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The indebtedness of Portuguese SMEs and the impact of leverage on their performance[1]

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Bank of Portugal

[1] This paper was prepared for the meeting. The views expressed are those of the authors and do not necessarily reflect the views of the BIS, the IFC or the central banks and other institutions represented at the meeting.

The indebtedness of Portuguese SMEs and the impact of leverage on their performance

Ana Filipa Carvalho, Manuel Perestrello, Mário Lourenço[1]

Abstract

Small and medium-sized enterprises (SMEs) account for a relevant part of Portuguese companies' turnover and number of employees, standing for half the loans granted to non-financial corporations by resident financial institutions. Tracking their performance is one of the pillars of monitoring the country's financial stability. Focusing on these companies' performance, and using Banco de Portugal's Central Balance-Sheet Database and Central Credit Register data, stylised facts suggest that financial debt is not usually used to increase profitability. Instead, indebtedness seems to be increasingly linked to companies that eventually cease their activity. Implications regarding monetary policy, financial stability and risk assessment are also addressed.

Keywords: Enterprises, Indebtedness, Leverage, Profitability, SMEs, Financial stability

JEL classification: D22

Contents

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1. Introduction

Small and medium-sized enterprises (SMEs) are a relevant part of the non-financial corporations (NFC) sector in Portugal. Although debt has historically played a significant role in these companies' sustainability, it is not clear whether it has been used as a tool to expand their activity and achieve a better performance, or just as a way to carry on with their day-to-day operation, often leading to a situation where debt stands for a burden on company's operating profitability. Understanding this issue seems to be of particular relevance in the context of the recent economic and financial crisis and considering the deleveraging effort recently undergone by the Portuguese economy.

From the perspective of the financial system, it is also important to determine the extent to which debt is used to foster higher profitability levels. Unsustainable debt from the non-financial corporations' perspective is naturally linked to an increase in non-performing loans from credit institutions, with obvious impacts on its capital requirements. Such assets (from the financial sector's perspective) may even be written-off from its balance sheets. It is therefore of the utmost relevance to determine the extent to which financial debt is being properly used by such an important part of Portuguese companies.

2. Data

The current analysis is mainly based on data obtained from the Central Balance-Sheet Database (CBSD) of Banco de Portugal's Statistics Department. The CBSD is a micro database that gathers the economic and financial information of all Non-Financial Corporations[2] (NFCs) in Portugal. This information is reported directly by the companies through the submission of *Informação Empresarial Simplificada* (Simplified Corporate Information), an integrated report of economic, financial and statistical information (based on non-consolidated accounting data) which companies have to report, on an annual basis, to the Ministry of Finance, the Ministry of Justice, Statistics Portugal and Banco de Portugal.

Only the subset of SMEs was considered for the purpose of this analysis. Companies are categorised as SMEs if they employ fewer than 250 and more than 10 employees and have an annual turnover between 2 million euros and 50 million euros and/or an annual balance sheet total between 2 million euros and 43 million euros, a classification that follows European Commission's Recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises.

[2] According to the 2010 European System of National and Regional Accounts (ESA 2010), the NFC sector includes private and public companies and excludes sole proprietors (included in the households' institutional sector). For the purpose of this analysis, holding companies (categorised under Section K of NACE Rev. 2) were also excluded. Companies developing activities classified under Sections O, T and U of NACE Rev. 2 were also excluded, as well as companies with no know NACE Rev.2 classification.

Microenterprises and large enterprises were not, hence, under the scope of this analysis.[3] In 2014, although accounting for only 10% of the total number of enterprises, SMEs represented 42% of the total turnover generated by Portuguese NFCs and 45% of the number of employees (Chart 1), a prominence in the Portuguese economic structure that has been relatively stable throughout the last years. SMEs are even more relevant within certain economic activity sectors. Indeed, in 2014 they stood for 28% of the enterprises of the “Manufacturing” and “Water supply; sewerage, waste management and remediation activities” sectors (Sections C and E of NACE Rev. 2), 60% of the turnover generated by companies within the “Education” and “Water supply; sewerage, waste management and remediation activities” sectors (Sections P and E of NACE Rev. 2) and for 64% of the number of employees of the “Manufacturing” sector (Section C of NACE Rev. 2) (Chart 2).

Chart 1: NFC’s structure by size class (2014)

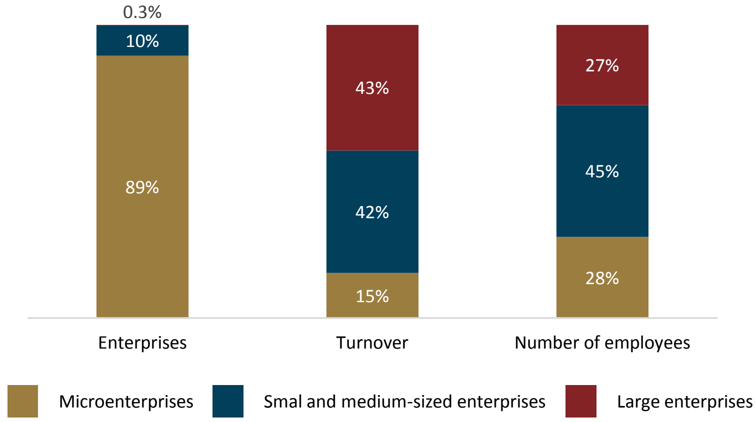
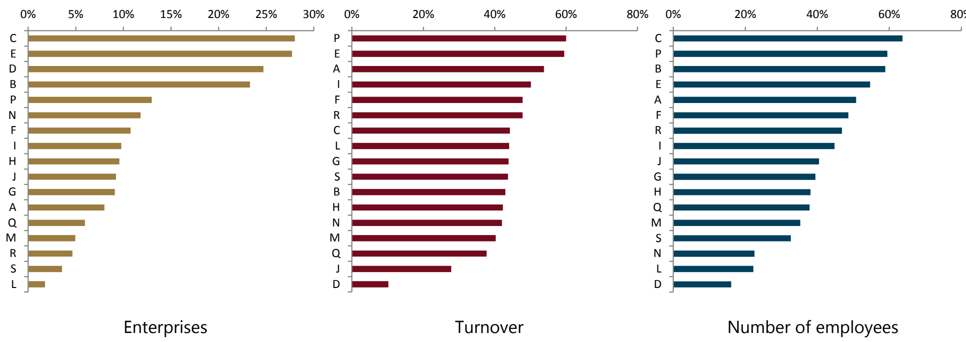


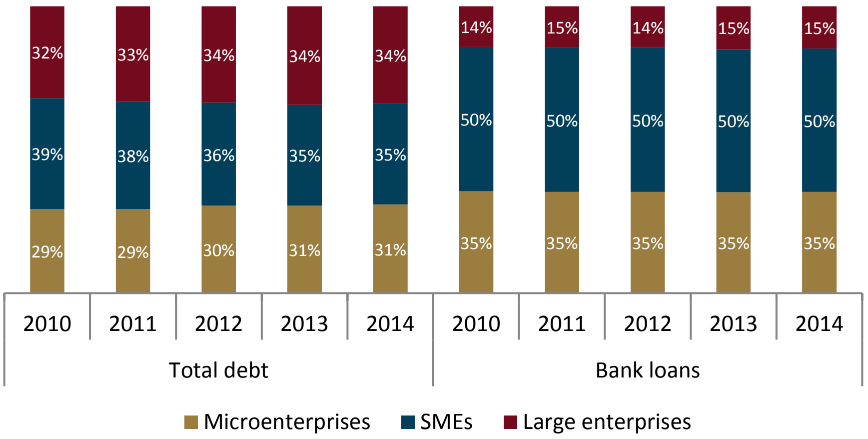
Chart 2: SMEs weight by NACE Rev. 2 Section (2014)



3 According to the European Commission Recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises, microenterprises are defined as enterprises which employ fewer than 10 employees and whose annual turnover and/or balance sheet total does not exceed 2 million euros. Large enterprises are those that are neither categorised as microenterprises, nor as SMEs.

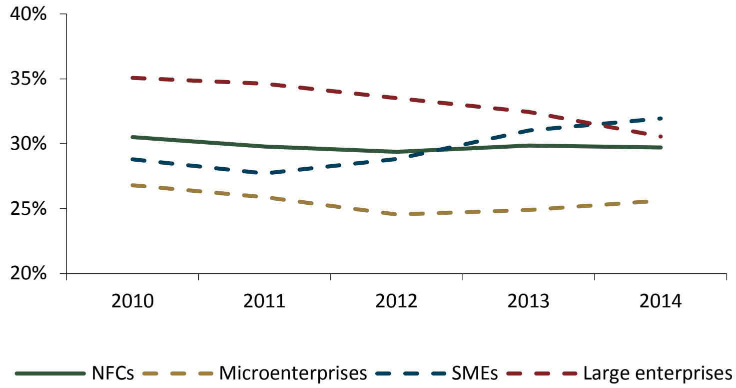
Breaking down NFCs total debt (understood as the total amount of balance sheet liabilities) by size class, it is relevant to notice that SMEs represented more than one third of such aggregate in the whole period under analysis. They accounted for 35% of the NFCs total debt in 2014 (Chart 3). Although NFCs total debt is almost equally distributed across the different size classes, data compiled by Banco de Portugal's Central Credit Register[4] show that SMEs stood for half of the bank loans granted by Portuguese Credit Institutions to the NFC sector during the 2010-14 period.

Chart 3: NFC's liabilities by size class (2010-14)



Debt has played a significant role in these companies' sustainability. Looking at NFCs' capital ratio (which determines the proportion of a company's assets funded by equity), in spite of a slight increase in recent years, 68% of SMEs' assets were funded by debt in 2014 (average capital ratio of 32%) [Banco de Portugal (2015)] (Chart 4).

Chart 4: NFC's capital ratio by size class (2010-14)



[4] The Central Credit Register is a database managed by Banco de Portugal, which gathers information provided by participating entities (resident institutions) regarding credit granted. For more information, please refer to Banco de Portugal Booklet No 5, *Central de Responsabilidades de Crédito* (Portuguese version only).

3. Methodology

Bearing in mind the aspects previously discussed regarding SMEs' weight in the Portuguese economy and their financial situation concerning indebtedness, the purpose of this analysis is to understand how SMEs' level of indebtedness or financial leverage is reflected on their profitability within a three year period.

In order to conduct such assessment, several indicators were considered to perform an evaluation of each company's indebtedness: the capital ratio (relating equity to total assets), a financial leverage ratio (calculated as the ratio between financial debt and the aggregate of equity and financial debt), the debt to equity ratio (relating total liabilities to equity), and other financial distress indicators such as the ratio between financial debt and earnings before interest, taxes, depreciation and amortization (EBITDA) or the inverted interest coverage ratio (i.e., the ratio between interests paid and EBITDA).

Regarding profitability, some of the most traditional indicators were considered: the return on assets ratio (which relates the net profit to the company's total assets), the return on equity (the ratio between net profit and total equity), as well as operating and net margins indicators (where EBITDA and net profit are related to each company's total income, respectively).

Regardless of their usefulness in most economic and financial analysis, several of these indicators have limitations on their calculation requirements for individual companies. For instance, ratios using equity as their denominator are often not computed when equity is negative. On the other hand, ratios using specific parts of each company's balance-sheet and income statement reports may often be impossible to calculate due to missing values (for example, when elements such as interest paid or even financial debt are considered). Although the analysis was conducted for all the above mentioned ratios (bearing in mind their specific limitations, in each case), only the capital ratio and the return on assets ratio were selected to assess each company's indebtedness and profitability levels, respectively. These ratios capture the main features that the analysis was meant to focus upon and, additionally, they maximize the number of analysed companies as there is only one obstruction to their calculation - the existence of companies with null values for total assets - which is common to both indicators.

As so, the capital ratio was considered as an indirect measure of each company's indebtedness, considering that it measures the solvency of the company by determining the proportion of assets financed by equity. The return on assets ratio was considered to be this analysis profitability proxy, given that it measures how efficiently a company can manage its assets to produce profits.

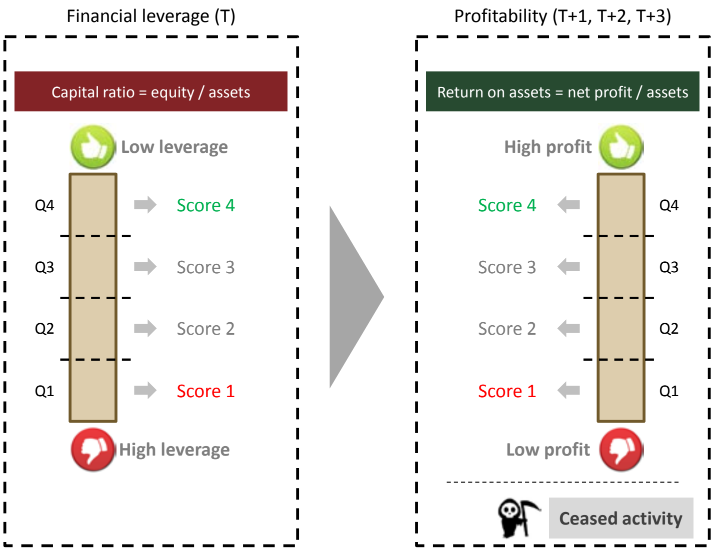
The CBSD data were used in order to determine each company's capital ratio and return on assets ratio for each year in the 2006-14 period. Subsequently, SMEs were scored from 1 to 4 according to their level of financial leverage and their positioning within the quartile distribution of individual capital ratios of SMEs. This score translates the company's performance as either being in the bottom 25% of the registered performances (score 1), above 25% but below 50% of its peers (score 2), above 50% but below 25% of its peers (score 3) or above 75% of its peers (score 4). The higher the company's capital ratio, and hence the score, the lower the company's financial leverage.

The same procedure was carried out regarding the profitability ratio. SMEs were then scored from 1 to 4 according to their level of profitability and their positioning within the quartile distribution of individual return on assets ratios of SMEs. In this case, the higher the return on assets ratio, and hence the score, the higher the company's profitability level.

Each company's leverage score in period T was then linked to its profitability score in the subsequent three years (periods T+1, T+2 and T+3). Results are first displayed as average values of the analysed indicators in the 2006-14 period, and, subsequently, as average values of two different time periods within that time span.

A special flag was considered when the company ceased its activity, a situation determined using Banco de Portugal's business register (which combines information from several databases managed by Banco de Portugal, as well as other administrative sources) [Gonçalves et al. (2013)] (Figure 1).

Figure 1: Summary of the proposed analysis framework

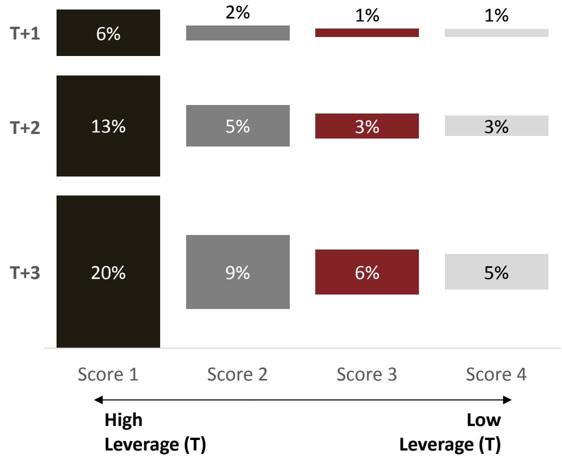


Considering the particular scope of this analysis and the above mentioned methodology, it is important to mention that once a company is categorised as SME in period T, it will be evaluated according to its profitability level for the three subsequent years, regardless of any changes in the company's size class during this period. This avoids discarding companies due to size classification changes, as this would probably introduce unnecessary "noise" in the current analysis. Nevertheless, it is important to notice that each year's quartile distribution of individual indicators is determined solely by the set of SMEs of that year.

4. Results

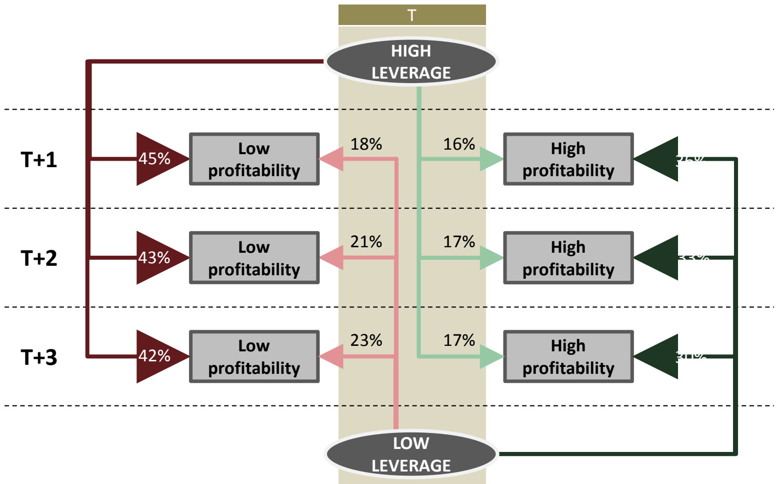
Focusing the analysis on the share of SMEs that ceased their activity on the three year time span following its indebtedness score classification, results seem to indicate that this situation is more relevant among Portuguese SMEs with the lowest capital ratio levels (hence, highest financial leverage levels). About 6% of SMEs with the lowest capital ratio levels in one year ceased their activity in the following year, a share higher than the share of enterprises that ceased their activity one year after having registered low leverage levels (1%). In a three year time span (bearing in mind that these results are cumulative across this time period), 20% of companies with the highest financial leverage levels ceased their activity. These results contrast with the 5% registered among enterprises with the lowest levels of financial leverage (Chart 5).

Chart 5: Share of SMEs that ceased their activity according to financial leverage scores in T



Among companies that did not cease activity, data reveal that SMEs with the highest financial leverage in period T are most commonly linked to low profitability levels in the following years. Indeed, 42% of SMEs with the highest leverage levels in one year registered the lowest profitability levels after three years, a share relatively similar when one year and two year time spans are considered (Figure 2). The stability of the results across different time spans enabled the analysis to be focused on the financial leverage of SMEs in period T and their profitability level three years after (T+3).

Figure 2: SMEs by financial leverage scores and profitability scores (high and low levels, at different time spans)



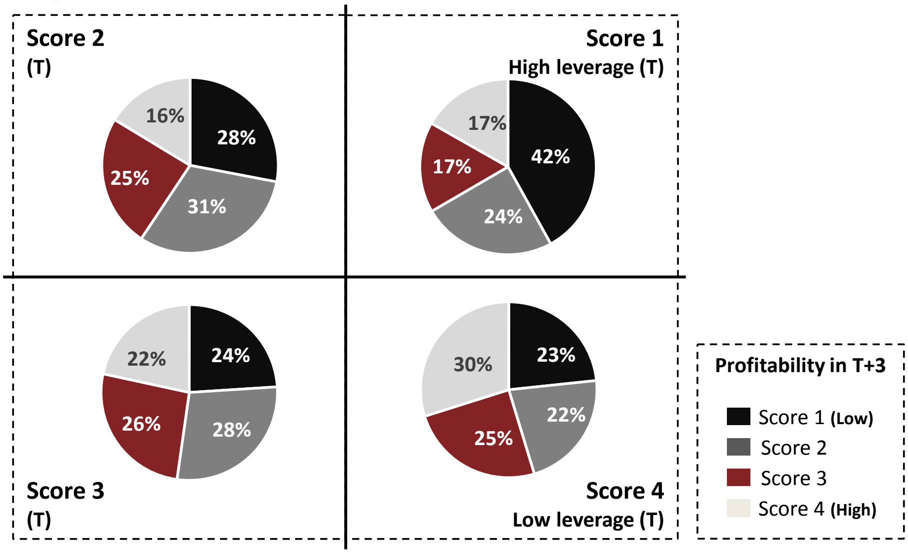
The link between companies with the highest leverage levels in one period and the lowest profitability levels three years after seem to be more noticeable when the set of least leveraged SMEs is considered. In this case, the percentage of SMEs posting the lowest profitability levels after three years drops to 23%, which compares with the previously mentioned share of 42%, when the highest leveraged SMEs are considered.

On the other hand, only 17% of the most highly leveraged SMEs reached high profitability levels in three years. For the least leveraged firms the percentage increases to 30%.

These stylised facts seem to indicate that high financial leverage is not usually associated with short/medium term profitability for Portuguese SMEs. Therefore, it could be argued that a significant share of Portuguese SMEs seem to be indebted (carrying non-profitable debt) rather than leveraged (debt leading to higher profitability levels).

Another aspect the data seem to point to is that (with the exception of SMEs with an indebtedness score of 3) profitability levels seem to be closely linked to the same indebtedness score (Chart 6). Within SMEs of the lowest leverage quadrant (score 4 at time T), the most relevant share of companies at time T+3 is the one related with the ones with the highest profitability levels (score 4 at time T+3). The same can be pointed out at leverage score 2 (where SMEs with profitability score 2 are the most relevant after three years) and leverage score 1 (where, as pointed out, the lowest profitability score stands for the largest share of SMEs).

Chart 6: SMEs by financial leverage scores (in T) and profitability scores (in T+3)



4.1. Breakdown by economic activity sectors

The results previously analysed were broken down according to the NACE Rev. 2 classification of economic activity, allowing the analysis to focus on specific economic activity sectors.

Considering different Sections of NACE Rev. 2, and focusing the analysis on the share of enterprises that ceased their activity, it is possible to identify economic activity sectors where this proportion is higher. This situation is particularly relevant in “Construction”, “Manufacturing” and “Administrative and support service activities” (Sections F, C and N of NACE Rev. 2, respectively) (Chart 7).

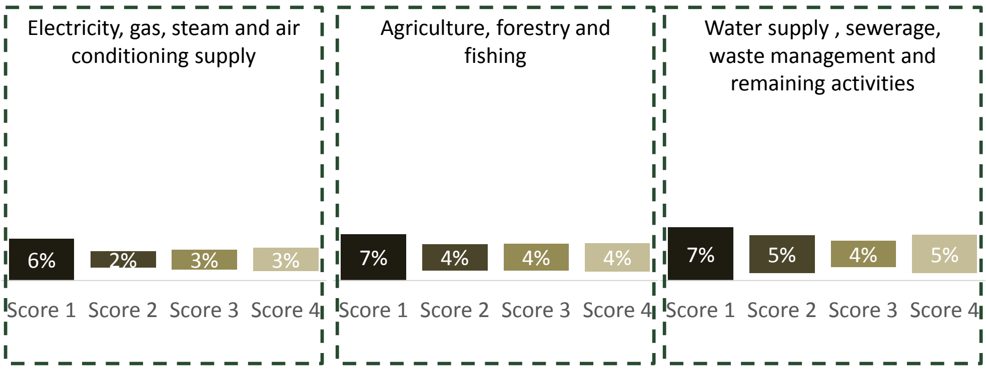
Chart 7: Share of SMEs that ceased activity in the three subsequent years according to financial leverage scores (sectors with highest shares) – by NACE Rev. 2 Section

“Construction” (Section F of NACE Rev. 2) stands out as the sector with the highest share of companies that ceased activity in the three year period after a high indebtedness level (leverage score 1) had been registered (27%), followed by

“Manufacturing” (26%) and “Administrative and support service activities” (21%) (respectively, Sections C and N of NACE Rev. 2). Still, it is important to mention that, among SMEs that ceased activity in the referred time span, “Manufacturing” displays the largest differential between the share of companies that ceased their activity having registered the highest and the lowest indebtedness levels (a differential of 22 percentage points between both cases).

By contrast, sectors such as “Electricity, gas, steam and air conditioning supply”, “Agriculture, forestry and fishing” and “Water supply, sewage, waste management and remediation activities” (Sections D, A and E of NACE Rev. 2, respectively) exhibit the lowest share of SMEs with the highest leverage levels that ceased activity in the ensuing three-year period (Chart 8). Market regulation regarding utilities may determine to some extent the fact that Sections D and E of NACE Rev. 2 seem to have the lowest share of companies ceasing activity despite of them having the highest indebtedness ratios.

Chart 8: Share of SMEs that ceased activity in the three subsequent years according to financial leverage score (sectors where shares are lowest)



Regardless of the economic activity sector, the share of SMEs that ceased their activity after a three year period seems to be larger among SMEs with the highest indebtedness levels (score 1 in period T).

Considering only the companies that did not cease activity, the analysis then focused specifically on the subset of companies with the highest leverage levels (leverage score 1 in period T) and the lowest profitability levels after a three year period (profitability score 1). This high-low leverage-to-profitability situation and the structure of SMEs under these circumstances (according to their economic activity sector) was then compared to the breakdown of all the SMEs in order to understand if a particular sector is over- or under-represented in this leverage-to-profitability situation (Table 1).

Results show that the “Accommodation and food service activities” sector (Section I of NACE Rev. 2) is more relevant in the high-low leverage-to-profitability situation, when compared to its relevance among total SMEs. This sector accounts for a 15% share of the subset of companies with high leverage and low profitability levels, a share 7 percentage points higher than this sector’s share among total SMEs. Likewise, “Real estate activities” (Section L of NACE Rev. 2) is also over-represented in the analysed subset of SMEs, with a share 2 percentage points higher than the one this sector accounts for when the total population of SMEs is considered.

Table 1: SMEs' structure by leverage-to-profitability situation and economic activity sector

NACE Rev. 2	Total SMEs (1)	High leverage and low profitability (2)	=(2)-(1)	Low leverage and high profitability (3)	=(3)-(1)
A – Agric., forestry and fish.	2.3%	2.5%	0.2%	2.7%	0.4%
B – Mining and quarrying	0.6%	0.5%	-0.1%	0.6%	0.0%
C – Manufacturing	28.3%	23.7%	-4.6%	26.9%	-1.3%
D – Elect., gas, steam	0.4%	0.2%	-0.2%	0.6%	0.2%
E – Water supply, sewerage	0.6%	0.4%	-0.3%	0.6%	-0.1%
F – Construction	15.6%	13.3%	-2.4%	9.1%	-6.5%
G – Wholes. and retail trade	23.0%	21.2%	-1.8%	24.0%	1.0%
H – Transportation	4.1%	3.1%	-1.0%	4.3%	0.3%
I – Accomod., food storage	8.0%	15.2%	7.2%	9.2%	1.2%
J – Information and commun.	2.0%	2.1%	0.1%	2.4%	0.4%
L – Real estate activities	1.3%	2.9%	1.6%	0.8%	-0.5%
M – Prof., scient., tech. activ.	4.4%	3.2%	-1.2%	7.2%	2.7%
N – Adm. and support serv.	3.6%	4.4%	0.8%	3.3%	-0.3%
P – Education	1.7%	2.4%	0.7%	2.1%	0.4%
Q – Human health, soc. work	2.7%	2.3%	-0.4%	4.9%	2.2%
R – Arts, entert., recreation	0.5%	1.0%	0.5%	0.3%	-0.2%
S – Other service activities	0.9%	1.7%	0.8%	0.8%	-0.1%

Sectors such as "Manufacturing", "Construction" and "Wholesale and retail trade; repair of motor vehicles and motorcycles" (respectively, Sections C, F and G of NACE Rev. 2) seem to be under-represented in the high-low leverage-to-profitability situation when compared with the share they account for among total SMEs (-5, -3 and -2 percentage points, respectively).

The same kind of analysis was conducted taking into consideration the subset of SMEs with low indebtedness levels in period T (leverage score 4) and the highest levels of profitability in period T+3 (profitability score 4). The low-high leverage-to-profitability situation determined yet another structure of enterprises. Within these SMEs, the "Construction" sector (Section F of NACE Rev. 2) stood out as being under-represented, when compared to its relevance among the total number of SMEs. This sector stood for only 9% of SMEs under the referred low-high leverage-to-profitability situation, a percentage 7 percentage points lower than its share among total SMEs. Conversely, "Professional and scientific activities" and "Health and social activities" (Sections M and Q of NACE Rev. 2, respectively) stood out, displaying a larger share of companies in the low-high leverage-to-profitability situation than the one registered when considering total SMEs.

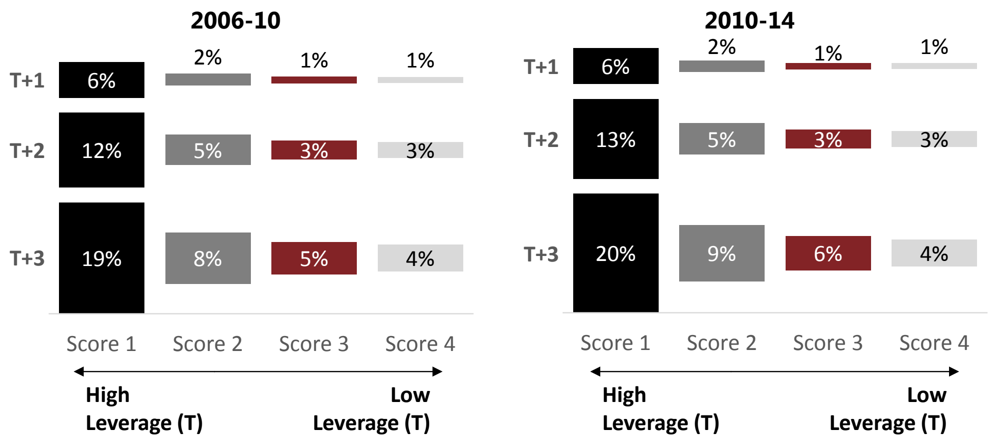
4.2 Breakdown by different time periods

The data used for this analysis encloses a relatively large time span, across which the world as seen significant changes affecting differently each country's economic and financial situation. In the case of Portugal, in the aftermath of the global financial crisis registered at the end of the first decade of the 21.st century, an economic and financial assistance program was implemented, targeted at solving some of the imbalances of Portuguese economy, regarding both the behaviour of public agents (namely, the structural deficit of the Portuguese Public Administration) and the increasing indebtedness of private economic agents (households and NFCs).

Hence, it would be important to see if the above mentioned results are somewhat different when distinct time spans are considered. In order to do so, the available data were broken down into two subsets of data, the first of which covering the period between 2006 and 2010, and the second set of data concerning the 2010-14 period.

Data seem to point to the fact that the share of SMEs ceasing activity in the three year period after having registered the highest indebtedness levels is not seemingly different between both time spans: this share stood at 19% and at 20% in the 2006-10 and 2010-14 periods, respectively (Chart 9).

Chart 9: Share of SMEs that ceased their activity according to financial leverage scores by different time periods

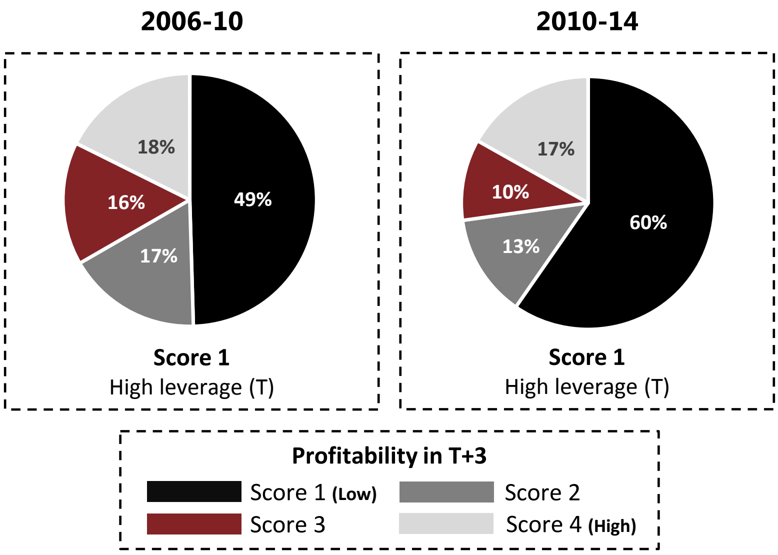


Notwithstanding, it is possible to identify economic activity sectors where the difference between both periods is more noticeable. For instance, the "Transportation and storage" sector (Section H of NACE Rev. 2) stands out with an increase of 6 p.p., from 16% in the 2006-10 period to 22% in the 2010-14 period. Likewise, in the "Agriculture, forestry and fishing" sector (Section A of NACE Rev. 2), the share of SMEs ceasing activity in the three year period after having registered the highest indebtedness levels doubled, from 4% to 8%. Inversely, in the "Electricity, gas, steam and air conditioning supply" sector (Section D of NACE Rev. 2) the share of companies in the same situation that ceased activity seems to have decreased: while the percentage of SMEs in this situation stood at 8% in the 2006-10 period, it dropped to 1% during 2010-14.

On the other hand, concerning the share of companies that did not cease their activity, results seem to indicate that in the most recent period under analysis, the share of SMEs with the lowest profitability levels (profitability score 1) among companies with the highest indebtedness levels (leverage score 1) is higher than in the previous period (44% in the 2010-14 period, compared with 41% in the 2006-10 period). Also, the share of enterprises with highest profitability levels (profitability score 4) among less leveraged enterprises (leverage score 4) seems to be lower in the second period under analysis (28% in the 2010-14 period, compared with 32% in the 2006-10 period).

The differences registered between the obtained results in the two periods seem to be particularly relevant in some economic activity sectors, especially among the enterprises with the highest indebtedness level and low profitability situation three years after. The "Accommodation and food service activities" sector (Section I of NACE Rev. 2) stands out with a 11 p.p. difference between the two periods (while 49% of the high indebted SMEs registered a profitability score of 1 during 2006-10, this percentage raised to 60% in 2010-14) (Chart 10).

Chart 10: Accommodation and food service activities' SMEs with high financial leverage scores in T and different profitability scores in T+3, at different time periods



5. Conclusions

Given the relevance of SMEs within the NFC sector in Portugal, the current analysis intended to explore the importance of financial debt on these companies' performance. The analysis aimed at revealing some stylised facts on the link between SMEs' indebtedness and profitability levels: are Portuguese SMEs indebted (carrying non-profitable debt) as opposed to being leveraged (using debt as a mean to increase activity and reach higher profitability levels)?

Stylised facts show that the latter is, in general, not the case. The most leveraged SMEs seem to be, in broad terms, more prone to ceasing their activity in the short/medium term. This fact is consistently registered across different economic activity sectors, regardless of the time period considered to conduct such an analysis.

SMEs with the highest indebtedness levels do not seem to be associated with higher profitability levels during the same time period. Instead, they seem to have the lowest profitability levels, as opposed to less leveraged SMEs which tend to reach higher profitability levels.

From the perspective of the financial system, these results are of the utmost importance. They seem to indicate that, for each company, there is an ideal level of indebtedness which can be perceived as a good indicator of the company's capability to repay its debt and to obtain new financing. Debt above such levels may often be binding the company's future profitability in some way.

Given that unsustainable debt from the non-financial corporations' perspective often leads to default, the ability of financial institutions to identify and deal with such risk is of paramount importance. This is particularly true in the context of recent developments regarding credit constraints and new capital requirements.

A trustworthy assessment of each financial institutions credit at risk, based on a correct evaluation of its borrower's financial soundness is, therefore, particularly relevant. This evaluation, however, should be carried out regarding both the new credit granted by financial institutions to new and current customers, but also previously granted credit perceived as performing, regardless of the real performance of its counterparts. Hence, credit institution's balance sheets should be evaluated considering the possibility to write-off or set up provisions on credit that, although still performing, might be at risk. Such situations should be assessed based, not only on the counterparty's ability to repay its debt, but also on its ability to do so while reaching higher performance levels, given the evidence provided that SMEs often seem to carry non-profitable debt and, hence, non-repayable financing.

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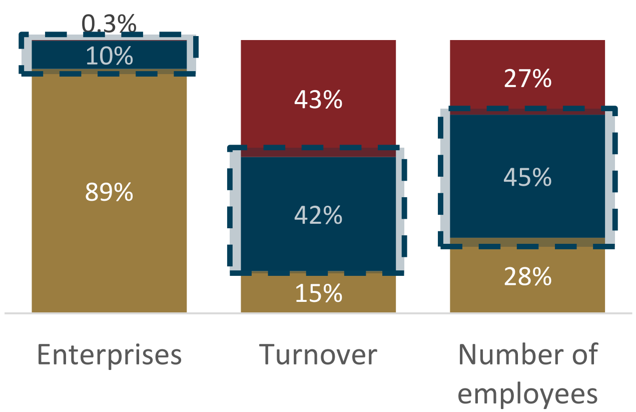
Motivation

In 2014, SMEs accounted for 42% of non-financial corporations’ (NFCs) turnover and 45% of their employees

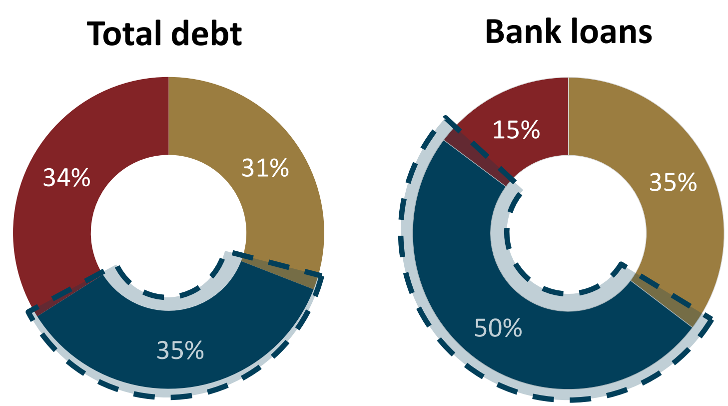
…as well as for 50% of the loans granted by Portuguese credit institutions to NFCs

Structure (by size class)



40 thousand	128,000 M€	1.1M employees

Liabilities (by size class)



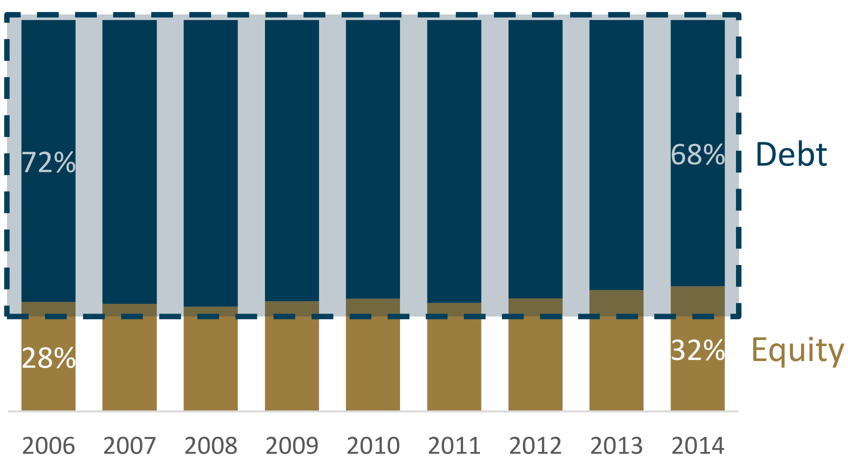
Microenterprises SMEs Large enterprises

The indebtedness of Portuguese SMEs and the impact of leverage on their performance

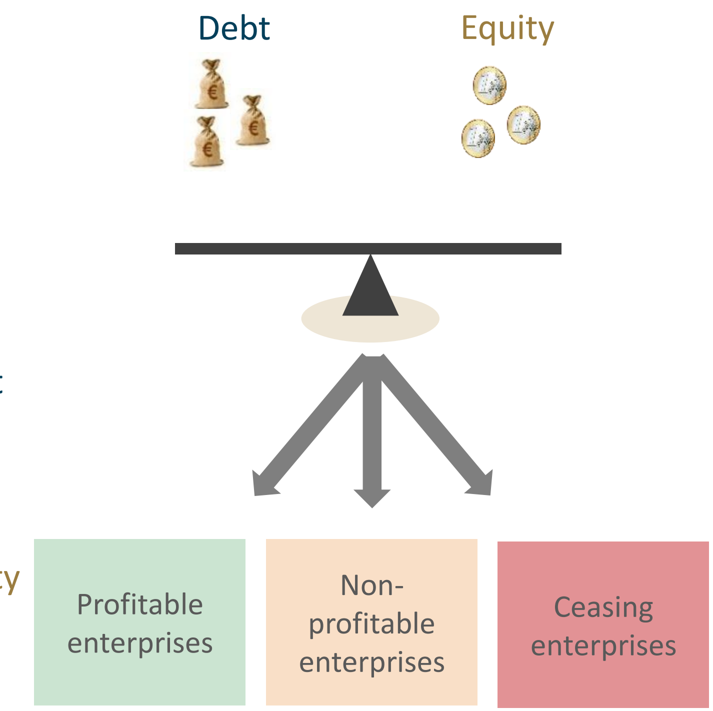
Motivation

SMEs' assets are, historically, mainly funded with debt...

Capital ratio



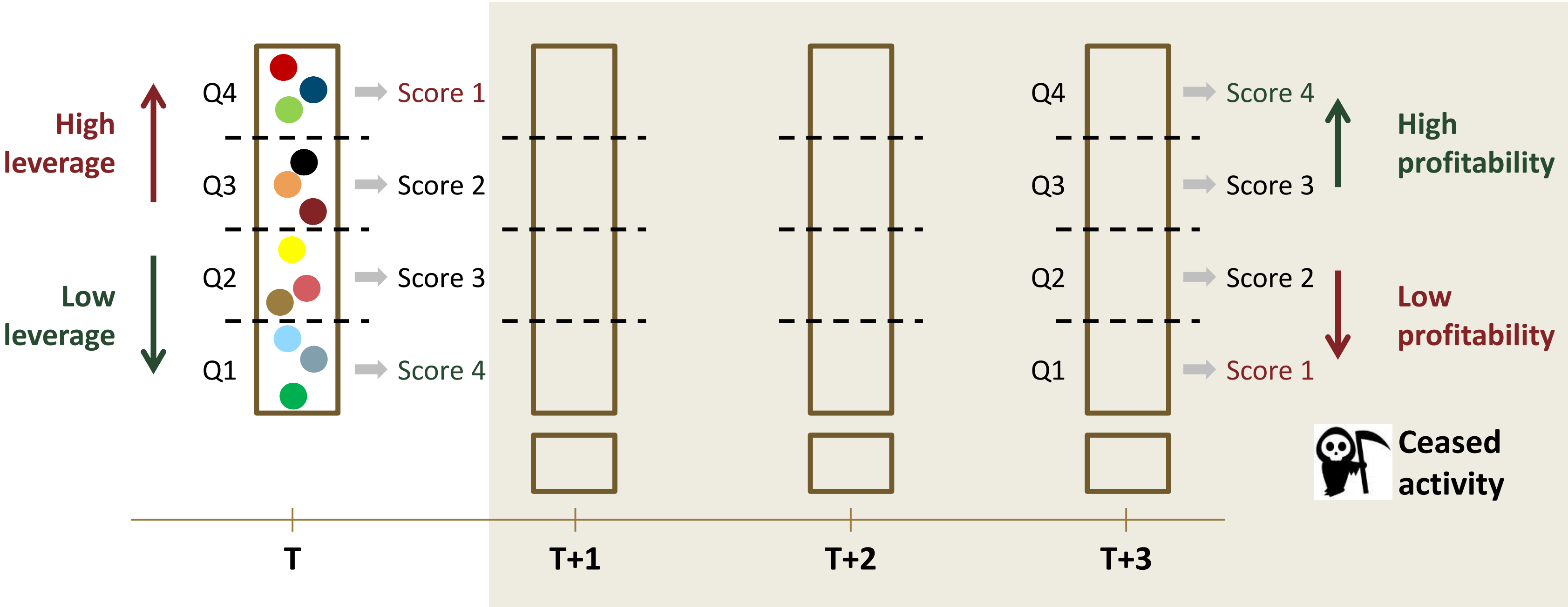
But is this debt used to leverage companies' profitability?



Leveraged enterprises, where debt leads to profit

Indebted enterprises, carrying non-profitable debt

Regarding the indebtedness of SMEs in period T, a quartile-based analysis allowed us to measure each company's profitability level in the three subsequent years

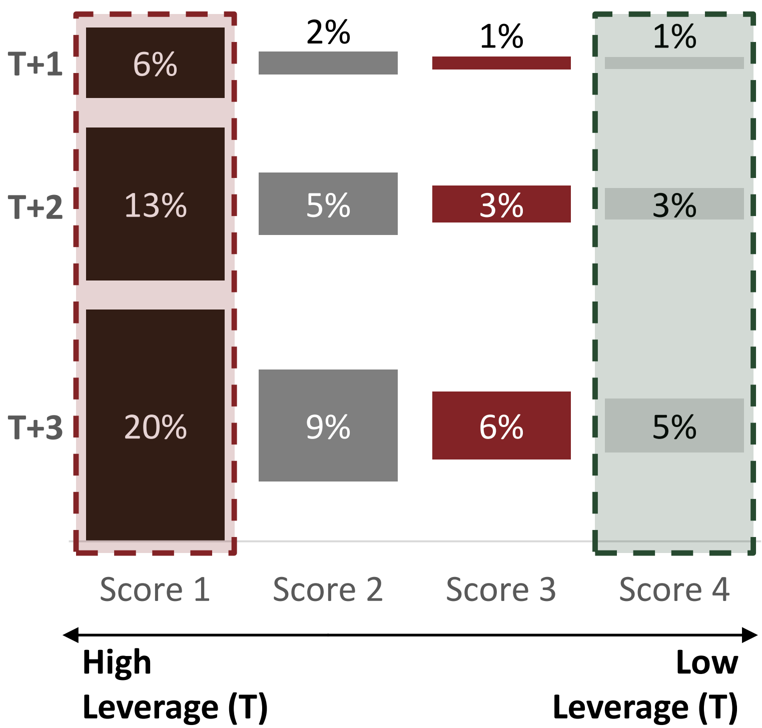


Leverage proxy: capital ratio = equity / assets

Profitability proxy: return on assets = net profit / assets

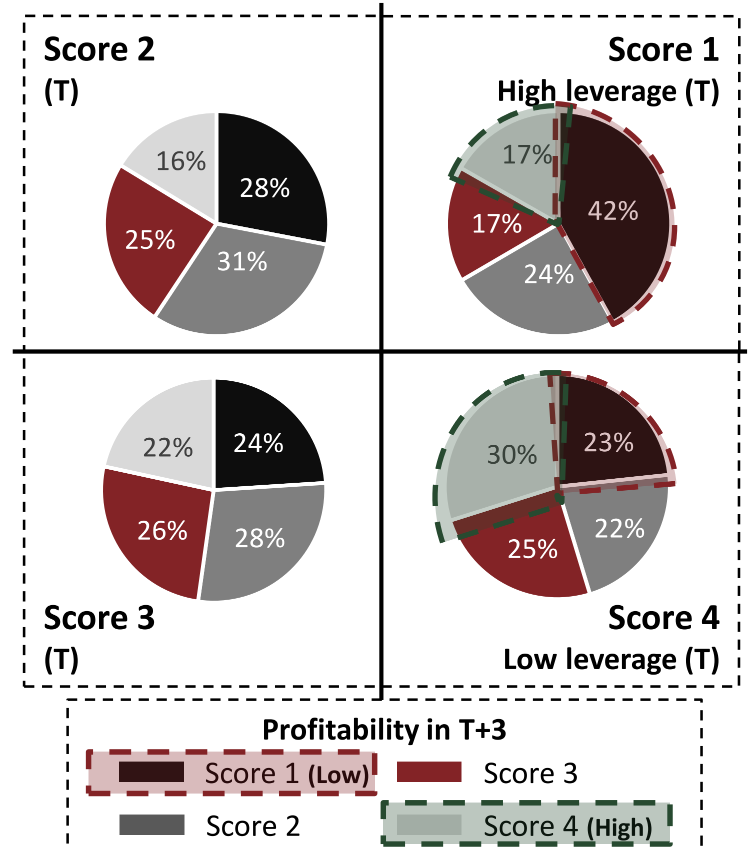
In 2006-14, 20% of the most leveraged SMEs ceased their activity within 3 years (5% in the least leveraged companies)

Enterprises that ceased activity



The share of companies with low profitability levels in T+3 increases with the indebtedness level in T

Enterprises that did not cease activity



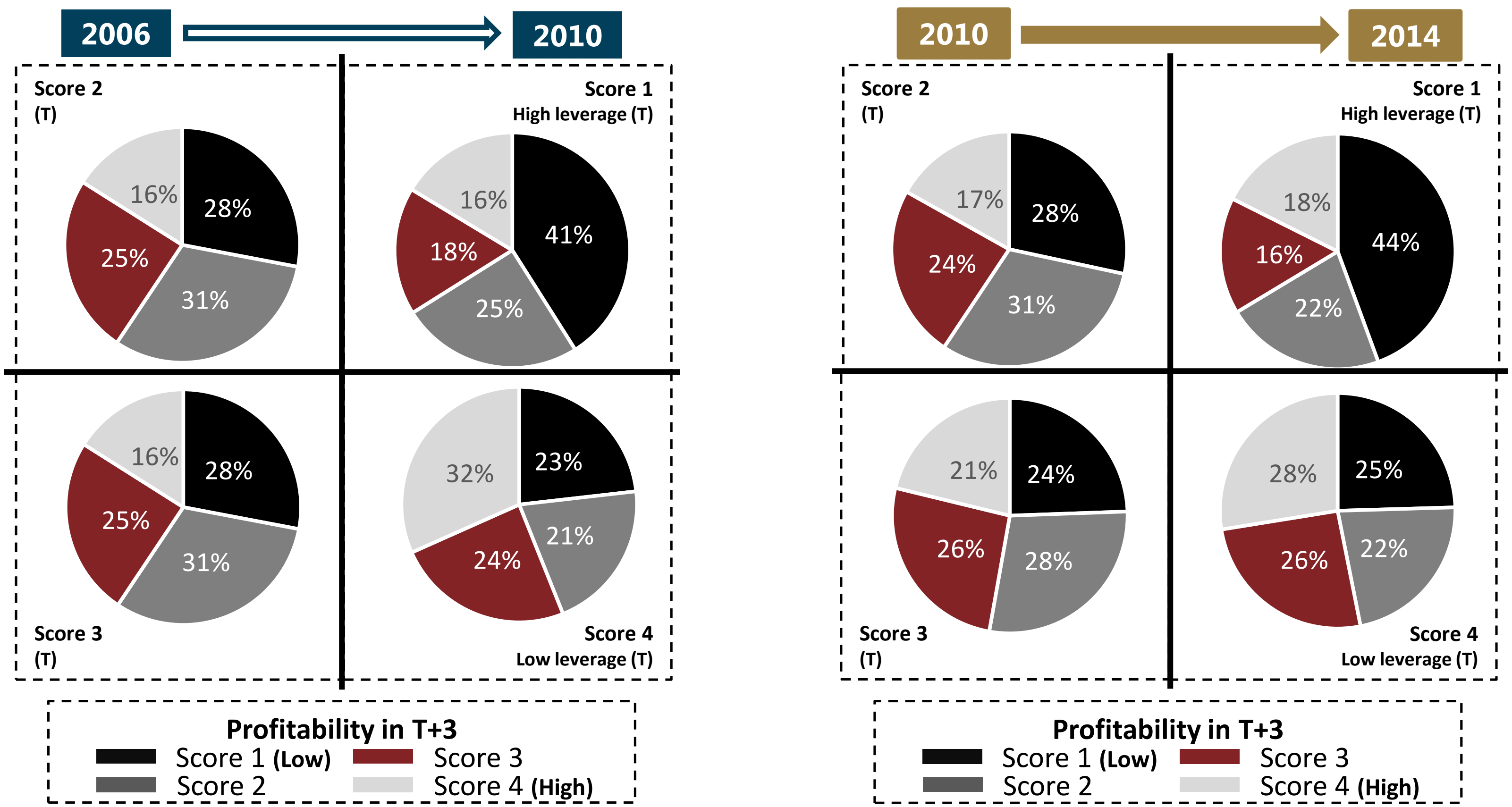
"Accommodation and food service activities" is more relevant in the high-low leverage-to-profitability situation. "Construction" seems to be less relevant among SMEs in the low-high leverage-to profitability situation.

Enterprises that did not cease activity

NACE Rev. 2	Total SMEs (1)	High leverage and low profitability (2)	=(2)-(1)	Low leverage and high profitability (3)	=(3)-(1)
C – Manufacturing	28.3%	23.7%	-4.6%	26.9%	-1.3%
F – Construction	15.6%	13.3%	-2.4%	9.1%	-6.5%
G – Wholes. and retail trade	23.0%	21.2%	-1.8%	24.0%	1.0%
H – Transportation	4.1%	3.1%	-1.0%	4.3%	0.3%
I – Accomod., food storage	8.0%	15.2%	7.2%	9.2%	1.2%
M – Prof., scient., tech. activ.	4.4%	3.2%	-1.2%	7.2%	2.7%
Q – Human health, soc. work	2.7%	2.3%	-0.4%	4.9%	2.2%

Observations seem to be more concentrated in the extreme situations in the 2010-14 period

Enterprises that did not cease activity



Conclusions

- The share of companies ceasing activity is larger amongst those with high leverage levels
- Data seems to show that profitability is inversely related to indebtedness (low leverage associated to high profitability and vice-versa)
- A significant share of Portuguese SMEs seems to be indebted (carrying non-profitable debt) rather than leveraged (debt leading to higher profitability levels) – fact that is consistently registered, regardless of the considered time period
- The share of SMEs with lower profitability levels among companies with the highest indebtedness levels is higher in the most recent period under analysis
- The results seem to indicate that there is an ideal level of indebtedness which can be perceived as a good indicator of the company's capability to repay its debt
- Financial institutions' ability to identify unsustainable debt risk is of the utmost importance and should be carried out regarding both the new credit granted to new and current customers, but also previously granted credit perceived as performing
- Credit institution's balance sheets should be evaluated considering the possibility to write-off or set up provisions on credit that, although still performing, might be at risk

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