

# Changes in the degree of financial pressure borne by Spanish non-financial corporations: 2007-2016

Álvaro Menéndez and Maristela Mulino



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During the recent crisis, the degree of financial pressure borne by corporations grew rapidly, with the percentage of those whose operating income was not sufficient to cover interest payments increasing.

This financial pressure increased, to a greater extent, in small and in construction and real estate companies.

A progressive improvement has been observed from 2013 onwards, and there has been a significant reduction in the proportion of companies in a vulnerable position, especially in the SMEs segment.

## CHANGES IN THE DEGREE OF FINANCIAL PRESSURE BORNE BY SPANISH NON-FINANCIAL CORPORATIONS: 2007-2016

The authors of this note are Álvaro Menéndez and Maristela Mulino of the Directorate General Economics, Research and Statistics.

### Introduction

The onset of the crisis in 2008 adversely affected non-financial corporations' operating income, against a background in which their debt reached very high levels (as a percentage of GDP, it peaked at 118% in mid-2010). The combination of these factors was a major element of financial pressure for firms, which had to face payments arising from their external borrowing with a declining level of revenues. A useful indicator for evaluating the change in this degree of pressure is the so-called interest coverage ratio (ICR), which measures the relationship between the surpluses arising on ordinary activities before interest payments (gross operating profit plus financial revenue)<sup>1</sup> and financial costs. From a macroeconomic perspective, it is worth monitoring the ICR since low levels for this ratio may translate into greater difficulties in meeting debt payment and undertaking new investment projects and hiring new employees.

This note focuses on the distribution of the IRC during the crisis and subsequent recovery of the Spanish economy (2007-2016) for Spanish non-financial corporations, especially the most vulnerable firms, paying particular attention to size and sector of activity. For the years in question we resort chiefly to the CBI (Integrated Central Balance Sheet Data Office Survey), obtained on the basis of merging the CBA (CBSO Annual Survey) and the CBB (information on company filings with the Spanish Mercantile Registries). The CBI contains information on the balance sheets and income statements of a most extensive sample of companies (between 500,000 and 600,000 firms per year)<sup>2</sup>, which enables the ICR to be obtained for each of these companies in each year. Given that these data are only available to 2015, use is also made of the CBQ (CBSO Quarterly Survey), comprising a much smaller sample (around 1,000 small and medium-sized companies), providing for an approach to the latest changes (up to 2016 Q3).<sup>3</sup>

Following this introduction, the note is structured as follows. The second section describes the changes in the distribution of the ICR indicator from 2007 to 2015. The third section discusses how the weight of firms' employment and debt has evolved with a greater degree of financial pressure. The fourth section analyses the degree of persistence of situations of high financial pressure. The results of the financial pressure indicator are presented in the fifth section, but in the form of a dynamic analysis, for which the results of two consecutive years are taken into account. Finally, the sixth section draws the main conclusions.

### Distribution of the degree of financial pressure

Chart 1 shows, for the period 2007-2015, the distribution by tranche of the ICR indicator. As a firm shows higher values, this reflects a lesser degree of financial vulnerability. The results are presented with a breakdown by company size (SME or large corporation), and they are also offered for the construction and real estate services sector, on one hand, and for all the other productive sectors, on the other.

1 In this definition of ordinary profit neither amortisation or depreciation is deducted, since what are involved in both cases are accounting costs that entail no disbursement of funds for the company.

2 Only preliminary information is available for 2015, for slightly more than 300,000 companies.

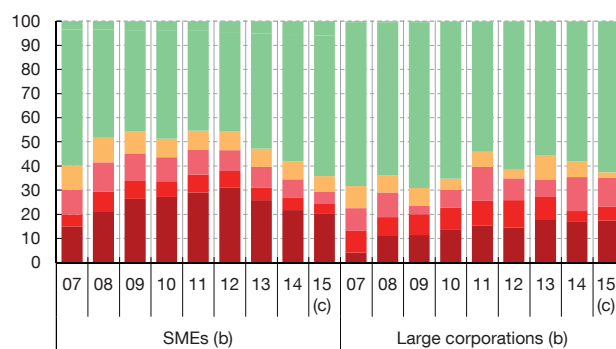
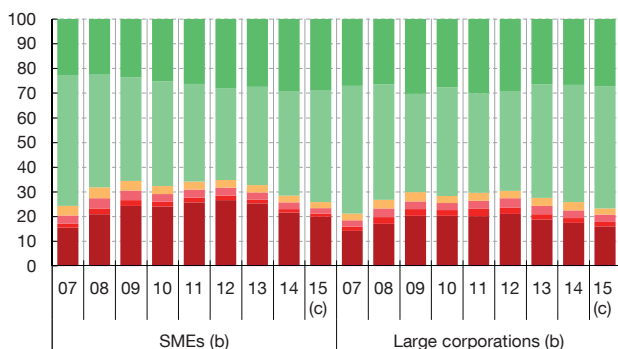
3 Note, in any event, that the degree of representativeness of the sample for certain sectors (such as construction and real estate development) in the CBQ is clearly less than that of the CBI; accordingly, the itemised information for this sector is not shown for 2016. Further, the behaviour of large corporations in the CBQ is, in general, particularly influential.

PERCENTAGE OF FIRMS (a)

WEIGHT OF DEBT (a)

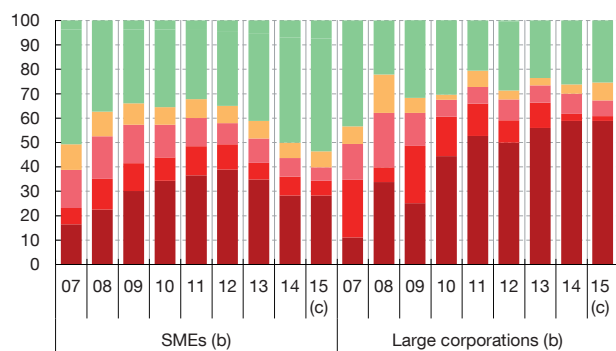
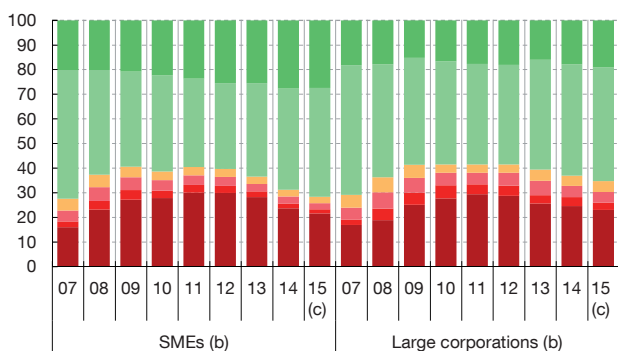
1 ALL FIRMS

2 ALL FIRMS



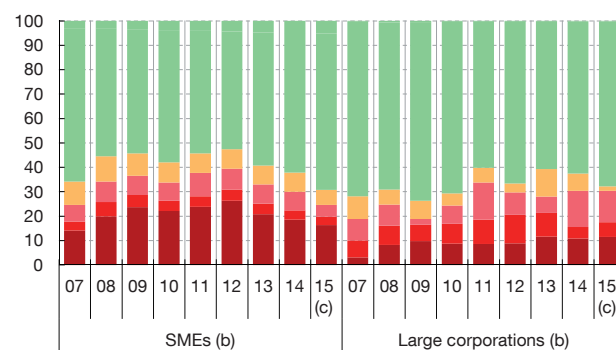
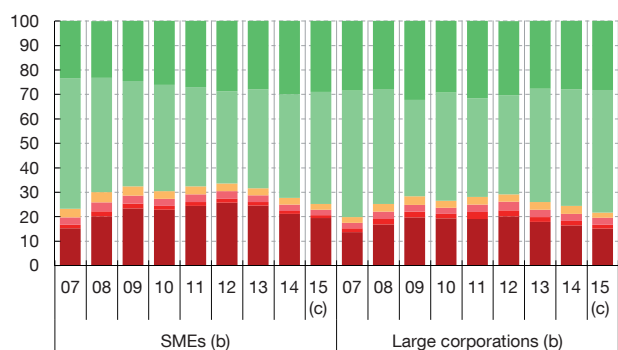
3 CONSTRUCTION AND REAL ESTATE SERVICES

4 CONSTRUCTION AND REAL ESTATE SERVICES



5 ALL OTHER ACTIVITIES

6 ALL OTHER ACTIVITIES



ICR < 0.5      0.5 < ICR < 1      1 < ICR < 1.5  
1.5 < ICR < 2      ICR > 2      FIRMS WITHOUT DEBT

ICR < 0.5      0.5 < ICR < 1      1 < ICR < 1.5  
1.5 < ICR < 2      ICR > 2

SOURCE: Banco de España.

- a Ratio defined as (Gross Operating Profit + Financial Revenue)/Financial Costs.
- b Firm size defined in accordance with Commission Recommendation 2003/361/EC.
- c 2015 data obtained by applying the percentage change, calculated drawing on a common sample of firms, to the previous year's figure.

This information evidences high heterogeneity of the companies in relation to the ICR indicator values, with a greater concentration of firms at the two extremes of the distribution (values below 0.5 times, on one side, and above 2 times or companies without debt, on the other side). It can also be seen how, as the crisis advanced, the distribution shifted towards lower values, essentially as a result of the contraction in companies' operating income, and this despite the notable decline witnessed from 2008 in the cost of corporate external borrowing, following the strong increase recorded in previous years. In any event it was notable how, during this recessionary period, the proportion of firms with a lesser degree of financial pressure (indicator values higher than 2 or without financial debt on their balance sheets) was constantly at a high level, above 65% in the case of SMEs, and never falling below 70% in the larger corporation segment. From 2013 onwards, with the onset of the economic recovery, there was a progressive, across-the-board improvement which translated into an increase in the proportion of firms with higher indicator values, though still without reaching pre-crisis levels.

When analysing how the companies' debt is distributed, on the basis of the different indicator values, a concentration at the extremes can also be discerned, albeit somewhat less markedly so than when this is observed in terms of the number of companies (see top right-hand panel of Chart 1).

Finally, the central and bottom panels of Chart 1 show that the performance of the construction and real estate services sectors was more negative than that of the other sectors, both during the crisis period and in the recovery. That highlights how the growing financial pressure affected construction and real estate companies particularly sharply, especially those with the highest volumes of debt.

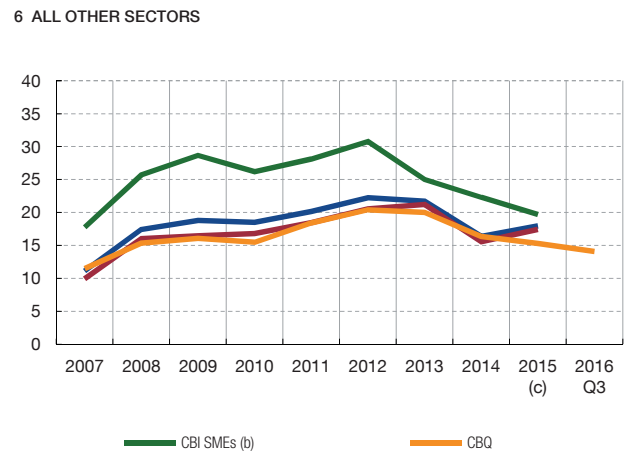
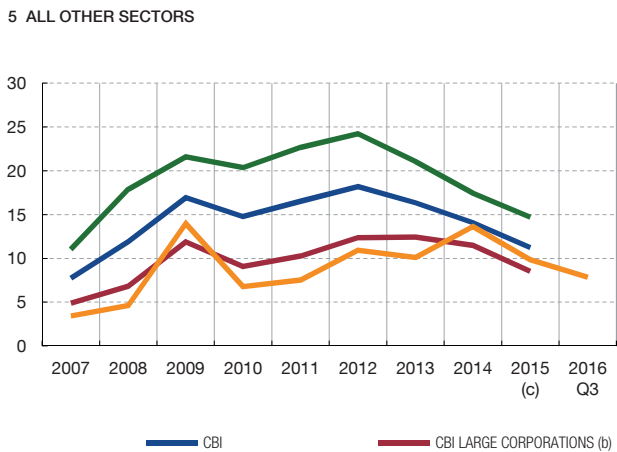
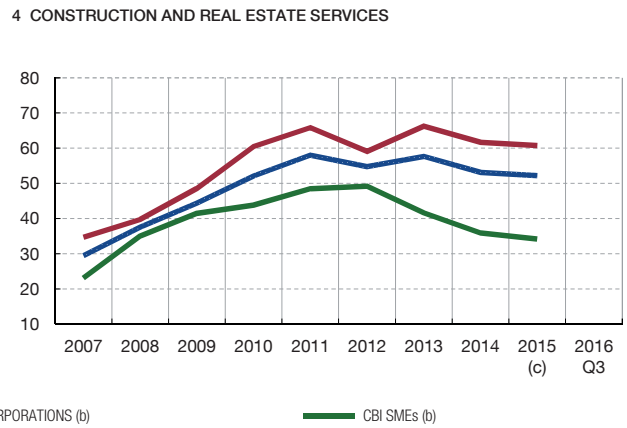
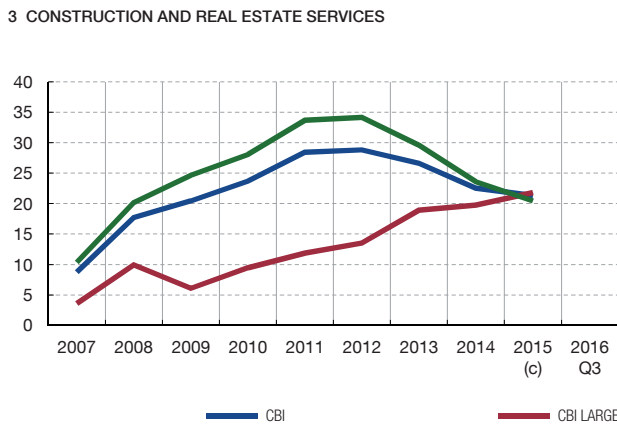
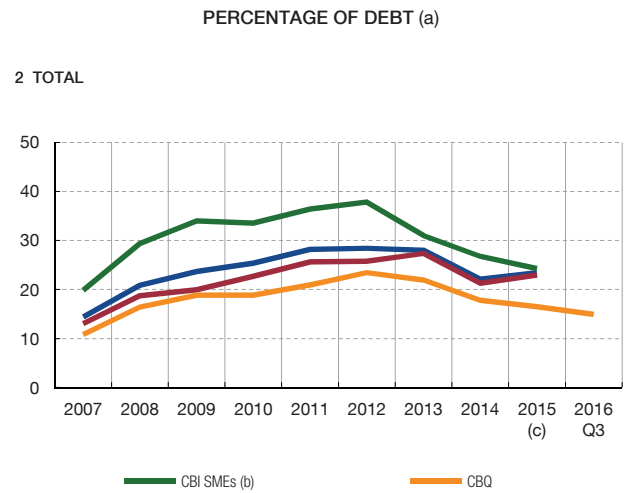
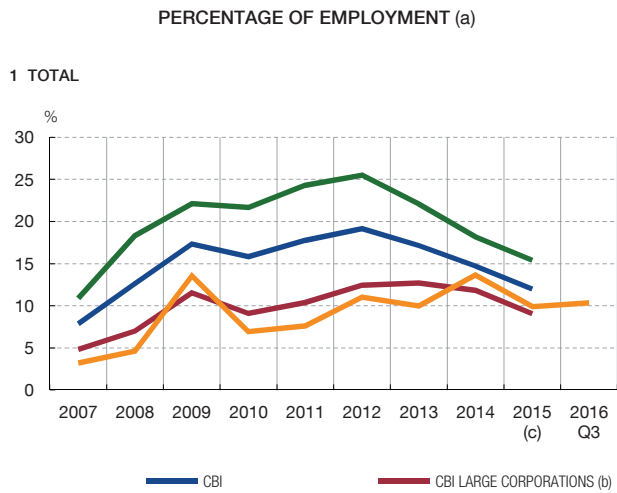
### **Companies with high financial pressure**

It is worth scrutinising the segment of companies bearing most financial pressure, a segment which this note defines as that comprising those firms whose IRC stood below 1, meaning that the funds generated during the year from their operations did not suffice to cover the interest incurred in the same period. Along with analysing the changes in the number of firms in a more vulnerable situation, which can be seen in Chart 1, in this section the results are presented in terms of these companies' employment and debt relative to the totals for their respective aggregates.

During the crisis, the proportion of firms subject to greater financial pressure moved on a rising trend, increasing from 17.1% in 2007 to 28.4% in 2012. If this analysis is made in terms of employment, a similar trend is observed, albeit with smaller percentages, which denotes the lesser relative size of the most vulnerable firms. Specifically, the average number of employees in firms in a more vulnerable situation climbed from 7.9% relative to that of the total for the sample in 2007 to 19.2% in 2012 (see top left-hand panel of Chart 2). The breakdown by size shows that both SMEs and large corporations followed a similar pattern during these years, although in SMEs the percentages were always higher. Moreover, the difference between both groups increased over the course of these years, to the extent that while in 2007 the percentage of employment of SMEs with greater financial pressure was 6 pp higher than that for the corresponding bigger corporations, the gap widened to 13 pp in 2012 (25.5% for SMEs against 12.4% for large corporations). The subsequent economic recovery was conducive to a progressive decline in these figures, one also more marked in the case of SMEs, whereby in 2015 the figure stood at 15.4% for this segment of firms, and at 9.1% for large companies.

Similar patterns can be seen when analysing the weight of the more vulnerable companies' debt in the sector's total debt (see top right-hand panel of Chart 2), although the levels are





SOURCE: Banco de España.

- a Firms subject to greater financial pressure are those for which the ratio (Gross Operating Profit + Financial Revenue)/Financial Costs is less than 1. Firms with no financial costs are considered excluded.
- b Firm size defined in accordance with Commission Recommendation 2003/361/EC.
- c 2015 data obtained by applying the percentage change, calculated drawing on a common sample of firms, to the previous year's figure.

always higher, meaning that in the SMEs segment the percentage of debt climbed to 37.8% in 2012, rising to 25.8% that same year in large corporations. In the three following years these figures fell, to 24.2% in SMEs and to 22.9% in larger companies.

The middle panels of Chart 2 display the results obtained for the construction and real estate services sector, and they show the greater impact exerted on these areas by the crisis. Thus, one-third of the companies belonging to this aggregate endured high financial pressure in 2012, amassing 28.8% of the sector's employment in that year, a much higher percentage than that recorded by all the other sectors. Expressed in terms of a percentage of debt, the differences are amplified; in 2012, these companies' external borrowings relative to the sector's total debt were equivalent to 54.7%, more than 30 pp above the figure reached by the rest of the sample. By size bracket, and in terms of employment, SMEs posted far higher percentages to 2012 than those of the large corporations in this sector. Conversely, regarding the weight accounted for by the debt of SMEs and large companies in a vulnerable situation relative to that of the totals for their respective segments, the weight of the larger corporations was constantly greater than that of SMEs in these sectors, given the high debt accumulated by the former. The charts also show that there was a progressive improvement in the construction and real estate services sector in the last three years analysed, albeit one very concentrated in the SMEs segment, since the weight of employment in the large corporations under greater financial pressure in these sectors continued to increase, and no significant decline was observed in the proportion accounted for by their debt relative to the total debt of these same productive sectors.

The bottom panels of Chart 2 show that, in the other sectors (i.e. excluding construction and real estate services), developments were more favourable. Hence, although the weight of employment of the firms in a situation of greater financial pressure also grew between 2007 and 2012 (by 10.5 pp), it did so to a lesser extent than in the real estate-related sectors, and they posted their highest figure, namely 18.2 %, in 2012. Similarly, the relative significance of their debt increased progressively during these years, to stand at 22.2%; but this figure was still far below that of the group of construction and real estate development companies in the same situation. Lastly, as in the whole sample, a decline in these percentages was witnessed from 2013, in line with the improvement in economic activity recorded as from that year.

Finally, the latest CBQ information shows how, during the first three quarters of 2016, the relative weight of employment in companies under high financial pressure stabilised, having already reached a low level the previous year at around 10%. If we analyse this sample excluding firms from the construction and real estate sector<sup>4</sup>, it can be seen how, in the other sectors, the improving trend recorded in previous years was extended, although the proportion in question still stood somewhat above the pre-crisis levels. As to the relative weight of these companies' debt, there was also a decline in 2016, extending the downward path of progressive correction seen since 2013.

## Persistence of financial pressure

The analysis so far has focused on the results obtained in each year taken in isolation. This approach does not take into account whether the companies under financial pressure maintain this position for more than a year or whether, on the contrary, there were significant inflows and outflows between the group of companies in a situation of greater pressure and all the other companies. A dynamic analysis reflecting these movements is worthwhile

<sup>4</sup> The results for this indicator for companies in the construction and real estate development sectors are not presented, since these sectors are not well represented in the CBQ.

in that it detects the degree of persistence of situations of financial pressure, providing for deeper conclusions than those based on a static analysis.<sup>5</sup>

Chart 3 reveals that the flow of companies whose financial situation improved or worsened relative to the previous period (crossing, in one direction or the other, the threshold of 1 in the ICR indicator) was very high every year, and especially during the early years of the crisis. Thus, depending on the years, between 36% and 49% of firms departing from a situation of greater financial pressure moved towards a position of greater financial ease (these percentages were constantly lower in the large corporations segment). This proportion moved on a slightly declining course from 2008 to 2012, subsequently growing progressively in the three following years, against a background of economic recovery. Conversely, the proportion of firms that moved into the group of those subject to greater financial pressure was also significant, especially in 2008 and 2009. In these two years, the group of companies in this situation grew at very high rates of 79.7% and 60.1%, respectively, owing largely to the small number of companies that were in this situation at the beginning of the recessionary period. Further, from 2008 to 2012, these percentages were constantly higher than the related figure for those abandoning this situation, a development which is consistent with the growing trend of the proportion of companies with greater financial pressure in that period. By contrast, in the last three years this trend reversed, meaning that both in 2013, and above all in 2014 and 2015, the percentage of companies that improved their financial situation was higher than that of those whose situation worsened.

#### Companies with greater financial pressure. Dynamic analysis

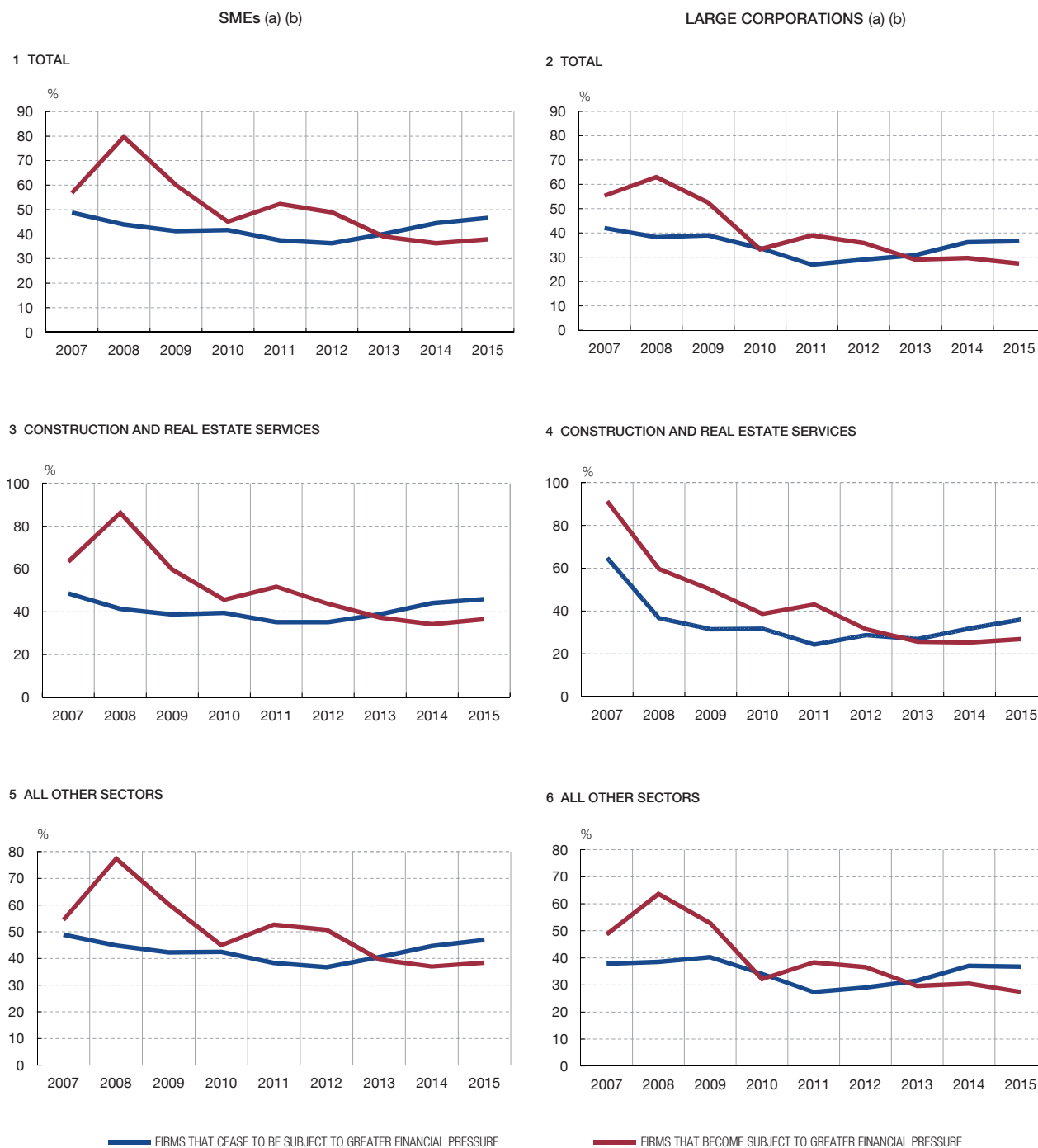
Chart 4 offers an analysis of the companies which, for two consecutive years, evidenced an ICR indicator value below 1. In terms both of these companies' employment and debt, the percentages obtained fall significantly compared with those recorded when only the results for each year taken in isolation are analysed (see Chart 2). This is logically related to the sizable flow of companies which, each year, crossed the high financial pressure threshold, as highlighted in Chart 3. As regards changes over time, the weight of employment in those companies which, for two consecutive years, evidenced an ICR value below 1 (top left-hand panel of Chart 4) rose progressively from 3% in 2008 to 10% in 2012, falling subsequently to 6.9% in 2015. The breakdown by size shows that SMEs continued to post higher percentages than those of large corporations, both for employment and for debt, although these percentages began to decline in SMEs earlier than in larger companies, which led to the differences between both segments narrowing substantially in 2015. The middle and bottom panels of Chart 4 respectively show the results obtained for the construction and real estate services sector and for all the other sectors. The companies in the first group are confirmed to have generally trended more unfavourably, although the percentages recorded are lower than those arising from a static analysis. Lastly, in the aggregate encompassing the remaining sectors, the trends are very similar to those of the whole sample, with a maximum percentage of 9.5% being recorded in 2012 and 2013 in terms of employment, falling subsequently to 6.6%, almost half the figure obtained on using the static approach. As to the weight of debt of these companies, it stood in 2015 at 7.8%, a figure also far lower than that obtained when performing an analysis based on each year in isolation.

#### Conclusions

The findings of this note evidence the presence of high heterogeneity in the degree of financial pressure borne by companies, measured in terms of the interest coverage

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<sup>5</sup> The dynamic analysis has not been performed with the CBQ sample of companies, since this exercise requires a sample of firms common to two consecutive years. In this case, that meant considerably reducing the representativeness of this sample, affecting the validity of the conclusions obtained.

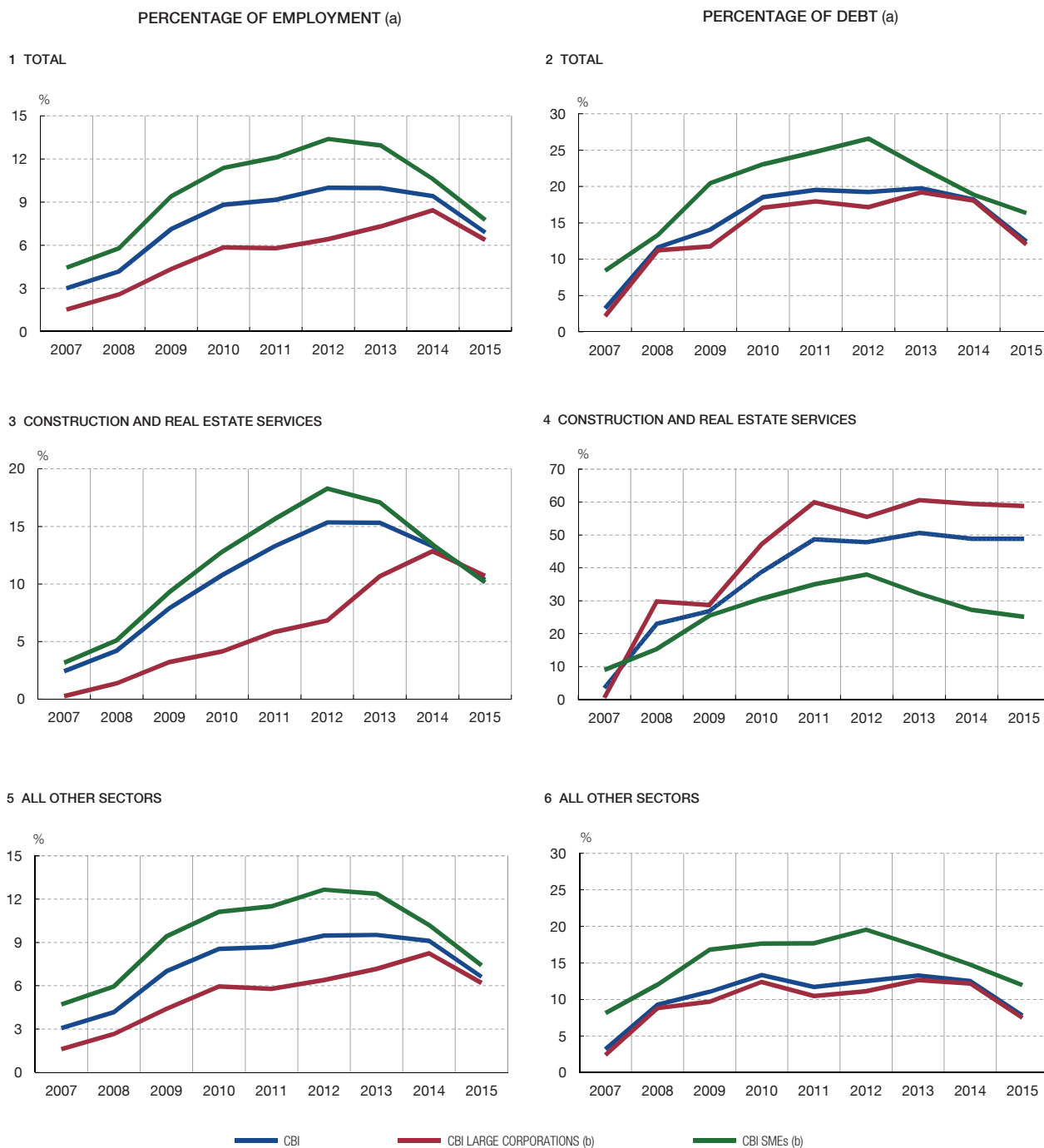


SOURCE: Banco de España.

- a Firms subject to greater financial pressure are those for which the ratio (Gross Operating Profit + Financial Revenue)/Financial Costs is less than 1. Firms with no financial costs are considered excluded. Percentages calculated according to the number of firms that were subject to greater financial pressure the previous year.
- b Firm size defined in accordance with Commission Recommendation 2003/361/EC.

ratio. Thus, for a notable proportion of such companies, financial costs absorb a significant portion of their operating income and, for another sizeable segment, ordinary profit comfortably exceeds interest payments. The percentage of those companies whose income for the year was not sufficient to cover interest payments tended to increase during the crisis, rising to almost 30% in 2012. The relative significance of the companies in this situation stood, in terms of employment, at 19%, and their debt





SOURCE: Banco de España.

- a Firms subject to greater financial pressure are those for which the ratio (Gross Operating Profit + Financial Revenue)/Financial Costs is less than 1. Firms with no financial costs are considered excluded.
- b Firm size defined in accordance with Commission Recommendation 2003/361/EC.

reached a figure of 28% relative to that for the total companies in the sample. The breakdown by size reveals that, during the crisis, the deterioration was more marked in the SMEs segment, both in terms of employment and in the weight accounted for by the debt of the more vulnerable companies. An analysis by sector shows that these percentages were higher and increased to a greater degree for construction and real estate companies.

As from 2013, with the onset of the recovery, this trend began to be reversed, especially in the SMEs segment, which had also been the segment that had undergone the worst downturn during the crisis. That led to a reduction in the weight of the employment and of the debt of the companies in a more vulnerable position, and to a narrowing of the differences between SMEs and large corporations. That said, in 2015 (the latest year with full information) these percentages still stood above pre-crisis levels. The latest information available from the CBQ which, while less complete, is based on a sample where the larger corporations are over-represented, points to a continuation of this improvement in the first three quarters of 2016, in which period the percentage of companies under high financial pressure is estimated to have held at low levels, and the weight of their debt relative to that of the total for the sector to have continued declining.

This note also offers evidence that the flow of firms whose ICR indicator value shifted last year to below 1 or which, on the contrary, emerged from this situation, was relatively high in both cases. This suggests that the analyses of financial pressure in the corporate sector based on a sole year (static approach) may overstate its scope. Indeed, if an analysis is made of the percentage of employment and debt of the companies whose value for the ICR indicator held below 1 for two consecutive years, these percentages fall substantially set against those obtained in a static analysis.

9.3.2017.