

Firm size and tax deductions

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1. Introduction

Portugal has a lower share of medium and large firms than most of the developed nations. This does not reflect the size of the domestic market, however. It signals an insufficient productive investment and lower participation in international markets, where firms can grow by having access to more profitable and a larger number of clients.

This has at least two consequences for the level of productivity in the Portuguese economy. First, it reduces the benefit from scale economies thus affecting directly the level of productivity. Second, it does not facilitate the integration of smaller firms in regional value chains, a channel to transmit competitive pressure to the rest of the economy thus incentivizing firms to innovate in order to become more productive.

The growth of firm size is even more relevant for the Portuguese economy if one remembers that the capital-labour ratio is low in comparison with other EU countries and the number of very small firms is higher (Pinheiro Alves, 2017) and may even be growing (Braguinsky et al, 2013). Therefore, it can be straightforwardly concluded that Portugal needs to have a larger share of medium and large firms.

This article is built on the empirical literature to consider tax deductions for retained and reinvested profits as one policy tool to facilitate mergers and acquisitions between Portuguese firms in order to help promote this change. It starts by presenting the potential effects of tax deduction to undistributed profits and proceeds by exposing empirical results on firm size and capital and productivity in Portuguese corporations. It concludes by underlining the role of tax policy to move incentives towards the upscaling of firms.

2. Tax deductions

Tax deductions for undistributed profits provide incentives for firms to retain and reinvest generated cash flows, thereby leading to more capitalized firms with a greater capacity to invest and to grow. Given that medium and large firms are better prepared to take advantage of these incentives in order to invest on a long term perspective, mergers and acquisitions between Portuguese firms should be facilitated.

Furthermore, higher capital stock per worker contributes to higher labour productivity and to enhance firms' solvency and capacity to survive. Low capital levels, on the other hand, undermine firms' capacity to growth leading to a market structure predominantly composed of small and micro firms, which further undermines productivity and survival. In addition low capitalization and firm size are often associated with more inefficient forms of management.

These aspects are particularly relevant for the Portuguese economy, given the high share of family-owned and small and micro firms and low levels of labour productivity, average capital ratios and rate of firm survival compared to the EU average.

The Portuguese corporate law rules establish distribution of profits as the norm discouraging retention which leads to relatively high debt to equity ratios. There are rules by which retention of earnings requires a special majority since retention is suspected of being a violation of minority shareholders rights (article 334 of the Civil Code and articles 22, 58, 217 and 294 of

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the Commercial Companies Code). The need for Portugal to encourage the retention of dividends was highlighted in many studies (e.g. EC, 2008).

Therefore, applying a more favorable tax regime to retained and reinvested profits would serve as an incentive to withhold profits, thus facilitating the capitalization of Portuguese firms and mergers and acquisitions. Moreover, it would enhance Portuguese firms' capital ratios and productivity and could also contribute to a more effective exit channel for 'zombie' firms, thereby enhancing market efficiency.

This is reinforced by the lower cost associated with the access to internal sources of financing that tax deductions promote. The traditional view about corporate investments is that, under the perfect capital market assumption (Modigliani and Miller, 1958, 1963), a firm's capital structure - in terms of debt and equity - is irrelevant to its value. This result in turn implies that internal sources of finance (such as cash from retained earnings) and external sources of finance (such as debt emission and/or equity issuances) are perfect substitutes, as they do not modify the value of the firm.

However, the perfect market assumption is not normally verified given taxes, transaction costs, information asymmetries and many other issues. And, outside the traditional framework, a firm's capital structure seems to matter. For instance, Myers and Majluf (1984) show that because of informational asymmetries between managers and investors, external sources of financing are less desirable, and when deciding about funding a new investment a "pecking-order" between sources of financing emerge: retained earnings (cash) have lower cost of capital than debt, and debt has a lower cost of capital than equity.

In other words, when deciding how to finance a new investment, managers prefer retained earnings (cash) to debt, and prefer debt to equity. Under imperfect market conditions, external sources of finance are more costly than the internal sources of finance and the investment possibilities of some firms may be constrained by the availability of internal funds

3. Capital and firm size

The Portuguese economy needs to improve its capital stock in order to converge with the EU average in terms of labour productivity. The lack of capital has been presented as one of the main explanations for the difference in the productivity level between Portugal and other European countries. Amador et al (2019), for example, refer to a relatively low capital-labour ratio in the Portuguese economy, about 20 per cent below the EU15 average in the period 1995-2005, and a little bit closer after the 2008 financial crisis but not due to an increase in the capital stock. The recovery was explained by the strong job destruction that did reduce the denominator (data from Penn World Tables²).

Portugal also has a number of large firms that is (in proportion to the total number of firms) half of that of the EU average, one third of the number in the United Kingdom and one fifth of the number of large firms in Germany³. This difference also exists for middle-sized firms, where Portugal has two thirds of the EU average, one third of the UK and one fourth of Germany. This is further evidence that the large majority of the Portuguese firms are too small to compete in international markets and thus it requires policies that promote their resizing. Mergers and acquisitions are the quickest way to achieve it.

The lack of capital is associated with the smaller size of the Portuguese firms. The available data from BACH database shows that both the ratio equity/workers and turnover/workers in the medium-sized and large firms are much smaller in Portugal (see tables) than in most EU

² Available at <https://www.rug.nl/ggdc/productivity/pwt/>.

³ Small Business Act country factsheets.

countries and thus asks for an increase in the average size of Portuguese firms through mergers and acquisitions.

Tables 1, 2, 3 and 4. Firm size and capital

Comparing the size of portuguese firms with that of other EU countries - Equity per employee 2017

	AUSTRIA	SPAIN	FRANCE	ITALY	BELGIUM
Medium	46,0%	66,4%	66,0%	58,4%	37,6%
Large	68,3%	58,2%	71,7%	50,5%	32,2%

Source: BACH database

Comparing the size of portuguese firms with that of other EU countries - Turnover per employee 2017

	AUSTRIA	SPAIN	FRANCE	ITALY	BELGIUM
Medium	65,3%	75,1%	55,2%	48,3%	39,4%
Large	73,8%	91,3%	71,3%	58,3%	44,0%

Source: BACH database

Structure of funding (% total balance sheet)																		
	AT		BE		CZ		DE		ES		LU		PL		PT		SK	
	2017	difference 2010-2017	2018	difference 2010-2018	2018	difference 2010-2018	2018	difference 2010-2018	2018	difference 2010-2018	2017	difference 2011-2017	2018	difference 2010-2018	2018	difference 2010-2018	2018	difference 2010-2018
SME																		
Equity	34	6	44	1	46	5	40	5	53	10	45	-13	52	1	36	8	33	4
Debt securities	2	1	0	0	1	1	0	0	0	0	12	-4	1	1	2	0	1	1
Loans	29	0	17	0	16	-1	25	-1	16	-8	4	-2	16	-1	16	-11	21	4
Trade payables	4	-1	8	-2	13	-6	5	-2	8	-2	28	10	9	-2	33	-2	24	-7
Other creditors	22	-6	28	2	21	1	15	-1	20	0	9	8	13	0	10	5	16	-3
Large Corporations																		
Equity	34	7	37	-3	43	-7	34	2	44	8	32	-18	48	-4	34	-1	35	-12
Debt securities	1	-8	0	0	0	-4	4	2	2	1	0	0	4	3	7	0	0	0
Loans	14	2	8	-4	8	2	7	-1	12	-7	8	7	16	4	7	-4	13	4
Trade payables	6	-1	16	4	29	9	5	-1	10	-1	45	6	9	-1	32	1	16	8
Other creditors	28	-4	33	2	16	2	31	4	24	-1	11	5	14	-2	13	5	25	6

Source BACH, latest available data

Internal Financing (net operating profit/total assets) by company size								
	AT	BE	CZ	DE	ES	LU	PL	PT
	2017	2018	2018	2018	2018	2017	2018	2018
TOTAL	4,9	3,3	7,9	3,0	3,9	2,9	5,7	3,5
small	4,9	3,6	6,8	5,0	3,4	4,0	5,7	2,2
medium	4,7	3,9	8,8	4,9	5,2	1,2	7,0	4,7
large	5,0	2,9	8,3	2,7	3,9	3,0	5,4	5,0

Source: BACH. Latest available data - 2018 (BE, CZ, DE, ES, PL, PT) and 2017 (AT, LU)

The level of equity in a medium-sized Portuguese firm is less than two thirds than a similar firm in Spain, France and Italy, and less than half in Austria and Belgium. A similar outcome can be found if the level of turnover is considered. Furthermore, these results apply to almost all industries in the economy where data is available (see annex).

Finally, the use of equity as a source of funding is significantly smaller in both Small, medium and large firms operating in Portugal. This is also true at a sectorial level (see annex). Although the levels of equity are similar to those of Austria and Slovakia, they are much smaller (10 to 20 percentage points) when compared with Belgium, Czech Republic, Germany, Spain, Luxembourg and Poland.

4. Productivity and firm size

There is also strong evidence that Portuguese firms would benefit in terms of labour productivity from upscaling the size of their operations organically or through either mergers or acquisitions. For instance, based on firm-level data of Portuguese firms, Gouveia (2019) shows that there is a monotonic relationship between the size classes and value-added per worker. This relation holds even after controlling for the sector, exporter/importer status, year of entry into the market and economic cycle. Furthermore, the gains are proportionally more significant for the highest percentiles of productivity.

Similarly, Braguinsky et al (2013) argue that Portugal's shrinking firms are linked to the country's low productivity and that this shift in the Portuguese firm size distribution is not reflected in other advanced industrial economies. The authors associate it with a structural shift from manufacturing to services, aggressive efforts to "de-monopolize" the Portuguese economy and labour market rigidity.

Moreover, there is evidence that this is not a unique feature of the Portuguese business environment as other studies find evince of the role of small and medium-sized enterprises (SMEs) in explaining modest productivity growth – see Colacelli and Hong (2019) for evidence in the Japanese economy.

Table 5. Firm size and productivity

Table 5 • Difference in productivity, by firm size | In thousands of euros per worker

Variables	10 th percentile	25 th percentile	50 th percentile	75 th percentile	90 th percentile
Size (Omitted category: micro firms)					
Small firms	5.860 (0.0169)	4.424 (0.0176)	5.090 (0.0242)	6.212 (0.0414)	7.730 (0.102)
Medium firms	6.984 (0.0386)	6.942 (0.0631)	9.421 (0.0897)	13.470 (0.144)	25.060 (0.546)
Large firms	7.336 (0.178)	8.649 (0.184)	15.520 (0.272)	31.050 (0.893)	90.020 (4.414)
Number of observations	2 404,405	2 404,405	2 404,405	2 404,405	2 404,405

Source: Banco de Portugal calculations based on IES. | Notes: The results are derived from a quantile regression, which allows for the calculation of descriptive statistics conditional on the remaining explanatory variables included in the model. For more details see Annex 2. All coefficients are statistically significant at a significance level of 1%. The robust standard errors are presented in parentheses.

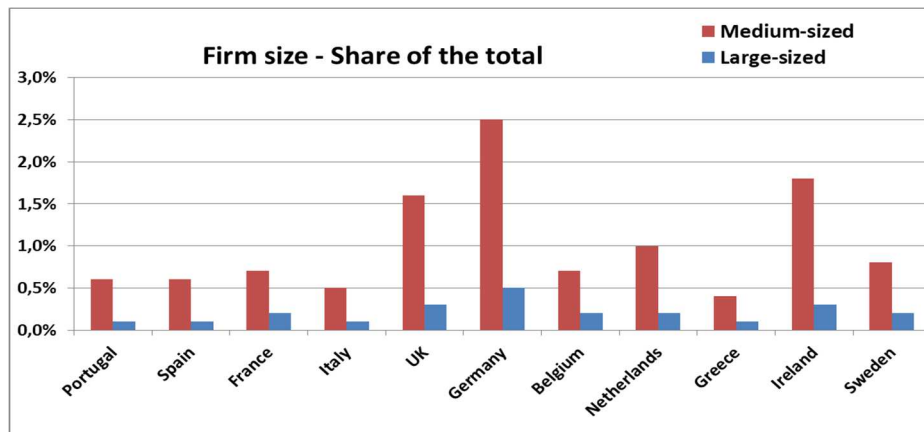
Table 6. Firm size and number of firms

Table 6 • Evolution of the number of firms, by firm size between 2008 and 2017

Size	2008		2017		2017 e 2008	
	Number of firms	Relative weight	Number of firms	Relative weight	Growth rate	Change in relative weight
Micro	210,695	82.5%	228,287	85.1%	8.3%	2.6 p.p.
Small	37,996	14.9%	33,605	12.5%	-11.6%	-2.3 p.p.
Medium	5,832	2.3%	5,505	2.1%	-5.6%	-0.2 p.p.
Large	962	0.4%	947	0.4%	-1.6%	-

Source: Banco de Portugal calculations based on IES.

This makes it particularly important to assess Portuguese firms' growth potential. In general, micro firms' share increased in the last decade, from 82.5% to 85.1%, across all the activity sectors, empirically reflecting the above presented view of Braguinsky et al (2013). This result also reflects the sectorial recomposition, with an increase in the number of firms in the services sectors, where micro firms are more prevalent. The large number of very small firms is the reflection of the low number of medium-sized and large firms.

Figure 1. Firm size – share of the total

Source: EC, from Pinheiro Alves (2017)

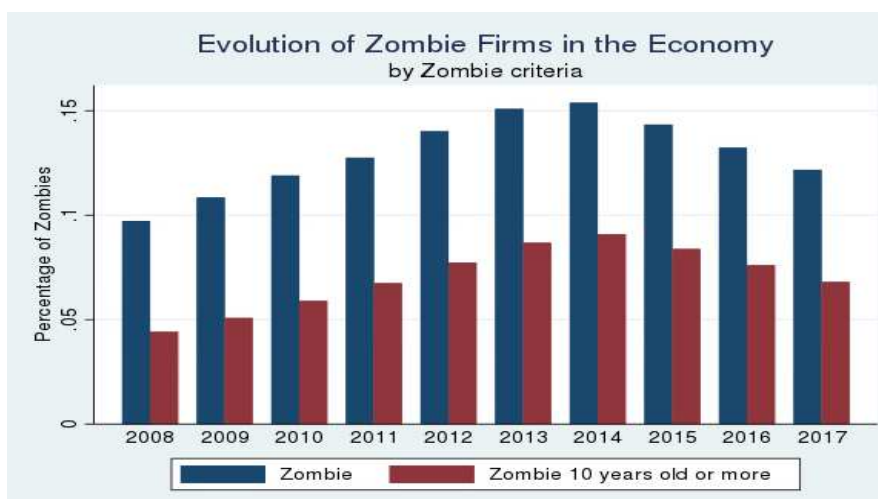
Furthermore, the existence of a large number of family businesses in countries like Greece and Portugal seems to be associated with a thicker tail of poorly managed companies (Opromolla, 2019). According to European Family Businesses, family-owned businesses represent about 75% of total firms and very well represented among very small firms. This result is line with Bloom and Van Reenen (2010) as they show that family businesses whose CEO is a member of the family are generally less well run than comparable companies, with different shareholder and management structures. This is also consistent with IMF (2015) whereby, family-owned firms run by family members or government owned firms tend to have poorer management practices as there is less pressure to increase the value of the firm.

Bloom et al. (2012 and 2014) also find evidence about the relationship between management quality and size or efficiency. Smaller firms and 'Government, family, and founder owned firms are often poorly managed, while large multinational, dispersed shareholder and private-equity owned firms are typically well managed'. 'Among private-sector firms, those owned and run by the founders or their descendants, especially firstborn sons, tend to be badly managed. Firms with professional (external, nonfamily) CEOs tend to be well managed.' The reason appears to be that many family firms adopt a rule of primogeniture, so that the eldest son becomes the chief executive officer, regardless of merit considerations.

The lower quality of management has negative effects on productivity and this is aggravated by the large number of "zombie" firms that exist in the Portuguese economy, despite recent trends that show a slight decrease in their number (Barros et al. 2020).

Firms that have a weak financial position, with a strong dependence on banks and unable to meet their financial obligations, are known in the related literature as "Zombies". The prevalence of this type of firms has been a defining feature of the Portuguese business fabric during the last decade (see, for instance, Gouveia et al. 2018). For example, in 2015, these firms represented 10% of indebtedness and 14.3% of employment in Portugal (Alexandre et al. 2017).

This "zombie" firms still constitute a significant hindrance to economic growth, and their persistence due to barriers to market exit negatively affect productivity. Zombie prevalence curbs the growth of viable firms, in particular the most productive, harming the intra-sectoral resource reallocation. Moreover, as singled out by Gouveia et al. (2018) policies that promote a reduction in exit and restructuring barriers, such as the proposed policy measure, helps a more effective exit channel and fosters the restructuring of the most productive and a better allocation of resources in the economy.

Figure 2. Number of Zombie firms in the Portuguese economy

Source: Barros et al, 2020.

Finally, there are a number of reasons why the current crisis might further impair productivity growth, including higher transactions costs, lower mobility, and a reduced scope of resource reallocation across firms and sectors. Small firms are likely to suffer the most and are likely to exit in large numbers following the shock of the pandemic.

5. Conclusions

Portugal has an excessive share of very small firms reflecting the existence of barriers to growth such as the lack of capital and a lower participation in international markets. Policy may change incentives in terms of firm size in different ways and tax deductions are one of the currently used tools that can be better tuned to promote the growth of the average Portuguese firm.

The enlargement of the regime where tax deductions for retained and reinvested profits are legally accepted, such as for larger medium sized firms or to include the acquisition of the majority of capital and voting rights in firms with a similar social object, would facilitate mergers and acquisitions between Portuguese firms.

If successfully implemented, these measures would contribute to the improvement of the capital-labour ration and would facilitate the scaling-up of firms, allowing for more corporate R&D, higher scale economies and a more frequent participation in regional value chains. The surviving firms would be more present in international markets and thus more productive.

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Annexes

Table A1. Portuguese firms

Figura 2.1.0.1 – Principais indicadores económicos das empresas não financeiras, por forma jurídica, dimensão, setor de atividade e total (2018)

	Empresas		Pessoal ao serviço		Volume de negócios		VAB		Gastos com o pessoal		EBE	
	2018	TV anual	2018	TV anual	2018	TV anual	2018	TV anual	2018	TV anual	2018	TV anual
	Nº	%	Nº	%	10 ⁶ Euros	%	10 ⁶ Euros	%	10 ⁶ Euros	%	10 ⁶ Euros	%
Total das empresas não financeiras	1 278 164	2,9	4 060 451	4,3	396 679	6,8	98 653	6,4	56 988	8,3	41 733	3,8
<i>Forma jurídica</i>												
Empresas individuais	864 397	2,0	952 370	1,7	15 883	3,6	7 470	6,9	1 274	2,6	6 365	7,6
Sociedades	413 767	4,8	3 108 081	5,1	380 796	6,9	91 182	6,4	55 714	8,4	35 369	3,1
Anónimas	21 826	-1,7	992 017	4,1	192 440	5,3	43 814	3,4	23 122	6,1	20 238	0,4
Quotas	383 625	5,3	2 013 043	5,8	172 046	9,0	43 680	9,8	30 285	10,6	13 366	7,3
Outras	8 316	-1,3	103 021	3,8	16 310	5,2	3 688	4,3	2 307	5,3	1 764	4,5
<i>Dimensão</i>												
PME	1 276 965	2,9	3 193 340	3,8	235 197	5,8	63 260	7,0	37 876	7,6	25 725	5,7
Grandes	1 199	4,8	867 111	6,4	161 483	8,2	35 392	5,4	19 113	9,7	16 008	0,8
<i>Setor de atividade</i>												
Agricultura e pescas	132 887	0,0	200 337	0,8	7 448	5,5	1 955	3,7	1 097	9,1	1 377	0,0
Indústria	69 236	0,9	744 606	3,3	96 323	5,4	22 951	2,8	13 410	6,3	9 512	-1,8
Energia e água	5 645	6,9	46 984	4,1	26 479	6,6	5 416	4,9	1 108	4,1	4 218	4,9
Construção e atividades imobiliárias	130 821	6,9	399 829	6,0	29 598	11,8	9 392	12,9	5 333	8,8	3 679	19,6
Comércio	217 831	-0,6	791 887	3,0	146 251	6,4	19 019	6,5	11 840	6,9	6 931	5,0
Transportes e armazenagem	25 592	12,0	175 559	5,5	21 864	7,2	7 534	5,1	4 478	9,7	3 102	-0,1
Alojamento e restauração	113 191	8,0	375 067	8,2	14 861	8,4	6 329	9,1	3 680	12,4	2 592	4,4
Informação e comunicação	19 116	7,2	111 168	8,9	12 941	3,7	6 025	6,3	3 304	11,5	2 650	0,3
Outros serviços	563 845	2,8	1 215 014	4,2	40 914	8,5	20 031	8,3	12 737	9,4	7 673	6,1

Fonte: INE, SCIE

Table A2. Employees per Firms, by size class

Employees per Firms (nr), by size class

2017

Sector	Size Class	PORTUGAL	AUSTRIA	SPAIN	FRANCE	ITALY	BELGIUM
Total	All Sizes	6,7	31,9	10,7	44,0	15,5	5,2
	SME	5,5	18,2	6,4	23,1	10,5	2,9
	Small	4,4	10,7	5,0	15,7	8,0	1,9
	Medium	142,7	96,6	107,7	81,7	70,1	56,6
	Large	657,0	570,8	1 137,9	699,1	494,5	415,5

Source: GEE based in BACH data.

Table A3. Turnover per Firms, by size class

Turnover per Firms (Euros), by size class

2017

Sector	Size Class	PORTUGAL	AUSTRIA	SPAIN	FRANCE	ITALY	BELGIUM
Total	All Sizes	813 719,3	8 841 884,6	2 161 667,7	13 180 493,8	4 360 679,9	2 453 967,4
	SME	465 844,8	3 431 997,7	813 772,9	4 676 927,2	1 862 758,6	977 711,5
	Small	308 179,5	1 764 316,5	547 580,5	2 618 758,9	1 076 797,0	592 928,7
	Medium	20 134 367,1	20 867 647,5	20 211 422,5	20 878 560,6	20 487 727,0	20 251 602,3
	Large	187 511 967,9	220 911 752,8	355 650 054,6	279 816 456,0	242 027 185,9	269 713 835,9

Source: GEE based in BACH data.

Table A4. Equity per Firms, by size class**Equity per Firms (Euros), by size class**

2017

Sector	Size Class	PORTUGAL	AUSTRIA	SPAIN	FRANCE	ITALY	BELGIUM
Total	All Sizes	397 896,3	4 082 076,9	1 302 157,5	4 617 470,5	1 671 497,0	1 438 740,0
	SME	278 218,2	2 087 920,3	573 528,2	1 704 306,7	676 427,7	744 505,6
	Small	212 986,0	1 104 023,1	450 115,6	993 549,6	406 074,5	582 235,9
	Medium	8 416 314,1	12 372 497,5	9 562 746,1	7 300 209,3	7 085 542,8	8 873 926,5
	Large	64 632 774,8	82 259 108,7	192 371 571,1	95 972 356,8	96 334 785,4	127 124 127,6

Source: GEE based in BACH data.

Table A5. Turnover per Employees, by size class**Turnover per Employees (Euros), by size class**

2017

Sector	Size Class	PORTUGAL	AUSTRIA	SPAIN	FRANCE	ITALY	BELGIUM
Total	All Sizes	121 709,0	276 949,7	202 061,3	299 625,6	280 437,9	472 801,6
	SME	85 099,5	188 789,0	127 152,4	202 489,5	177 145,1	334 377,0
	Small	70 457,5	165 175,3	109 287,0	167 308,3	134 590,7	320 107,1
	Medium	141 080,6	216 097,4	187 744,9	255 545,3	292 217,1	357 766,7
	Large	285 423,0	387 013,3	312 553,7	400 253,5	489 416,3	649 166,8

Source: GEE based in BACH data.

Table A6. Equity per Employees, by size class**Equity per Employees (Euros), by size class**

2017

Sector	Size Class	PORTUGAL	AUSTRIA	SPAIN	FRANCE	ITALY	BELGIUM
Total	All Sizes	59 513,8	127 860,8	121 718,8	104 966,7	107 495,0	277 199,5
	SME	50 824,3	114 853,3	89 614,1	73 788,6	64 327,1	254 620,7
	Small	48 693,9	103 358,6	89 834,8	63 476,3	50 755,9	314 334,3
	Medium	58 972,7	128 124,9	88 828,8	89 351,7	101 061,3	156 767,6
	Large	98 381,3	144 109,0	169 060,7	137 280,3	194 803,8	305 971,6

Source: GEE based in BACH data.

Note: BACH database limitation - Data coverage of the universe of firms in the database is very different across countries (ranging from 100% to 27.3%).

Table A7. Financial indicators by firm size

		Financial Indicators, by company size								
		AT 2017	BE 2018	CZ 2018	DE 2018	ES 2018	LU 2017	PL 2018	PT 2018	SK 2018
TOTAL	equity	34	40	45	35	47	38	49	35	34
	liabilities	66	60	55	65	53	62	51	65	66
	net profit/loss	6	7	5	3	6	5	4	4	3
	ratio of financial pressure	52	68	83	54	90	61	97	55	509
	return on sales	10	12		22	8	22	7	14	2
	return on equity	14	11	14	7	9	9	9	8	0
	return on assets	5	3	8	3	4	3	6	4	0
small	equity	35	45	46	40	55	33	54	36	32
	liabilities	65	55	54	60	45	67	46	64	68
	net profit/loss	7	7	9	4	4	99	5	4	5
	ratio of financial pressure	53	82	84	65	121	49	118	57	287
	return on sales	13	14		12	10	9	7	15	7
	return on equity	12	7	11	8	5	14	9	6	0
	return on assets	5	4	7	5	3	4	6	2	0
medium	equity	34	42	47	40	49	61	51	36	35
	liabilities	66	58	53	60	51	39	49	64	65
	net profit/loss	7	4	5	4	4	4	4	5	3
	ratio of financial pressure	52	74	88	66	95	158	104	56	1351
	return on sales	10	12		12	8	11	6	15	1
	return on equity	12	8	14	8	9	1	11	10	0
	return on assets	5	4	9	5	5	1	7	5	0
large	equity	34	37	43	34	44	32	48	34	35
	liabilities	66	63	57	66	56	68	52	66	65
	net profit/loss	6	8	4	2	7	3	4	4	2
	ratio of financial pressure	51	58	77	52	79	48	91	51	2299
	return on sales	9	10		24	8	28	7	11	2
	return on equity	15	16	17	7	12	11	9	12	0
	return on assets	5	3	8	3	4	3	5	5	0

Source: BACH, latest available data

Table A8. Sectorial indicators

Sectors		Structure of funding (% total balance sheet)								
		AT	BE	CZ	DE	ES	LU	PL	PT	SK
Manufacturing	Equity	40	49	55	33	45	62	53	42	39
	Debt securities	0		0	5	0	0	1	3	0
	Loans	12	5	8	4	11	2	16	13	14
	Other liabilities	19	32	13	32	21	29	8	23	20
	Trade creditors	8	10	20	5	16	4	16	16	21
Electricity and Gas	Equity	42	33	33	33	51	21	59	32	30
	Debt securities	3		1	2	1	0	11	11	0
	Loans	9	7	16	7	6	19	9	5	18
	Other liabilities	24	49	16	29	32	10	6	43	14
	Trade creditors	5	4	32	6	5	22	5	3	15
Water supply and waste management	Equity	39	26	58	39	53	50	57	36	47
	Debt securities	0		0	0	6	0	2	1	0
	Loans	21	15	5	33	14	4	11	18	12
	Other liabilities	20	11	14	9	16	18	4	23	5
	Trade creditors	8	4	19	3	4	9	3	4	6
Construction	Equity	28	34	45	19	41	25	38	30	31
	Debt securities	3		1	0	1	1	2	2	2
	Loans	14	16	6	7	21	9	14	19	13
	Other liabilities	32	29	17	13	23	24	12	34	20
	Trade creditors	4	15	27	6	9	8	18	12	31
Wholesale & retail trade	Equity	39	36	46	35	43	47	41	36	32
	Debt securities	1		0	1	1	6	1	2	0
	Loans	14	9	10	9	11	4	15	11	17
	Other liabilities	20	27	12	28	21	29	9	26	20
	Trade creditors	13	26	29	12	21	12	29	24	27
Transportation and storage	Equity	40	46	59	39	48	26	35	22	33
	Debt securities	0		0	4	4	0	2	8	0
	Loans	21	14	6	9	20	10	14	31	13
	Other liabilities	16	26	15	28	18	57	14	25	30
	Trade creditors	8	9	17	4	2	4	8	9	19
Accommodation and food service	Equity	24	40	44	33	52	17	52	30	35
	Debt securities	0		0	0	2	0	2	1	0
	Loans	50	18	25	11	19	1	30	20	30
	Other liabilities	16	33	20	25	21	2	7	40	21
	Trade creditors	4	7	9	9	4	80	5	5	8
Real Estate	Equity	30	39	35	40	61	38	67	34	26
	Debt securities	2		1	1	0	3	2	1	2
	Loans	34	28	28	40	22	13	15	15	34
	Other liabilities	29	29	31	13	15	44	7	46	29
	Trade creditors	1	1	5	1	1	1	3	2	6
Professional, Scientific and technical Activities	Equity	55	51	52	48	53	37	51	56	27
	Debt securities	4		2	5	3	12	2	10	2
	Loans	11	6	4	6	7	3	15	7	19
	Other liabilities	23	39	20	35	33	34	10	24	29
	Trade creditors	1	3	19	0	1	11	8	2	19

Source : BACH, latest available data (2018, except AT and LU - 2017)

		Financial Indicators, by sector								
		AT 2017	BE 2018	CZ 2018	DE 2018	ES 2018	LU 2017	PL 2018	PT 2018	SK 2018
Agriculture and Fishing	equity	38	38	56	74	57	39	65	42	41
	liabilities	62	62	44	26	43	61	35	58	59
	net profit/loss	4	4	5	2	4	3	5	4	5
	ratio of financial pressure	61	61	125	280	132	63	183	72	1117
	return on sales	9	10		10	8	4	6	14	115
	return on equity	11	7	11	1	5	10	7	3	0
	return on assets	6	3	8	1	3	-2	5	1	0
Manufacturing	equity	40	49	55	33	45	62	53	42	39
	liabilities	60	51	45	67	55	38	47	58	61
	net profit/loss	6	13	6	3	4	4	5	4	4
	ratio of financial pressure	66	97	124	50	82	164	111	72	2347
	return on sales	4	6		25	6	8	5	8	1
	return on equity	18	18	16	8	11	3	12	10	0
	return on assets	8	4	11	3	5	2	8	5	0
Electricity and Gas	equity	42	33	33	33	51	21	59	32	30
	liabilities	58	67	67	67	49	79	41	68	70
	net profit/loss	6	2	7	1	11	3	5	7	3
	ratio of financial pressure	71	50	50	48	102	26	146	47	2667
	return on sales	12	29		27	13	7	8	21	24
	return on equity	10	2	20	5	9	41	4	8	0
	return on assets	4	0	9	3	3	5	3	3	0
Water supply and waste management	equity	39	26	58	39	53	50	57	36	47
	liabilities	61	74	42	61	47	50	43	64	53
	net profit/loss	4	3	6	5	14	12	5	10	4
	ratio of financial pressure	64	35	138	65	112	101	130	57	4167
	return on sales	8	13		19	11	1	6	13	20
	return on equity	9	3	9	6	9	22	3	7	0
	return on assets	4	0	6	4	2	14	2	2	0
Construction	equity	28	34	45	19	41	25	38	30	31
	liabilities	72	66	55	81	59	75	62	70	69
	net profit/loss	8	4	6	3	2	5	5	4	4
	ratio of financial pressure	38	50	83	23	68	33	62	42	635
	return on sales	11	13		12	23	8	8	27	1
	return on equity	15	10	15	13	2	10	16	6	0
	return on assets	3	4	8	4	1	4	7	2	0
Wholesale & retail trade	equity	39	36	46	35	43	47	41	36	32
	liabilities	61	64	54	65	57	53	59	64	68
	net profit/loss	4	4	3	2	5	4	3	2	2
	ratio of financial pressure	64	55	86	55	76	90	69	55	221
	return on sales	6	12		10	5	30	7	8	2
	return on equity	21	16	15	14	20	8	15	9	0
	return on assets	8	4	8	6	5	4	8	4	0
Transportation and storage	equity	40	46	59	39	48	26	35	22	33
	liabilities	60	54	41	61	52	74	65	78	67
	net profit/loss	5	4	4	1	9	-6	4	5	3
	ratio of financial pressure	66	84	146	65	92	35	53	29	1527
	return on sales	6	15		32	9	18	7	19	7
	return on equity	12	5	10	1	7	-8	8	15	0
	return on assets	6	1	7	2	4	-1	4	5	0
Accommodation and food service	equity	24	40	44	33	52	17	52	30	35
	liabilities	76	60	56	67	48	83	48	70	65
	net profit/loss	5	2	8	4	8	6	6	5	4
	ratio of financial pressure	32	66	78	49	107	20	109	44	816
	return on sales	11	14		6	8	23	11	16	12
	return on equity	16	5	13	22	9	1	7	8	0
	return on assets	6	3	8	9	5	0	6	3	0
Information and Communication	equity	44	33	43	35	40	30	53	23	30
	liabilities	56	67	57	65	60	70	47	77	70
	net profit/loss	8	8	10	2	5	1	4	5	5
	ratio of financial pressure	80	49	75	55	67	44	114	30	1712
	return on sales	3	11		19	3	38	12	14	13
	return on equity	20	12	24	2	9	3	5	13	0
	return on assets	10	4	11	2	6	-1	5	5	0
Real Estate	equity	30	39	35	40	61	38	67	34	26
	liabilities	70	61	65	61	39	62	33	66	74
	net profit/loss	24	19	19	15	5	59	7	18	10
	ratio of financial pressure	44	63	54	65	154	61	203	52	519
	return on sales	24	27		21	20	15	13	26	17
	return on equity	8	4	6	6	1	7	2	6	1
	return on assets	3	2	4	4	1	3	2	2	0
Professional, Scientific and Technical Activities	equity	55	51	52	48	53	37	51	56	27
	liabilities	45	49	48	52	47	63	49	44	73
	net profit/loss	43	20	9	10	63	9	6	40	4
	ratio of financial pressure	122	102	108	94	115	59	102	127	822
	return on sales	12	20		36	20	15	10	11	5
	return on equity	12	5	16	1	7	11	7	9	0
	return on assets	2	1	8	0	0	-1	3	1	0

Source: BACH, latest available data