



Bank for the Accounts of Companies Harmonized

OUTLOOK
2

Financial structure and profitability of European companies

(October 2014)



Abstract

*This **Outlook #2**¹, entitled “Financial structure and profitability of European companies” uses BACH data to compare recent trends in firm performance in the following 9 European economies: Austria, Belgium, Czech Republic, France, Germany, Italy, Poland, Portugal and Spain. In particular, indicators on the financial structure of firms, their debt and financial services as well as their level of profitability are presented. The analysis includes an assessment of the recent situation in the countries under study and analyses the effects of the economic and financial crisis as well as the evolution between 2010 and 2012. During the analysis, particular attention is devoted to the role of firm size and industry affiliation, as well as measures of dispersion (median and quartiles).*

Disclaimer

This analysis is based exclusively on BACH data. Therefore, the evidence provided reflects the different national samples used to calculate BACH data and might differ from other sources. More information regarding methodological limitations and national sample specificities can be found in the Annex (Table A) and on the BACH website. The opinions of the authors of this document do not necessarily reflect those of the national central banks to which they belong or those of the ECCBSO

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FOREWORD

The European Committee of Central Balance-Sheet Data Offices (ECCBSO) is an informal body whose members consist of experts either from the Central Balance-Sheet Data Offices belonging to or associated with the National Central Banks of the European Community, or from National Statistical Institutes.

The Bank for the Accounts of Companies Harmonized Working Group (BACH WG) is one of ECCBSO's Working Groups. It was created within the foundation of developing and improving a European statistical database: the BACH database.

The [BACH database](#) provides comparable aggregated data (both economic and financial) based on the annual accounts of non-financial incorporated companies from European countries. Freely available, BACH includes data from 9 countries: Austria, Belgium, Czech Republic, France, Germany, Italy, Poland, Portugal and Spain.

We sincerely hope you can benefit from this analysis and we invite you to visit the BACH database and explore it as much as possible by making your own analysis. Do not hesitate to share your results with the BACH WG.

Executive summary

The present outlook compares the financial structure and profit margins of firms in several European countries. The study pays particular attention to the role of firm size and industry affiliation and analyses trends over the recent years. Results suggest that in 2012 the leverage ratio and the weight of short term debt vary substantially across countries, whereas differences are less pronounced when different firm size classes are considered. On the contrary, in most countries the average liquidity held by firms varies with firm size. Average interest charges are highest in the countries such as Portugal and the Czech Republic where firms are more leveraged, even though the ratio varies by sector. Regarding profitability, the average German and French firms are the most profitable. The economic and financial crisis led to a strong decline in profitability, whereas the pattern for the years 2009-2012 is mixed. Despite the fact that from 2010 onwards firm profitability has recovered in most countries, the weighted values of this indicator did not reach the 2007 levels.

INTRODUCTION

The *Bank for the Accounts of Companies Harmonized*² (BACH) is a database that provides comparable aggregated data (both economic and financial) based on the annual accounts of non-financial corporations of the following *European* countries: *Austria, Belgium, Czech Republic, France, Germany, Italy, Poland, Portugal and Spain*³.

For the sake (i) of consistency with national accounting standards that have been partially evolving during the last years towards the International Financial Reporting Standards (IFRS) and also (ii) of improving comparability among countries, a new BACH database was released in 2013. Substantial data harmonization efforts have been realized in order to increase the reliability of cross-country comparisons. However, differences in accounting standards and national sample characteristics persist which might impact on the results provided in this outlook. Information on the accounting deviations and the sample characteristics in each country are available on the BACH website.

Table 1 shows the national coverage rates of the samples from which BACH data is constructed. Data for Belgium and Portugal come from the entire national population of non-financial corporations, while the situation is diverse for the other countries. On the other hand, national samples are fairly representative when the weights of the different business sectors are considered (Table 2).

TABLE 1 | COVERAGE RATES (2012)

	Number of enterprises	Corporations (Corp)/ Turnover (Turn)/ Employees (Emp)
AT - Austria	38%	Not available
BE - Belgium	99%	99% (Emp)
CZ – Czech Republic	8%	Not available
FR – France	28%	79% (Emp)
DE – Germany	9% (2011)	68% (Turn, 2011)
IT – Italy	7%	76% (Turn)
PL – Poland	3%	56% (Emp) ⁴
PT – Portugal	98%	98% (Turn)
ES – Spain	31%	55% (Emp)

² All the information presented in this *Outlook* can be downloaded for free from the [BACH website](#).

³ In a near future, five more countries will be included in the BACH database: Denmark, Luxembourg, Netherlands, Romania and Slovakia.

⁴ Data is exhaustive in the case of companies with more than 9 employees that deliver full balance sheet statement.

TABLE 2 | STRUCTURES BY BUSINESS SECTOR (absolute difference between population and sample, 2012)

	AT (Corp)	FR (Emp)	DE (Turn, 2011)	IT (Turn)	ES (Emp)
A – Agriculture, forestry and fishing	0.0 p.p.	0.0 p.p.	0.3 p.p.	0.1 p.p.	1.5 p.p.
B – Mining and quarrying	0.0 p.p.	0.0 p.p.	0.1 p.p.	0.7 p.p.	0.0 p.p.
C – Manufacturing	5.0 p.p.	2.2 p.p.	3.4 p.p.	3.1 p.p.	0.7 p.p.
D – Electricity, gas, steam and air cond.	0.0 p.p.	0.3 p.p.	6.3 p.p.	1.4 p.p.	0.2 p.p.
E – Water supply, sewerage, waste	1.0 p.p.	0.1 p.p.	0.1 p.p.	0.0 p.p.	0.6 p.p.
F – Construction	3.0 p.p.	0.2 p.p.	1.4 p.p.	2.4 p.p.	2.3 p.p.
G – Wholesale and retail trade	2.0 p.p.	1.1 p.p.	3.9 p.p.	0.6 p.p.	1.3 p.p.
H – Transportation and storage	1.0 p.p.	1.0 p.p.	0.3 p.p.	0.2 p.p.	1.5 p.p.
I – Accommodation and food service act.	3.0 p.p.	0.6 p.p.	0.4 p.p.	0.7 p.p.	1.2 p.p.
J – Information and communication	1.0 p.p.	0.6 p.p.	1.3 p.p.	0.2 p.p.	0.6 p.p.
L – Real estate activities	1.0 p.p.	0.7 p.p.	0.1 p.p.	0.1 p.p.	0.0 p.p.
M – Professional, scientific and technical	3.0 p.p.	0.8 p.p.	1.6 p.p.	NA	0.8 p.p.
N – Administrative and support services	0.0 p.p.	0.7 p.p.	0.8 p.p.	0.3 p.p.	0.4 p.p.
P – Education	1.0 p.p.	0.4 p.p.	0.1 p.p.	NA	1.3 p.p.
Q – Human health and social work act.	0.0 p.p.	1.7 p.p.	0.8 p.p.	NA	0.8 p.p.
R – Arts, entertainment and recreation	1.0 p.p.	0.1 p.p.	0.2 p.p.	0.2 p.p.	0.7 p.p.
S – Other service activities	0.0 p.p.	0.6 p.p.	0.2 p.p.	0.1 p.p.	0.1 p.p.

Less than 1 p.p.

Between 1 p.p. and 3 p.p.

More than 3 p.p.

Note: Portugal and Belgium are not represented because they cover the entire population. Differences between population and the sample are not available for Poland and the Czech Republic.

Legend: Corp – number of corporations, Turn – turnover, Emp – employees, NA – not available.

The present *Outlook* assesses the **Financial structure and profitability of European companies** in the following 9 countries: Austria, Belgium, Czech Republic, France, Germany, Italy, Poland, Portugal and

Spain. Specifically, the *Outlook* compares the financial structure, the financial and debt service as well as the profitability of firms across different European countries and analyses recent trends.

The first part of the *Outlook* describes selected features of the financial structure of European non-financial corporations. The second part provides insights about financial pressure, as the degree of financial distress is related to the chosen financial instruments. The third part of the *Outlook* evaluates the level of profitability of firms in different European countries. During the analysis, the role of firm size and industry affiliation is taken into account.

During the analysis, the term *Total companies* refer to the aggregate 'Zc' in the BACH database. In this sense, *Total companies* comprise all business sectors with exception to *K642 – Activities of holding companies* and *M701 – Activities of head offices*.

The BACH database covers only non-financial corporations; sole proprietorships are not taken into account. Whenever several years are considered, data come from variable sample, i.e. the sample changes over the years.

Regarding firm size, the BACH database provides information for different firm size bins based on turnover. Accordingly, small firms ('small SMEs' hereafter) have annual turnover of less than 10 million Euro whereas medium firms sell between 10 and less than 50 million Euro ('medium SMEs', hereafter). Firms whose turnover exceeds 50 million Euro are classified as 'large firms'.

At the end of this *Outlook* national specificities by country are available. This information is meant to guide the reader to better understand the results of the *Outlook*.

FINANCIAL STRUCTURE

“The surge in leverage sowed the seeds of the financial crisis and has had a significant effect on the nature, severity and persistence of the downturn at both the country and sectoral levels. While debt can, in general, improve economic welfare and spur economic growth if it remains at moderate levels, when it reaches excessive levels it creates the conditions for financial instability and hampers investment and economic growth” - European Central Bank

The financial structure of firms summarizes how they finance their assets with their resources. Firms' assets can differ along diverse lines as they are related to their operating activity (inventories or fixed assets), to their liquidity needs (cash and deposits), or represent financial assets connected to their transactions (trade receivables) or owned as a form of investment (shares). In general, firms finance only a part of their assets with equity (capital and retained earnings), while other resources such as financial debt (bank loans, other loans and bonds) and other liabilities (for example trade payables) represent an important part of their liabilities.

The combination between equity and debt as the two sources which finance firms' assets represents the financial structure. The strength of firms' balance-sheets is usually assessed by looking at leverage ratios, like the weight of equity over assets: as the first is a measure of the investment of the shareholders, it represents a long-term resource of the firms and a buffer to protect creditors, so that this ratio is an indicator of the strength or vulnerability of firms. Apart from summarizing the firms' situation, financial structure also affects their economic results: leverage could have a positive impact when the rate of return from operating activity is higher than the cost of debt, but this effect could reverse during an economic downturn as operating profitability decreases and the cost of debt goes up due to an increased riskiness of firms.

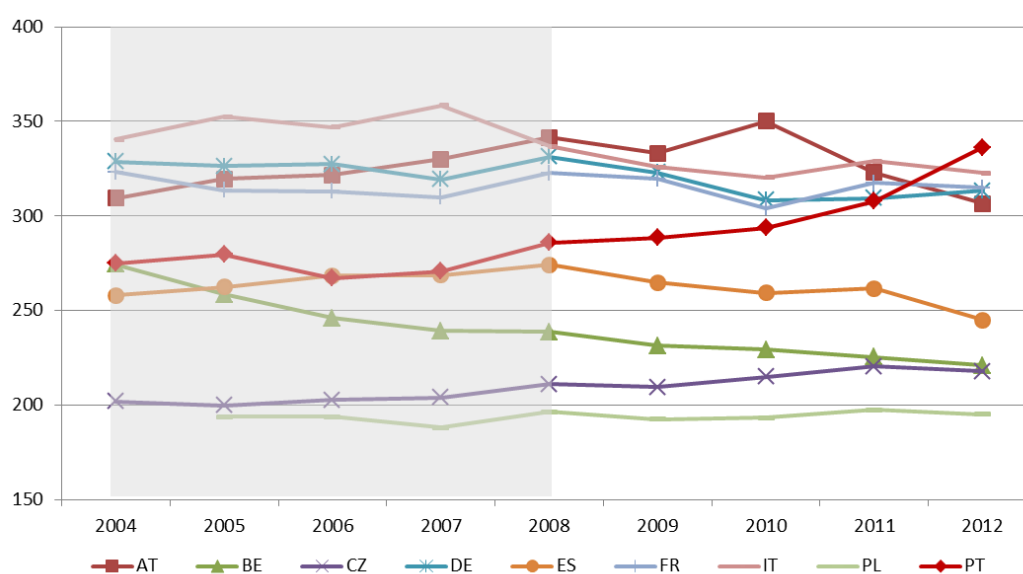
Another relevant dimension of firms' balance-sheet concerns the weight of short-term debt. In fact, both the availability and the cost of external short-term finance are highly sensitive to the overall economic situation. Therefore, higher dependence on short-term debt represents a source of fragility for firms. A possible buffer to this weakness is represented by firms' liquidity, which shields them from a more difficult access and/or higher cost of external finance.

Based on BACH data, this section presents some evidence of these three aspects (leverage, weight of short-term debt, liquidity) for European firms.

CROSS COUNTRY LEVERAGE

Chart 1 presents evidence of the evolution of capital ratios between 2004 and 2012 in the 9 countries under study. The measure of leverage considered is the **assets to equity ratio** and refers to the weighted average of total companies. The graph shows the leveraging pattern which characterized the years before the economic and financial crisis (2004-2008); Belgium represents a notable exception,⁵ as before 2008 leverage diminished, while in Austria and Spain the increase in leverage was more pronounced (32 percentage points (p.p.) and 16 p.p. respectively). In nearly all the countries the financial crisis and the following recessions or a slower economic growth caused a deleveraging process, which appear stronger in Austria and Spain; the only exceptions are Portugal and, at a smaller extent, Czech Republic (where leverage went up by 50 p.p. and 7 p.p., respectively).

CHART 1 | R11. ASSETS TO EQUITY RATIO – Total Companies
Weighted averages (2012, in %)



Note: Values are not available for Poland in 2004.

Chart 1 also shows relevant differences among countries, as leverage is above 300% in Portugal, Italy, France, Germany, and Austria while it is below or around 200% in Poland, Czech Republic and Belgium. With the relevant exception of Austria and Portugal, the ranking among countries in 2012 is similar to those in 2008.

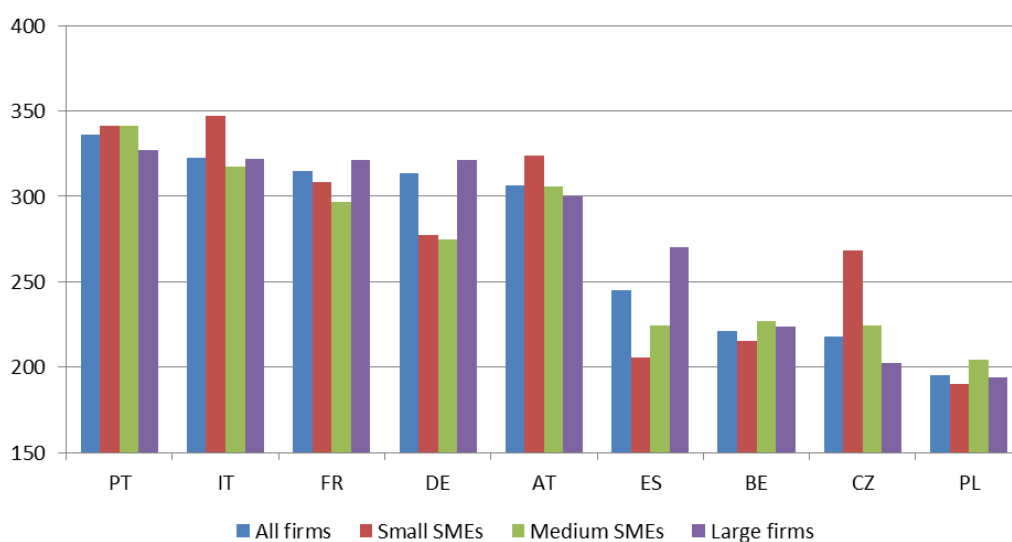
⁵ This continuous decrease in Belgium can partly be explained by the introduction, in 2005, of an innovative tax incentive called “notional interest deduction”, enabling all companies subject to Belgian corporate tax to deduct from their taxable income a fictitious interest calculated on the basis of their shareholder’s equity (net assets). Due to this measure, equity of the companies increased significantly after 2005.

This finding is in line with the fact that most of the differences between countries are structural and are generally related to differences in taxation (a higher corporate tax rate creates an incentive towards higher leverage as a part of interest expenses are at least partially deductible), development of equity markets (usually negatively correlated with leverage, as firms find easier access to new capital) and the protection of creditors (positively related with leverage as it provides an incentive to use debt as a source of finance).

The importance of the role played by factors at the country level is confirmed by the fact that the ranking of the countries is similar among different firm size classes. Chart 2 refers to 2012 and includes leverage for the total sample and the three enterprise size classes. The ranking of the countries derived from aggregate values is similar when each enterprise size class is considered.

In nearly all countries, leverage is higher for smaller firms. Spain is a relevant exception, as leverage increases with size classes. In countries such as Germany and France, large firms have a higher leverage with respect to smaller firms.

CHART 2 | R11. ASSETS TO EQUITY RATIO – By enterprise size
Weighted averages (2012, in %)

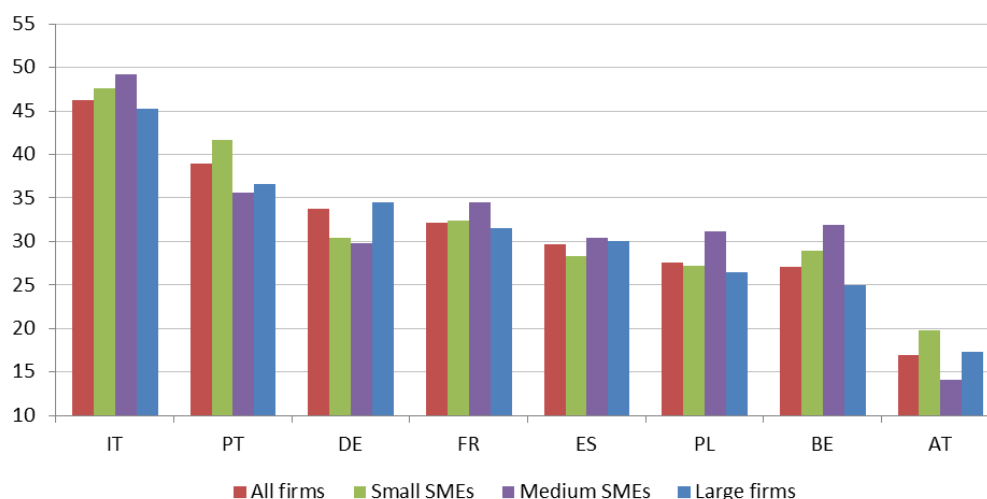


WEIGHT OF SHORT-TERM DEBT

Two other relevant features of firms' financial structure are related to the weight of short and long term liabilities and assets, which in accounting data refer to residual maturity. Chart 3 shows the ratio of **current debt over total assets** in 2012 for the countries under analysis (current debt includes financial debt, trade payables and other current liabilities). In general the ratio is around 30 %. However, for Italy and Portugal the ratios are higher (46% and 39%, respectively). The lower ratio for Austria (17%) is due to limited availability of complete data.⁶ Also in this case the ranking of the countries under study is similar along the different enterprise size classes.

A higher value of this ratio could be related to a larger reliance of firms on trade payables and short-term lines of credit; also this higher proportion of short-term debt could contribute to a higher leverage, as the same four countries (Portugal, Italy, France and Germany) have the highest values in these two indicators. During the last few years the greater difficulties to obtain credit from suppliers and (especially short-term) loans from financial institutions also could have exposed more levered firms with shorter debt duration (like in Italy and Portugal) to an increase in the cost of financing with respect to other countries.

CHART 3 | R16. CURRENT DEBT/TOTAL BALANCE SHEET - By enterprise size
Weighted averages (2012, in %)



Note: values not available for Czech Republic. The lower ratio for Austria is due to limited availability of complete data.

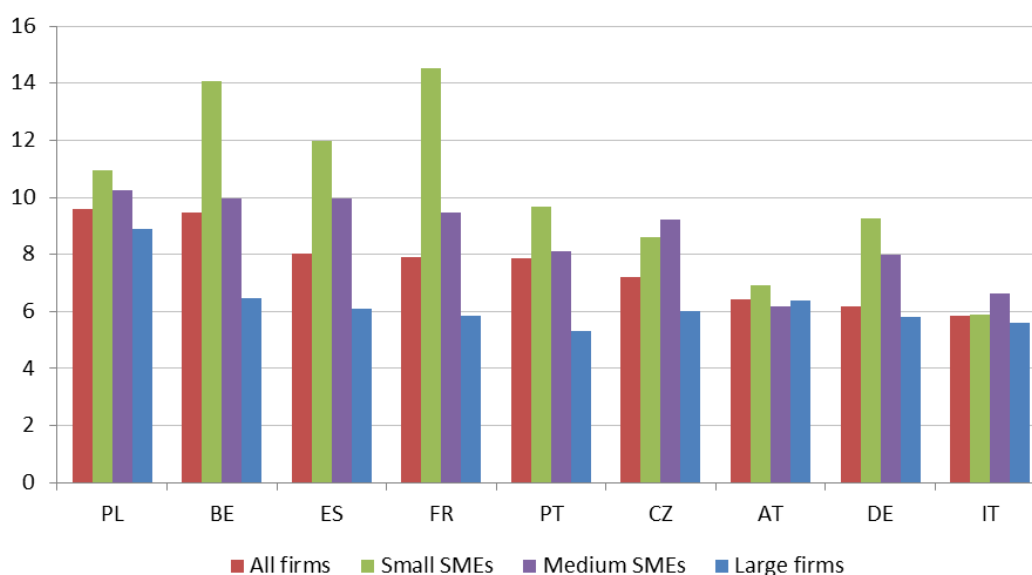
⁶ Detailed information is available on the excel file *DEVIATIONS* on the BACH Website.

LIQUIDITY

The asset composition of firms is another relevant feature of their financial structure. The amount of liquidity and other tradable financial assets represent a way to sustain ordinary activity and investment. During the crisis it also represented a possible alternative to the refinancing of short-term debt, thus reducing firms' liquidity risk.

Chart 4 shows the **ratio between liquid and tradable assets over total assets** for 2012, with a distinction also by enterprise class size. The ratio is lower in Italy and Germany (around 6%), while it is higher in Belgium and Poland (around 9.5%). The ranking is similar for large firms, which also have comparable ratios (values range from 5.3% in Portugal to 8.9% in Poland); also for medium SMEs the ranking of countries is similar, with the exception of Germany and Czech Republic. When small SMEs are considered, the differences between countries are larger and Belgian and French firms stand out. Interestingly, in most countries small enterprises have a higher ratio: a likely explanation is the fact that smaller firms tend to have a larger amount of precautionary liquidity, as usually they are not able to access to external finance with the same easiness of larger firms.

CHART 4 | R14. OTHER FINANCIAL ASSETS AND CASH AND BANK/TOTAL BALANCE SHEET
By enterprise size - weighted averages (2012, in %)



FINANCIAL AND DEBT SERVICE

Non-financial corporations' margins are not only a result of good operational performance. Taking advantage of the different financial instruments available might increase profitability. Among others, the indebtedness of one company can be crucial to boost installed capacity, to meet short-term commitments or to take advantage of fiscal opportunities. However, the decision of leverage of a company has to be strictly linked to the economic cost of the financial instruments available as well as on the debt level when compared to the operational margins.

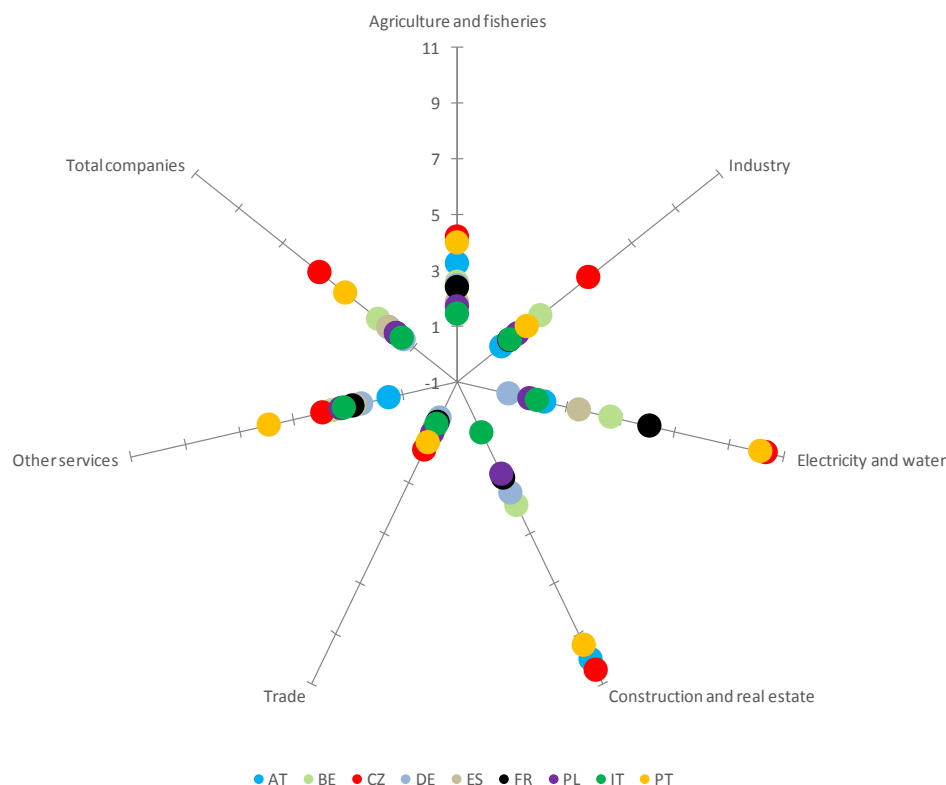
The previous part explored how European companies' assets were financed. In particular, evidence on the assets to equity ratio, which measures the importance of equity over total assets, was provided. The present chapter primarily focuses on the degree of financial pressure, expressed by financial and debt service ratios. In principle, financial distress may arise from two (possibly related) different situations; (i) a low capacity to generate income and/ or (ii) an increase in interests and similar charges.

Chart 5 plots information on **interest and similar charges over net turnover** in the 9 countries under study (mean values). The data refer to total companies. In other words, it assesses the percentage of the annual turnover that is allocated to pay debt interest and similar charges.

In 2012, the indicator reaches the highest values in Czech Republic and in Portugal (5.3% and 4.1%, respectively). It means that for each 100 Euros of turnover, the average Czech firm spends 5 Euros to pay interest and similar charges. On the other hand, companies in Germany and Italy had the lowest value of this particular ratio (1.4% and 1.5%, respectively).

There is also substantial heterogeneity across business sectors. In most countries, two business sectors - *Electricity and water* and *Construction and real estate* - have the highest weight of interest and similar charges in the net turnover. As before, it is in the Czech Republic and in Portugal where firms in the *Electricity and water* sector have the highest values. On the contrary, in all countries firms operating in the *Trade* sector have the lowest values of this ratio.

CHART 5 | R24. INTEREST AND SIMILAR CHARGES OVER NET TURNOVER – By business sector
Weighted averages (2012, in %)



Note: the business sector aggregations considered for this analysis are the following: (i) Agriculture and fisheries (NACE A), (ii) Industry (NACE B, C), (iii) Electricity and water (NACE D, E), (iv) Construction and real estate (NACE F, L), (v) Trade (NACE G) and (vi) Other services (NACE H, I, J, Mc, N, P, Q, R, S, T).

Methodology: the business sector aggregation in this chart is not directly available in the BACH database. This business sector aggregation was obtained via turnover absolute values.

Another way of evaluating the importance of interest and similar charges in the operational activity of non-financial corporations is to consider the ratio **interest and similar charges over gross operating profit**. This is a more restrictive indicator since it considers the weight of interest and similar charges in the total margin of the companies⁷. Median values are used rather than weighted averages in order to minimize the possible influence of outliers in the samples.

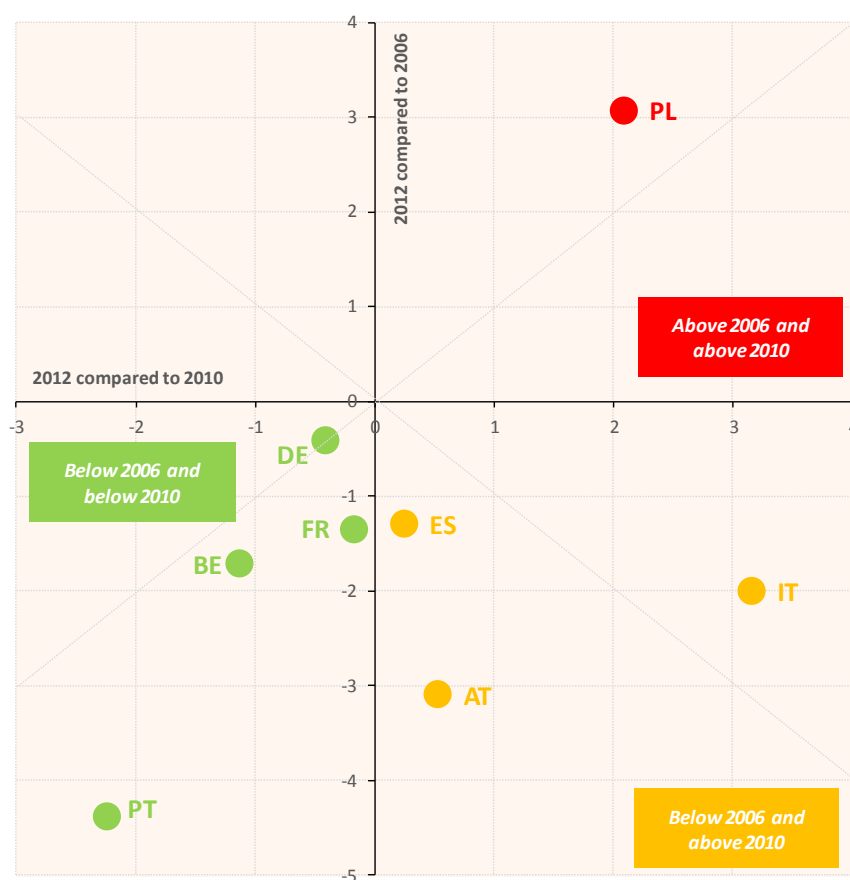
⁷ Gross operating profits result from the sum of the turnover, variation in stocks of finished goods and work in progress and capitalized production less operating subsidies and supplementary operating income, cost of goods sold, materials and consumables, external supplies and services, staff costs and operating taxes and other operating charges.

In 2012, Italian and French companies have the highest value of this indicator (15.3% and 11.4%, respectively). This means that the median company in Italy spends 15 Euros in interest and similar charges of each 100 Euros of gross operating profit. It is equivalent to say that, in 2012, half of the Italian non-financial corporations spent more than 15 Euros of each 100 Euros of gross operating profit generated. This result might be driven by the high leverage ratios of French and Italian enterprises (see Chart 2).

On the other hand, Portuguese and Spanish median companies have the lowest value of this indicator (3.1% and 8.0%, respectively). Note that in weighted mean terms Portugal has one of the highest values in the interest and similar charges over gross operating profit as expected from the assets to equity ratio presented in the previous section.

Chart 6 compares the ratio interest and similar charges over gross operating profit in 2012 to both 2006 and 2010 levels.

CHART 6 | R25. INTEREST AND SIMILAR CHARGES OVER GROSS OPERATING PROFIT – Total Companies,
Median values, (2012, in percentage points)



Note: values not available for the Czech Republic.

Financial structure and profitability of European companies

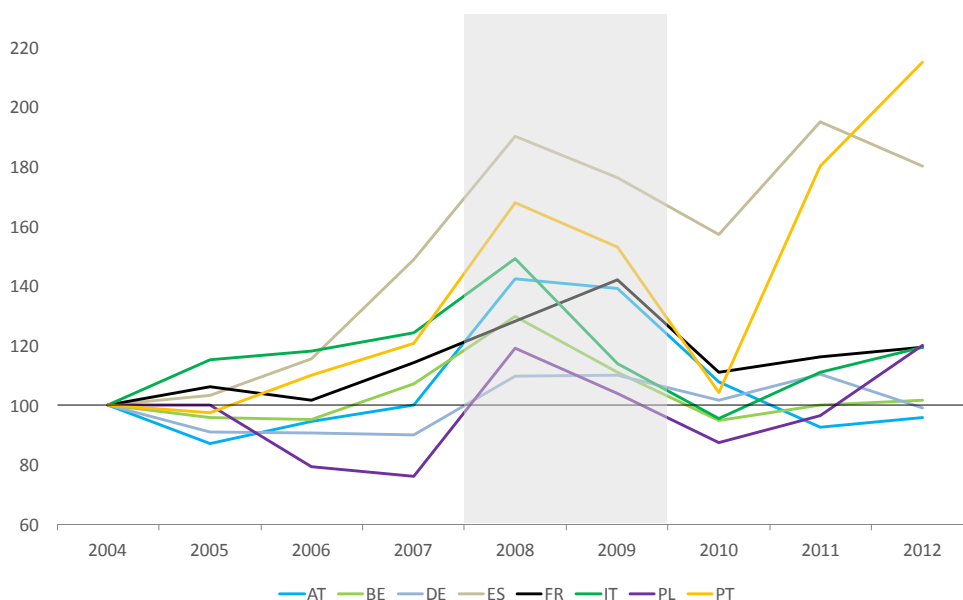
Only in Poland the median company has in 2012 interest and similar charges over gross operating profit higher than both 2006 and 2010. In this country there was a huge increase of interests on financial debts in 2012 in comparison to 2006 (by 100.7%) and in comparison to 2010 (by 37.9%). In 2012, financial expenses other than interests rose compared to 2006 level by 114.7% and by 42.9% compared to 2010.

By contrast, four European countries (Germany, France, Belgium and Portugal) have in 2012 a lower ratio when compared with both 2006 and 2010 (lower left quadrant of Chart 6). In these four countries the 2012 value is closer to the 2010 level than to the 2006 level.

Median firms in the other three countries - Austria, Italy, and Spain - have a lower value of interest and similar charges on gross operating profit in 2012 compared to the 2006 levels, but the value is greater than the one achieved immediately after 2010.

Another way of evaluating the financial pressure of non-financial corporations is to use the weight of **interest over financial debt on EBITDA** (Earnings before interest, taxes, depreciation and amortization) (Chart 7, weighted mean values).

**CHART 7 | 1/R22. INTEREST ON FINANCIAL DEBT OVER EBITDA – Total Companies,
Weighted values (2004 = 100)**



Note: values not available for the Czech Republic. For Poland, for the year of 2004, since data is not available, it was assumed the value of 2005.

In 2012, firms in Portugal and Spain face the highest financial pressure (33% and 19%, respectively). In the particular case of Portugal, one third of the EBITDA generated in 2012 was used to pay financial

debt. On the contrary, Polish and Austrian companies have the lowest values of this ratio (15% and 16%, respectively). The results for the Portuguese companies are in line with the high leverage ratio in these countries (see Chart 1).

In the case of Portugal, in 2012, the increase in terms of financial pressure was due to the decrease of EBITDA, in particular for small firms.

Between 2004 and 2012, with the exception for Germany and Austria, firms in all countries faced an increase in the weight of financial debt on EBITDA. It was in Portugal and Spain that non-financial corporations have experienced the highest relative increase of financial pressure.

It is interesting to note that all countries have diminished the level of interests over financial debt on EBITDA between 2008 and 2010.

PROFITABILITY

This section analyses the profitability of firms across European countries. The extent to which firms generate profits is one of the most important indicators of corporate performance as it measures their ability to compete on both domestic and international markets. In other words, the profitability of the business sector is a key indicator of the economy's overall competitiveness. At the same time, profitable firms are better able to realize investment, to create employment and therefore to boost overall economic growth. Moreover, higher profitability allows firms to better cope with temporary downturns in economic activity.

Firm profitability is analyzed from different angles. First, a static exercise describes the pattern of profitability of firms in different European countries in 2012. The analysis makes use of the richness of the data provided in BACH presenting information on average profitability as well as on the first and third quartile of the underlying distribution. Next, the pattern of firm profits for forms of different size classes – small SMEs, medium SMEs and large firms – is presented. Overall, greater profitability of firms suggests that the economy as a whole is better able to boost employment and economic growth.

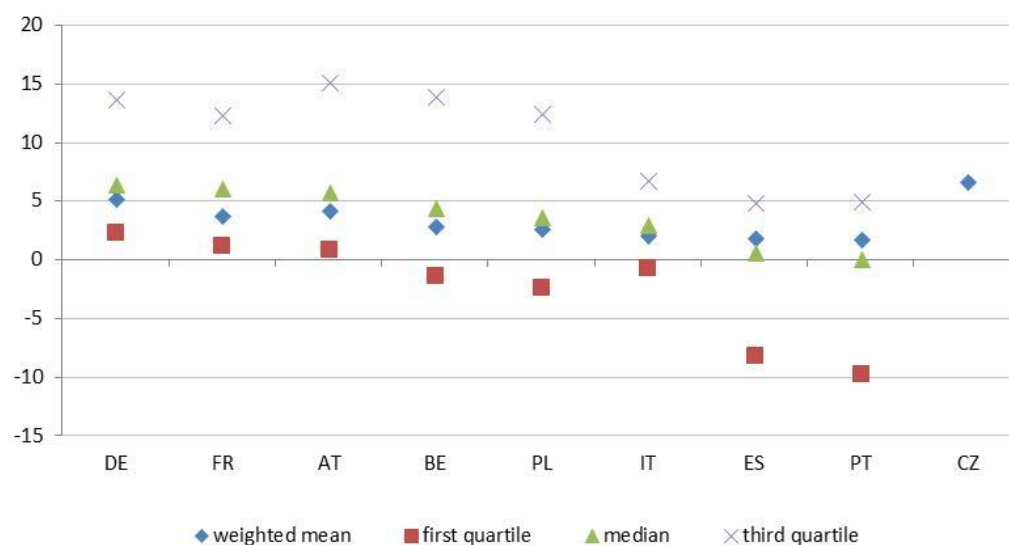
In a second step, cross-country dynamics in firm profitability over the period 2004 – 2012 is provided. This exercise emphasizes the impact of the economic and financial crisis in 2008/2009 and shows the different recovery pattern across the countries under study. Again, the evolution in firm profitability is presented for SMEs and large firms separately.

CROSS-COUNTRY PROFIT MARGINS IN 2012

Chart 8 shows BACH data on firm profits, measured by **net operating profits over total assets** for the selected sample of countries. Data refers to the year 2012 and contains several points of the distribution of profitability that allow a detailed assessment of the pattern of firm profits and the comparison across countries. Specifically, the figure depicts the weighted mean, the median (Q2) as well as the first and third quartile of the profitability distribution (Q1 and Q3, respectively). In order to provide evidence on the overall situation in each economy, the information refers to all companies and all industries.

The chart suggests that there is substantial cross country heterogeneity in firm profitability in 2012. German and French firms are the most profitable with a median profit ratio of 6.4% and 6.0%, respectively. On the other hand, firms in Italy, Spain and Portugal are among the least profitable: the profit level of the median firm reaches 2.9% in Italy and 0.6% in Spain whereas in Portugal it is 0%. This country pattern reflects the general economic situation in the different economies. Firms in the Southern European countries that are heavily hit by the Euro crisis have the lowest profit levels.

CHART 8 | R39. NET OPERATING PROFITS OVER TOTAL ASSETS – Total Companies (2012, in %)



Note: Dispersion measures are not available for the Czech Republic.

At the same time, the figure evidences that in several countries the first quartile of the distribution of net operating profits over total assets is negative, in particular Belgium, Poland, Italy, Spain and Portugal.⁸ This implies that a substantial number of firms actually face negative operating income in 2012.

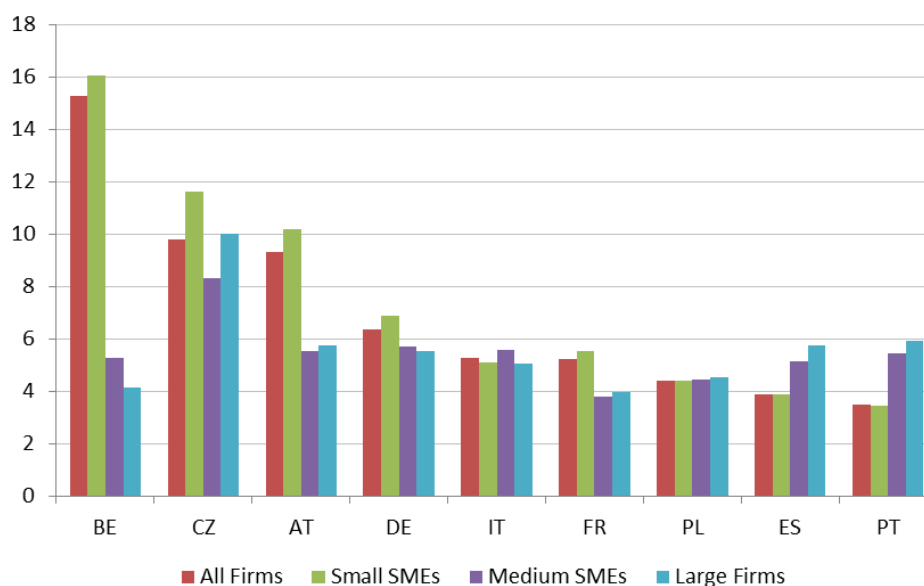
Analyzing several points of the profitability distribution informs about the within-country dispersion in firm profitability, as measured by the interquartile range (difference between the third and the first quartile). The highest dispersion is found among Belgium firms (15.2 p.p.), followed by their counterparts in Poland and Portugal (14.8 p.p. and 14.6 p.p., respectively). The lowest dispersion can be found in Italy (7.4 p.p.).

PROFITABILITY BY FIRM SIZE

Chart 9 shows firm profits, measured by the median of **EBITDA over net turnover** for different firm size classes in the 9 countries under study. For the sake of comparison, the overall level of profitability is also plotted ("All Firms"). As before, the graph contains data belonging to all industries in order to better capture the overall situation in the different countries. Countries are ranked according to the median of EBITDA over net turnover of total companies.

⁸ In the case of Belgium, the negative profits of the first quartile might be due to the fact that the Belgium sample is exhaustive, i.e. it contains a large number of small firms.

CHART 9 | R33. EBITDA OVER NET TURNOVER – By enterprise size, Median values (2012, in %)



Note: Since dispersion measures are not available the weighted mean was considered in the case of the Czech Republic.

BACH data suggests that there exists substantial heterogeneity in profitability across countries, especially when small firms are considered. In Belgium, small SMEs' EBITDA over net turnover reaches 16.0% whereas in Portugal, Poland, and Spain their profitability ratio is less than 5%.⁹ For medium SMEs and large firms, the cross-country differences are less pronounced. Profitability for medium SMEs ranges from 8.3% in the Czech Republic to 3.8% in France while for large firms it varies between 10% (Czech Republic) and 4% (France).

Analyzing the EBITDA over net turnover of different size classes within countries suggests that in Spain, Portugal, and Poland there is a positive relation between median firm profitability and firm size. In other words, large firms are among the most profitable, followed by Medium and small SMEs. In the other countries, it is small SMEs that feature the highest average profit ratio (except for Italy where medium SMEs are slightly more profitable than their smaller counterparts). In Germany and Belgium, the relationship between median EBITDA over net turnover and firm size is actually negative, with large firms being the least profitable ones. Finally, while within country variation in EBITDA over net turnover is high in Belgium and Austria, median profit levels are much more similar between different size classes in Poland, Italy, and Germany.

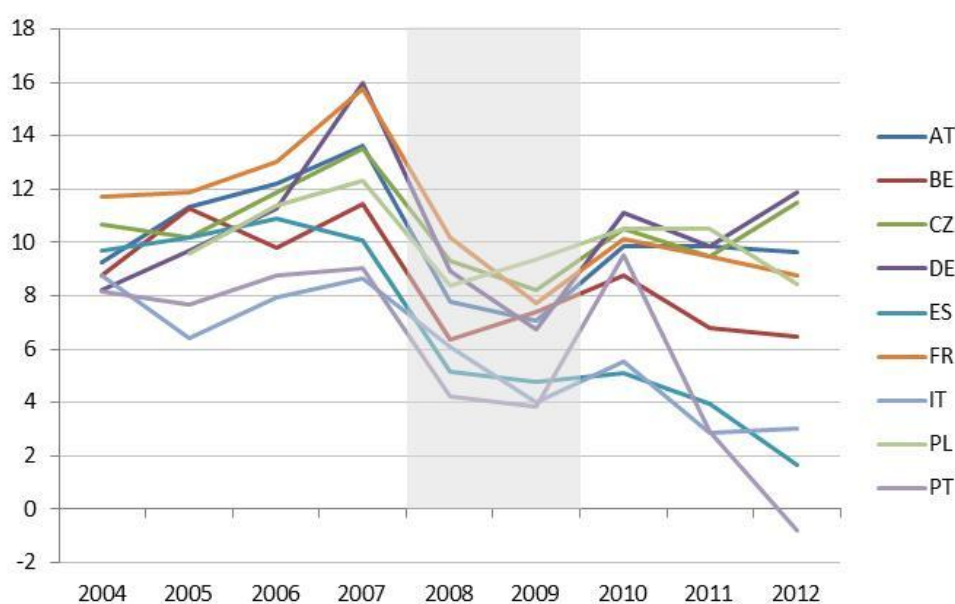
⁹ The comparison in level between Belgium and other countries for small firms should be made with all necessary reservations, as the turnover of a significant number of these small companies is extrapolated.

PROFIT MARGINS OVER THE PERIOD 2004-2012 ACROSS COUNTRIES

In the following, the evolution of firm profitability over the period 2004–2012 is analyzed, measured by **Return on Equity** (ROE). The following graph depicts ROE for the whole spectrum of firms (i.e. all industries and all firm size classes) in the 9 countries under study.

Chart 10 reveals several findings. First, ROE fluctuates strongly over the period. In particular, a pronounced negative effect of the economic and financial crisis of 2008/2009 emerges. In all countries, firm profitability plummeted in these two years. The decrease was most pronounced for German firms, where average ROE dropped by more than 9 p.p. from 16% in 2007 to 6.7% two years later. In France and Austria, ROE fell by 8 and 6.6 p.p., respectively. In general, from 2010 onwards, firm profitability recovered without reaching the level in 2007. However, the recovery process was rather uneven across countries. In Germany, the average firm managed to increase its ROE by 5.1 p.p. between 2009 and 2012; firms in France, the Czech Republic and Austria display an increase in ROE as well. By contrast, ROE of Belgian (-0.9 p.p.), Italian (-1 p.p.), Polish (-1 p.p.), Spanish (-3.1 p.p.) and Portuguese firms (-4.6 p.p.) decreased over the last three years covered in the sample.

CHART 10 | R38. RETURN ON EQUITY – weighted averages (2004-2012, in %)



At the same time the BACH data shows changes in the dispersion of ROE over time. In 2004, average ROE ranged from 11.7% in France to 8.2% in Portugal. Eight years later, the situation has significantly changed. In fact, ROE of the average German firm reaches 11.9% while the average firm in Portugal incurs a loss in 2012 as implied by the marginally negative ROE (-0.8%). It appears that it is especially in the years after 2009 that the dispersion of ROE across countries has widened.

Chart 11 plots the average ROE of large firms and SMEs in the 9 countries under study for the period 2007-2012. The pattern shows that for both size classes ROE dropped during the economic downturn in 2008/2009, even if the collapse appears to be more pronounced for large enterprises. However, from 2009 onwards, the recovery was mainly driven by large firms. In fact, SMEs display a somewhat tiny increase in 2010 but afterwards any signs of recovery have been largely absent, even in countries like Germany or Austria that showed a rather pronounced overall increase during the last 3 years (see Chart 10). However, the increasing trend in the dispersion of ROE across countries appears to be true for both SMEs and large firms. Overall, ROE seems to be higher for large firms than for SMEs.

CHART 11 | R38. RETURN ON EQUITY – Weighted means (2007-2012, in %)

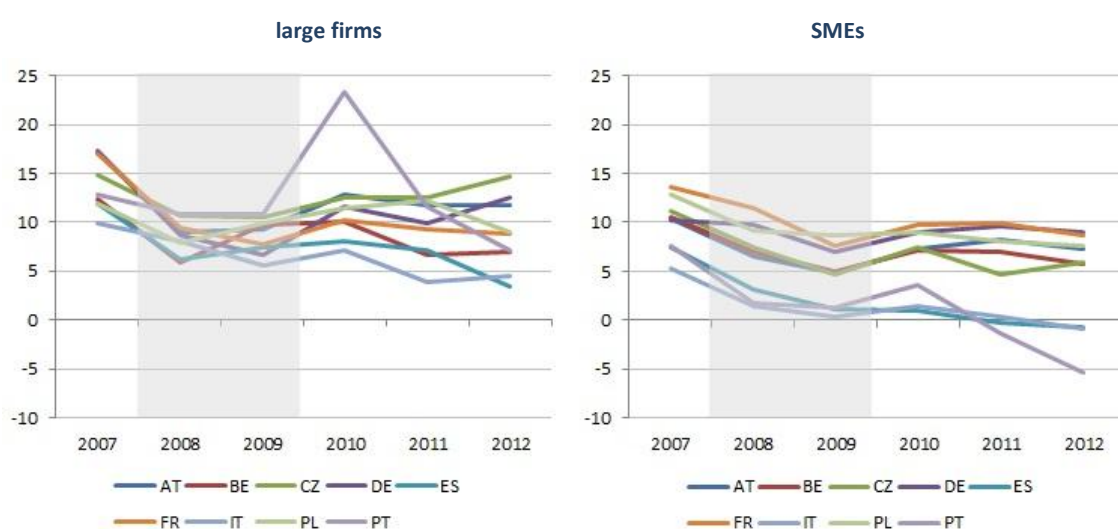


Chart 12 provides more details on the evolution of ROE in the various countries over the period 2007-2012. Specifically, it decomposes ROE according to the DuPont Decomposition, according to which ROE can be broken down into profitability (net profits over net turnover), operating efficiency (net turnover over total assets) and financial leverage (total assets over total equity):

$$\text{Return on Equity} = \frac{\text{Net profit or loss}}{\text{Net turnover}} * \frac{\text{Net turnover}}{\text{Total assets}} * \frac{\text{Total assets}}{\text{Total equity}}$$

In BACH, these indicators are subsumed under the ratios R34, R41, and R11, respectively.

CHART 12 | DuPONT DECOMPOSITION OF THE RETURN TO EQUITY – Weighted means (2007-2012, in %)

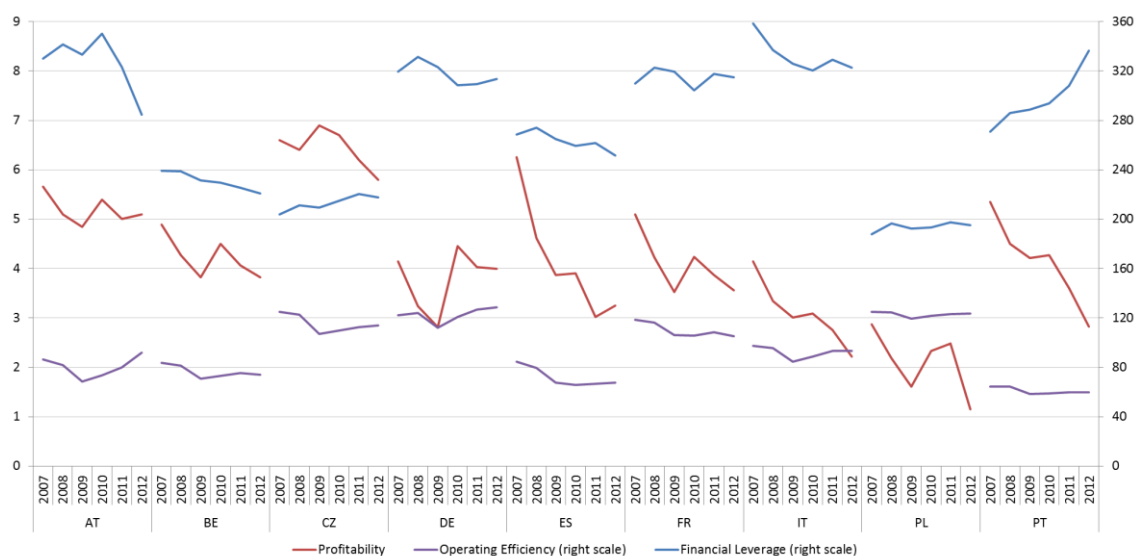


Chart 12 shows that in virtually all countries, profitability has decreased over the period, i.e. the amount of profit for each unit of sales has gone down during 2007-2012. On the other hand, operating efficiency, captured by the ratio of net sales over total assets has decreased in all countries during 2008/2009 and increased thereafter in most economies. Moreover, with the exception of firms in the Czech Republic and in Portugal, companies underwent a process of de-leveraging during 2007-2012, as evidenced by the downward trend in financial leverage.

ANNEX – NATIONAL SPECIFICITIES

TABLE A | NATIONAL SPECIFICITIES BY COUNTRY (2004 - 2012)

	Notes
AT - Austria	-
BE - Belgium	Enterprises are financed at a large extent by equity. This financial structure characteristic justifies the lower cross-country profitability of Belgium firms. In the case of small firms, data for turnover are extrapolated between different years.
CZ – Czech Republic	-
FR – France	No break in time series. Very high coverage rate for firms with annual turnover of more than 750 000 Euro.
DE – Germany	Provisions (esp. for pensions) are (still) very important in corporate finance in Germany.
IT – Italy	-
PL – Poland	-
PT – Portugal	(1) Before 2007 Portuguese figures are based on samples. It is only from 2007 onwards that Portugal has full coverage of the entire population of non-financial corporations. (2) In terms of return on equity large companies weighted mean have an outlier value due to a merge operation (2010).
ES – Spain	-



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