SPANISH NON-FINANCIAL CORPORATIONS' DEBT SINCE THE START OF THE CRISIS. A DISAGGREGATED ANALYSIS

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Introduction

During the expansionary phase before the crisis began, there was a marked increase in Spanish non-financial corporations' indebtedness. This led debt, in terms of GDP, to stand at very high levels both historically and in comparison with other developed countries. The need to redress the excessive volume of these liabilities, along with the lower demand for funds attributable to the decline in investment plans and tighter supply-side financing conditions, first prompted a swift slowdown in corporations' borrowed funds and later led to an actual contraction in these liabilities. Specifically, the financial accounts information shows how the level of debt[1] in the non-financial corporations sector peaked in 2009 Q2. The cumulative fall from then to end-2011 stands at 4%. This trend has continued in 2012, raising the cumulative decline to 7.4% according to figures for 2012 Q3 (the latest available).

This article analyses debt levels in the non-financial corporations sector in recent years from a microeconomic perspective, with a view to identifying potentially different behavioural patterns (by sector, size and based on the degree of leverage) that cannot be detected in the aggregate information. It also studies to what extent debt levels may affect corporations' employment and investment decisions. To do so, it uses the Central Balance Sheet Data Office's CBA and CBB databases, from which two samples of corporations have been constructed. The first comprises approximately 180,000 corporations, common to the years 2007 to 2010. For 2011 (the latest year available) a second aggregate has been prepared with those corporations which, having already sent information for that year, also form part of the previous group. In this case the number of corporations is substantially lower (50,000), as it is in a year which is still considered open and for which, therefore, data are not yet being reported. In order to correct the changes in level associated with the different composition of the two samples, the indicators used have been appropriately spliced in this latter year. Furthermore, corporations belonging to the "holdings" sector have been excluded: on one hand, due to their scant significance for the scope of this study, which is more focused on analysing debt developments in the main Spanish productive sectors; and on the other, to the attempt to avoid potential duplications arising from cross-lending between corporations in the same group.

Following this introduction, the article comprises four sections. Section 2 describes developments in corporations' debt and leverage ratios, breaking these down by sector and size. Section 3 analyses the course of these variables on the basis of the corporations' debt levels at the start of the period under study. In the fourth section, a study is made of the extent to which the degree of leverage of the corporations has affected their employment and investment decisions. Finally, section 5 draws the main conclusions.

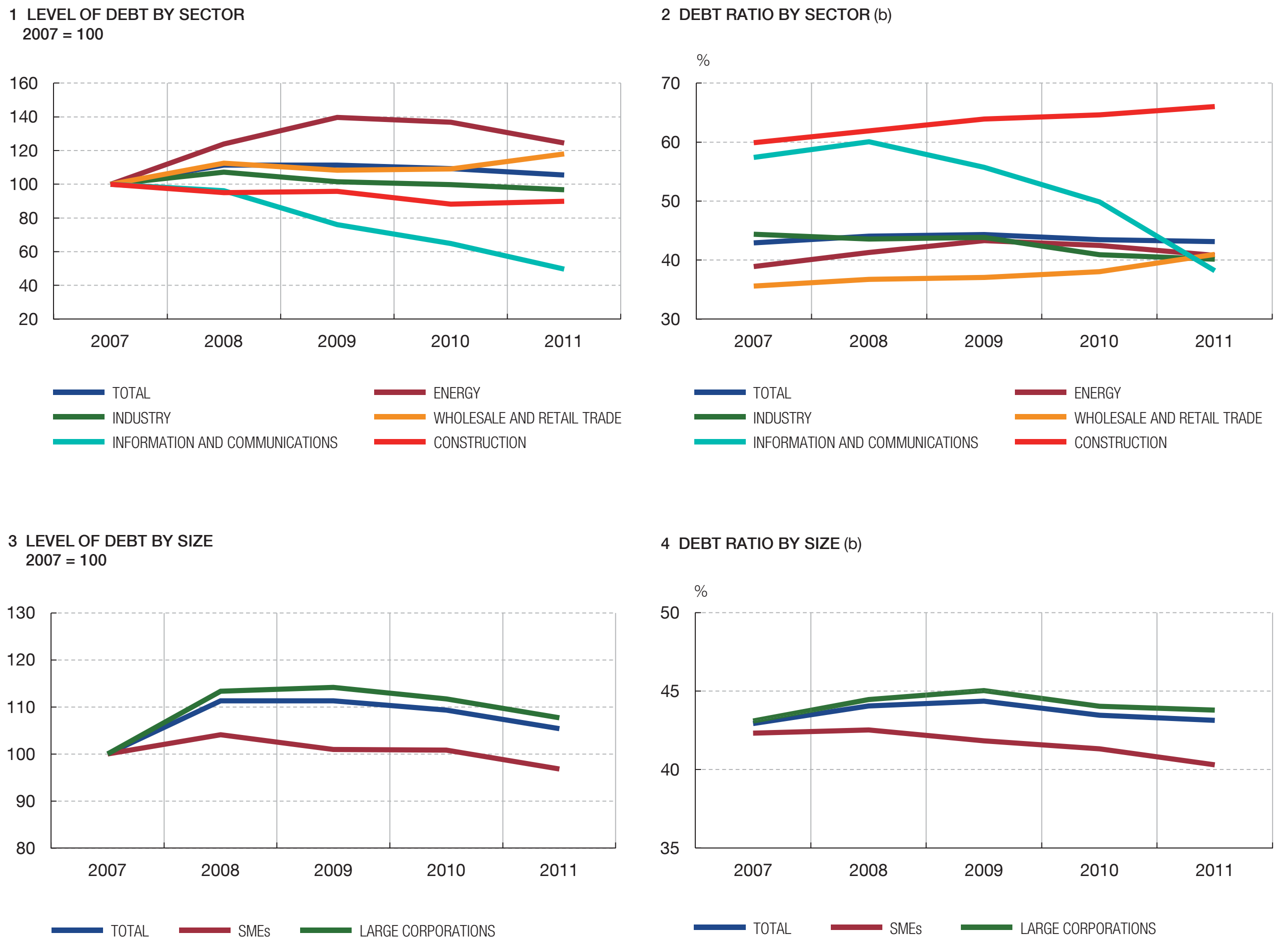
Developments in debt levels and in debt ratios. Breakdown by sector and size

Developments since 2007 in debt levels for the sample as a whole are in line with the financial accounts data. Thus an increase in 2008 gave way to a contractionary pattern from 2009 (see top left panel of Chart 1). The sectoral breakdown reveals, however, significant heterogeneity, perhaps partly related to the initial level of indebtedness (see top right panel of Chart 1). Thus, in the sectors which before the crisis (in 2007) had a leverage

1 Throughout this article, debt is understood to comprise all interest-bearing borrowed funds, such as bank lending and fixed-income securities.

REPORTING CORPORATIONS' DEBT. BREAKDOWN BY SECTOR AND SIZE (a)

CHART 1



SOURCE: Banco de España.

a The data for 2011 are linked drawing on the changes recorded in the sample of corporations for this year
b Ratio defined as total interest-bearing debt/net assets.

ratio[2] above the overall sample average (such as construction, information & communications and, to a lesser extent, manufacturing), borrowed funds tended to decrease. By contrast, in the other sectors, whose initial debt ratios were more moderate, these liabilities were more buoyant, to the point that they increased notably in the energy sector until 2009, although they declined slightly in the ensuing two years.

The developments in debt described above generally gave rise to a progressive reduction in leverage ratios in the productive sectors most indebted at the start of the period analysed and to a certain stabilisation or slight rise in those which started from lower debt ratios. Hence there was a sectoral convergence in this indicator. The exception to this pattern is construction, the debt levels of which fell insufficiently to offset the decline in its net assets (the denominator of the ratio), associated with the sizeable cumulative losses of these companies, and, as a result, the leverage ratio tended to pick up.

The breakdown by company size showed some differences in debt and leverage ratio behaviour depending on this characteristic (see bottom panels of Chart 1). Thus, although

2 The leverage ratio used in this article is defined as the ratio of interest-bearing debt to net assets (total assets minus non-interest-bearing external liabilities).

in 2008 borrowed funds tended to grow at large corporations and SMEs, the rise at the latter was more moderate. From that year, the debt of smaller companies progressively declined in a cumulative fall of 7% to end-2011 from its peak in 2008, which took it below its level in 2007. This pattern of behaviour has not been uniform across sectors, since it was in construction where the falls were sharpest, while in others, such as wholesale & retail trade, borrowed funds remained practically unchanged or even rose slightly, as in information & communications.

In the case of larger firms, debt began to decline a year later (2010) and the cumulative fall from then until end-2011 was 4.9%. Unlike with SMEs, this contraction did not offset the increase in the previous two years, so in the whole of the period analysed these liabilities rose with respect to 2007. The breakdown by productive sector shows a certain heterogeneity, with large falls in construction and manufacturing and even sharper cutbacks in information & communication, and increases at the large firms of the wholesale & retail trade and energy sectors (although in this latter case borrowed funds decreased in 2011).

The lesser dynamism of the debt of SMEs compared with that of large firms in recent years may be partly related to the greater impact of the crisis on the economic and financial situation of SMEs, which explains their greater difficulty in accessing fresh borrowed funds. Thus the informations in the CBSO databases reveals a sharper fall in the indicators of activity and economic results for SMEs than for large firms.[3]

These developments saw the debt ratio of SMEs move on a declining course from 2008 (see the bottom right-hand panel of Chart 1). At larger corporations this indicator increased from 2007 to 2009, falling back in subsequent years, albeit at an insufficient pace to offset the prior increase; accordingly, in 2011 it stood slightly above its level just before the start of the crisis.

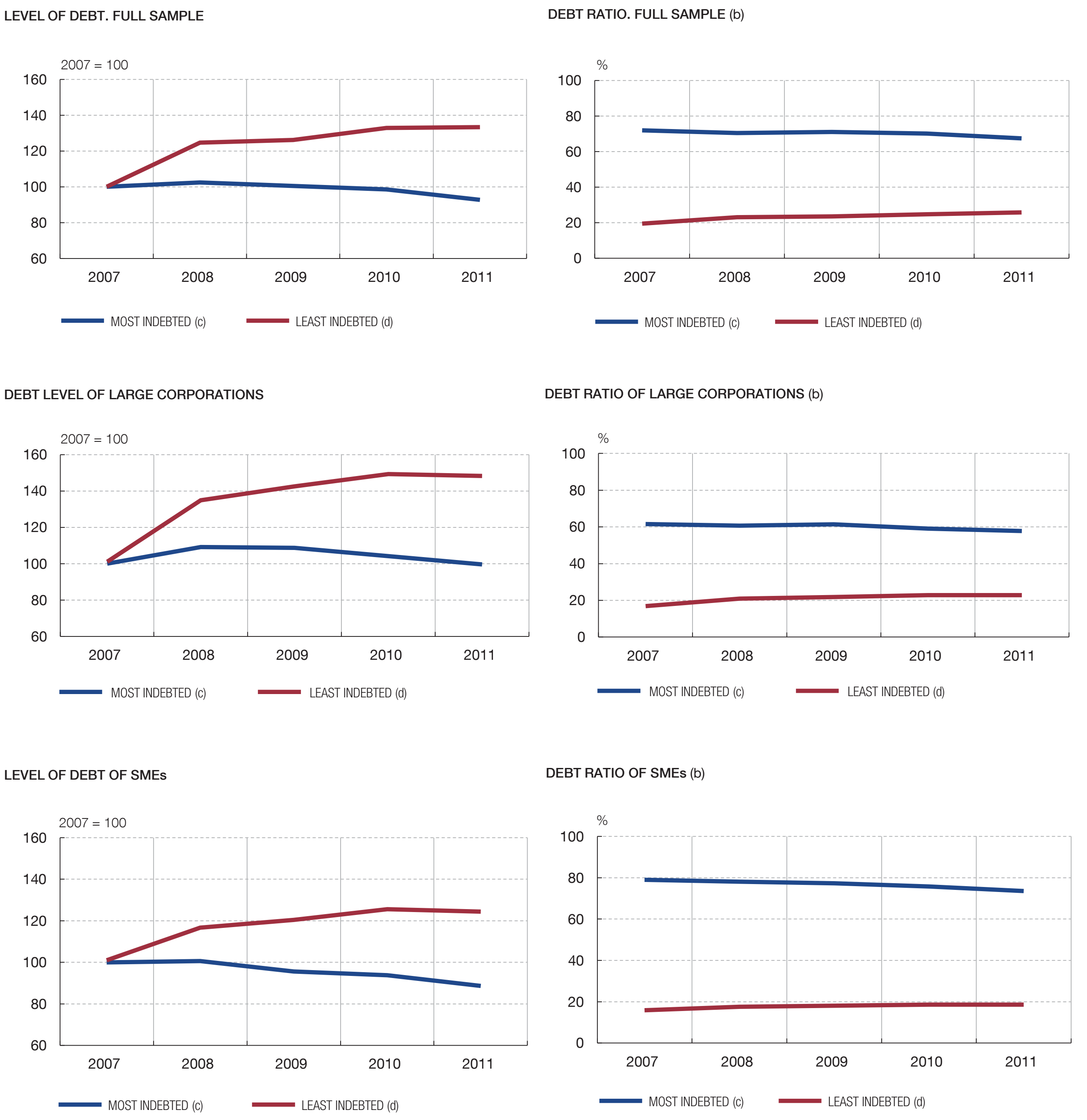
Developments in debt on the basis of the initial level of indebtedness

To study the extent to which changes in corporations' borrowed funds during the recent period are related to the starting level of debt, the corporations in the sample have been separated into two groups, depending on whether in 2007 their leverage ratio was higher or lower than the median for their sector. This definition ensures that the two groups are made up of the same number of corporations from the various productive sectors, preventing the findings from being influenced by the different sectoral composition of the samples.

The results obtained show that there appears to be a connection between the initial level of debt and the course subsequently followed by financing. Thus, as can be seen in the top left-hand panel of Chart 2, the corporations whose leverage ratio in 2007 was below the median for their sector considerably increased their resort to borrowed funds during the period under analysis. As a result, in this aggregate the level of debt increased by more than 33% on the initial situation up to 2011. Conversely, at more indebted companies, there were reductions in debt of almost 10% from the peaks recorded in 2008. Consequently, some convergence was seen in leverage ratios between the two groups of corporations. Thus, in the case of the more indebted corporations, for which this ratio was 72% in 2007, there was a reduction of somewhat less than 5 pp to 67.4% in 2011. In the opposite direction, in the aggregate of corporations that had a low initial level of debt, this ratio grew throughout the period, ultimately posting a figure of 25.8%, more than 6 pp up on 2007.

3 See Box 1 of the article "Results of non-financial corporations in 2011 and in the first three quarters of 2012", *Economic Bulletin,* November 2012, Banco de España.

REPORTING CORPORATIONS' DEBT. BREAKDOWN BY DEGREE OF DEBT (a) CHART 2



SOURCE: Banco de España.

a All the data for 2011 are linked.
b Ratio defined as total interest-bearing debt/net assets.
c Corporations whose debt ratio is greater than or equal to the median ratio of the sector to which they belong.
d Corporations whose debt ratio is less than the median ratio of the sector to which they belong.

Disaggregating on the basis of size, similar conclusions are reached to those observed in the sample as a whole (see the centre and bottom panels of Chart 2). Thus, in the case of large corporations and SMEs alike, in the group showing a higher level of initial debt there were declines in debt levels, these being more pronounced for smaller corporations, which posted a cumulative decline to 2011 of 11.9% from their peak in 2008, compared with the fall of 8.8% observed during the same period for more indebted corporations of a larger size. The sharper contraction in these funds at the more indebted SMEs may be related both to the more marked impact of the crisis on this segment and to the greater need to adjust balance sheets derived from their higher initial leverage, which stood in 2007 at 80%, almost 20 pp above the figure for large corporations in this same situation. Set against this, at both SMEs and large corporations, those departing from a lower proportion of borrowed funds on their balance sheets at the start of the period increased their debt over the course of recent years, although growth was more significant at the bigger corporations. As a result of the developments described for these liabilities, the differences between the leverage ratios of the most and least indebted corporations narrowed both at large companies and at SMEs.

Implications of debt for employment and investment

From 2008 to 2011, Spanish non-financial corporations were strongly affected by the economic crisis. This made for a notable deterioration in their productive activity, giving rise to a sizable contraction in employment, and it influenced their investment decisions considerably. As can be seen in the left-hand panels of Chart 3, the adjustment in staffing was sharper for corporations starting from higher debt levels. Thus, for the latter the reduction in average staff numbers climbed to 11.6% over the whole of the period analysed, while in the aggregate of less indebted corporations the decline was 9.6%.

Distinguishing between corporations in terms of size, the adjustment in employment can be seen to have been more acute at SMEs, in line with the greater impact of the crisis for this type of corporation. Within this segment, those starting with a higher level of debt were those that underwent the biggest staff cuts, with a cumulative fall of over 18% in the period analysed. Although at SMEs with a sounder initial financial situation there was also a notable reduction in employees, this decline was somewhat more moderate, with numbers 15% down compared with their level in 2007. This same differential behaviour based on the initial degree of leverage is seen at larger corporations.

As regards the pursuit of investment activity (measured by the flow of tangible gross fixed capital formation divided by the stock of net assets at the start of each period[4]), it can be seen how, from 2008, this variable progressively lost momentum (see the right-hand panels of Chart 3). By making a distinction based on the weight of borrowed funds in balance sheets, and as was observed when analysing employment, it is seen how corporations with a greater degree of leverage showed a sharper deterioration in the pace of their investment compared with those with less debt.

Dividing the sample on the basis of the size of corporations shows, firstly, that the reduction in investment activity was considerably greater at SMEs. That illustrates once again how this type of corporation was comparatively more affected by the crisis. Moreover, within this segment, those firms starting from higher debt levels underwent a sharper decline in investment than that at other SMEs, leading them even to post a negative value last year. Likewise, at large, less indebted corporations, the loss of momentum in investment was comparatively more moderate than at those with high leverage, and they have been capable of maintaining a higher investment ratio level in recent years.

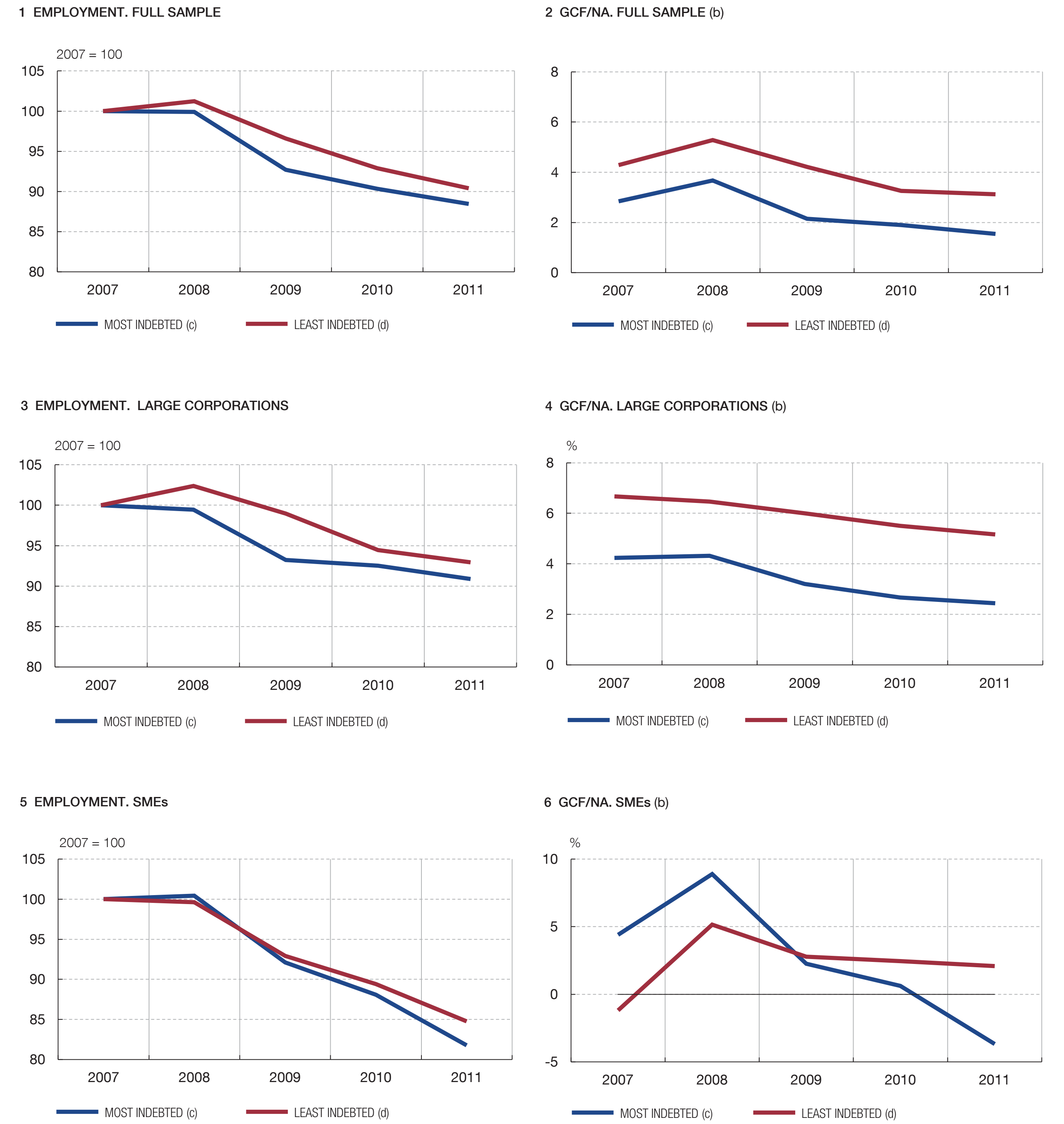
Conclusions

The results of this article illustrate the presence of high heterogeneity in the recent course of corporations' debt when taking as a basis characteristics such as the sector of activity, size and financial position of the firms. Specifically, the evidence shows how the process of deleveraging begun in 2009 is proving more intense than may be inferred from the

4 In the case of the CBB corporations, the concept of gross fixed capital formation has, in the absence of sufficient information, been proxied by the difference in the balance sheet stocks of tangible fixed assets, adjusted for their annual depreciation.

REPORTING CORPORATIONS' EMPLOYMENT AND INVESTMENT (a)

CHART 3



SOURCE: Banco de España.

a The data for 2011 are linked drawing on the changes recorded in the sample of corporations for this year.
b Ratio defined as gross capital formation/net assets.
c Corporations whose debt ratio in 2007 was greater than the median ratio of the sector to which they belong.
d Corporations whose debt ratio in 2007 was less than or equal to the median ratio of the sector to which they belong.

aggregate data and that it is concentrated, as might be expected, on corporations that had greater restructuring needs owing to the fact their debt had reached higher levels. This development is consistent, however, with greater external borrowing by corporations with a sounder initial financial position, corporations that might even have increased their resort to external funding during the period analysed, having greater leeway to do so and being perceived, on the whole, as more solvent by lenders.

The evidence presented also shows how corporations at which the weight of external borrowing in their balance sheet was higher before the crisis have fared more unfavourably in terms of staffing and investment in tangible fixed assets. This suggests that corporations with higher debt levels have been comparatively more affected in their activity since they are more vulnerable to adverse shocks, showing greater adjustment and restructuring needs.

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