms, but to date no solvency-support

instruments have been introduced for smaller firms. To minimise the risk of insolvent but viable firms being wound up, measures should be introduced, among others, to provide for rapid restructuring of their debts, reforming the court and out-of-court insolvency proceedings to make them swifter and more efficient.<sup>7</sup>

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7 For more details on the current problems of the Spanish insolvency and pre-insolvency system, and of ways in which they may be improved, see M. García-Posada Gómez (2020), "Analysis of insolvency proceedings in Spain against the backdrop of the COVID-19 crisis: insolvency proceedings, pre-insolvency arrangements and the insolvency moratorium", *Occasional Paper* No 2029, Banco de España.