

News release:

**FINANCING COSTS
OF NON-FINANCIAL CORPORATIONS
IN EUROPEAN COUNTRIES
A Statistical Analysis based on
Accounting Data**

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Disclaimer

The views expressed in this paper are those of authors and do not necessarily represent those of the ECCBSO or those of the national central banks. The financial cost indicator used in this study was calculated with a harmonized definition. Nevertheless, it reflects national charts of accounts, which may not be completely harmonized.

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Executive Summary

In this release, we analyze the financing costs (FC) of non-financial corporations (NFC). The main indicator of the financing costs is computed on the basis of the accounting data. This indicator - based on BACH (*) methodology described in Annex I - is calculated on a country basis, as well as by sector of activity and size of companies.

This release is an updated version of the previous work. It covers a time span ranging from 2000 to 2023, which is the most recent year with available data. Details about the sectors and size criteria, can be found in Annex II, while Annex III reports the number of firms by country and year.

(*) *The Bank for the Accounts of Companies Harmonized (BACH) database contains aggregated and relatively harmonized annual accounting data of non-financial enterprises.*

- **The year of 2023 was shaped by a significant growth of financing costs' median across all countries, amid rising interest rates**
(Page 4) Figure 1 - Financing costs' median, between 2013 and 2023 (in %)
(Page 4) Table 1 - Financing costs' median (in %)
- **Sectoral financing costs are heterogeneous across countries and in 2023 increased for all size classes**
(Page 5) Figure 2 - Median of financing costs, by country and sector of activity (in %), in 2023
(Page 6) Figure 3 - Financing costs' median by size class (average of 6 countries, in %), between 2013 and 2023
- **In 2023, in most countries more than 50% of corporations faced costs above 3,5%**
(Page 7) Figure 4a - Percentage of corporations, by class of financing costs (in %), in 2022
(Page 7) Figure 4b - Percentage of corporations, by class of financing costs (in %), in 2023
- **Financial pressure faced by NFC has increased in all quartiles in 2023, amid a context of rising interest rates**
(Page 8) Figure 5 - Quartiles of the financing cost distribution, by country (in %), in 2021, 2022 and 2023
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- **Between 2022 and 2023 almost all countries increased the percentage of vulnerable firms and their respective debt**
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(Page 10) Figure 7b - Percentage of debt held by vulnerable firms (ICR<2), by country (in %), in 2021, 2022 and 2023
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(Page 11) Figure 8b - Percentage of debt held by vulnerable firms (ICR<2), by country (in %), in 2013, 2018 and 2023



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- **Medium and small companies held together the highest percentage of vulnerable firms and vulnerable debt proportions, in all countries**
(Page 12) Figure 9a - Percentage of vulnerable firms (ICR<2), by country and size class (in %), in 2023
(Page 12) Figure 9b - Percentage of debt held by vulnerable firms (ICR<2), by country and size class (in %), in 2023
(Page 13) Figure 10a - Percentage of vulnerable firms (ICR<2), by country and sector of activity (in %), in 2023
(Page 14) Figure 10b - Percentage of debt held by vulnerable firms (ICR<2), by country and sector of activity (in %), in 2023
- **On average, about 70% of the resilient firms in one year remained resilient on the following year, while about 45% of the vulnerable firms (ICR<2) stayed vulnerable on the following year**
(Page 15) Figure 11 - ICR transition matrices (average of 6 countries, in %) - ICR lead, ICR classification

Annexes

- (Page 16) Annex I: Methodology
- (Page 17) Annex II: Sector and size criteria
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While in 2022 the median financing costs have started to increase when compared to the previous year (more pronounced in the case of Poland), 2023 was shaped by a significant growth across all countries, reversing the decreasing trend observed over the analyzed period, amid rising interest rates (Figure 1). Comparing the level of financing costs in 2023 across the European countries, France had the lowest, while Poland had the highest. Nevertheless, the median financing costs were below those of 2013 in most countries.

Figure 1 - Financing costs' median by country*, between 2013 and 2023 (in %)

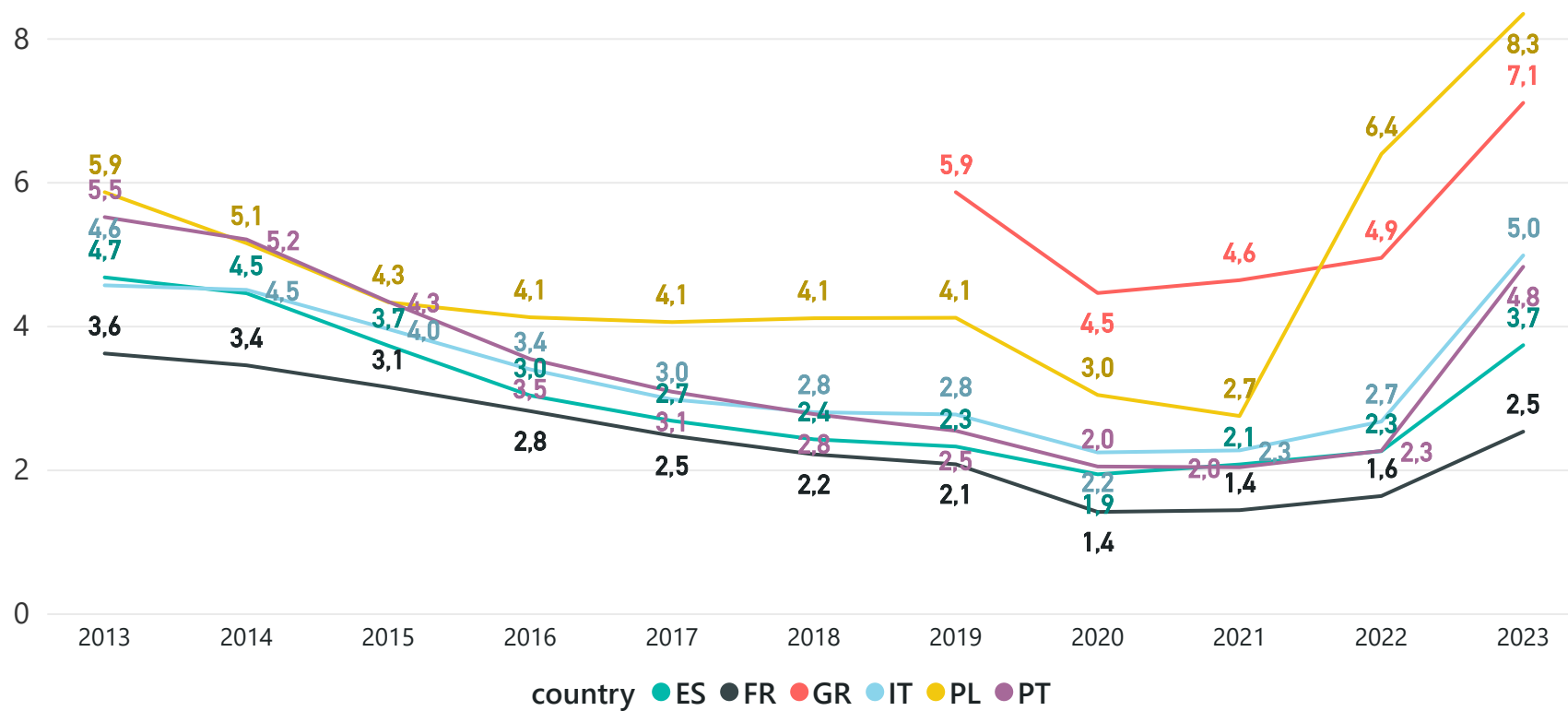


Table 1 - Financing costs' median (in %)

Year	ES	FR	GR	IT	PL	PT
2013	4,7	3,6		4,6	5,9	5,5
2019	2,3	2,1	5,9	2,8	4,1	2,5
2020	1,9	1,4	4,5	2,2	3,0	2,0
2021	2,1	1,4	4,6	2,3	2,7	2,0
2022	2,3	1,6	4,9	2,7	6,4	2,3
2023	3,7	2,5	7,1	5,0	8,3	4,8

Legend: ES - Spain, FR - France, GR - Greece, IT - Italy, PL - Poland, PT - Portugal

* Data available for Greece since 2019.

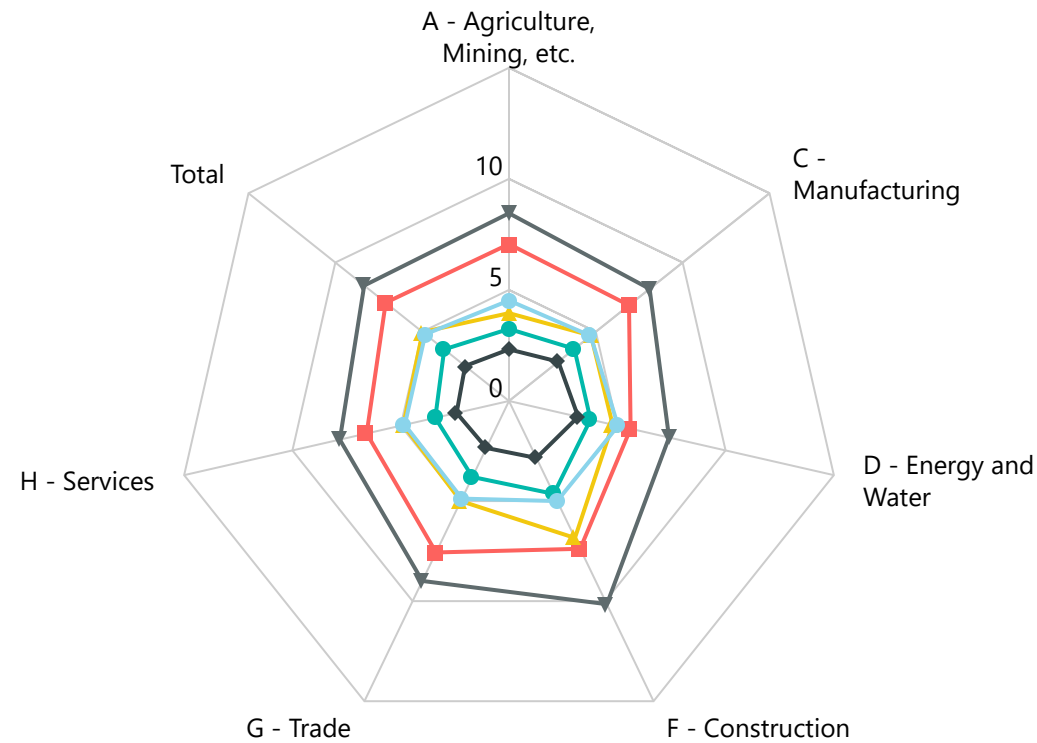


Comparing the median financing costs in 2023 for different sectors across five European countries suggests that the ranking of sectors of activity was heterogeneous across countries. Indeed, the sectors of activity characterized by the lowest or highest median financing costs were not the same in different countries. However, the construction sector is among the sectors with higher financing costs.

Figure 2 - Median of financing costs, by country and sector of activity (in %), in 2023

country

● - ES ● - FR ■ - GR ★ - IT ▼ - PL ● - PT

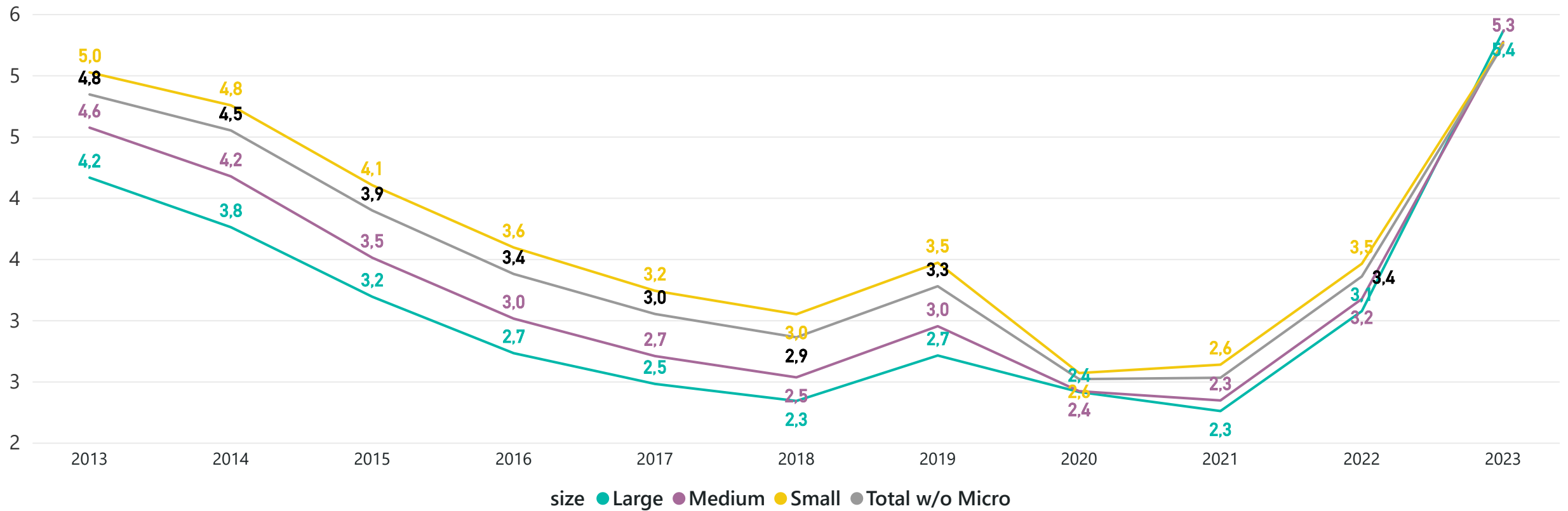


Legend: ES - Spain, FR - France, GR - Greece, IT - Italy, PL - Poland, PT - Portugal



Typically larger firms face lower median financing costs. However, in 2023, rising interest rates affected more strongly larger firms, so that the median financing costs was eventually similar across firm size classes (Figure 3).

Figure 3 - Financing costs' median by size class (average of 6 countries*, in %), between 2013 and 2023



Legend: ES - Spain, FR - France, GR - Greece, IT - Italy, PL - Poland, PT - Portugal

* Data available for Greece since 2019.



In order to assess the heterogeneity of the financing costs faced by firms within countries, it is useful to distinguish several classes. The first class refers to firms facing financing costs below 1%, while, at the other extreme, the last class above 7,5%. The results are very heterogeneous across countries (e.g. the 2023 situation in Spain or France appears very different from that in other countries). In 2022, more than 50% of the firms in Spain, France and Portugal had financing costs below 2,5% (Figure 4a). In 2023, the situation has changed and, with the exception of France, more than 50% of corporations face costs above 3,5% (Figure 4b).

Figure 4a - Percentage of corporations, by class of financing costs (in %), in 2022

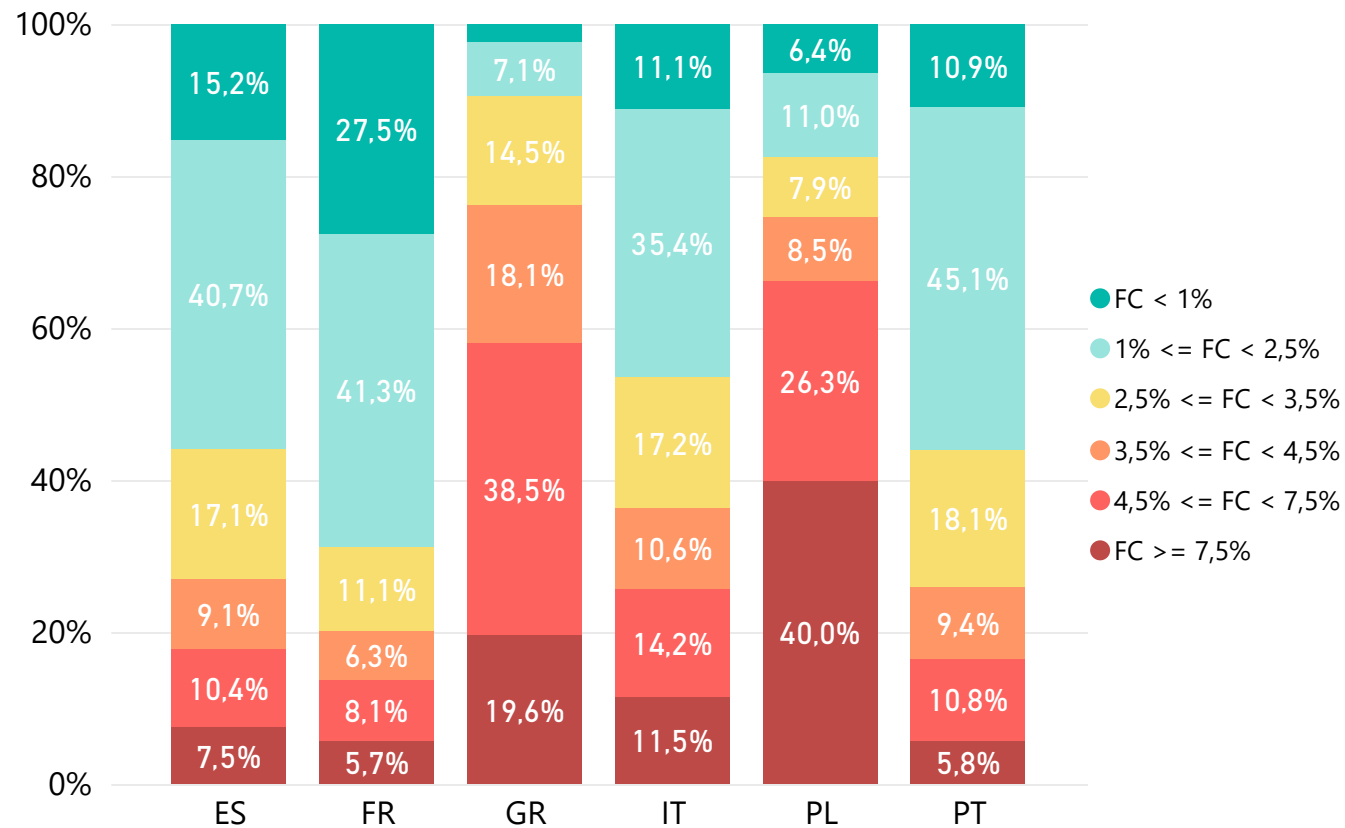
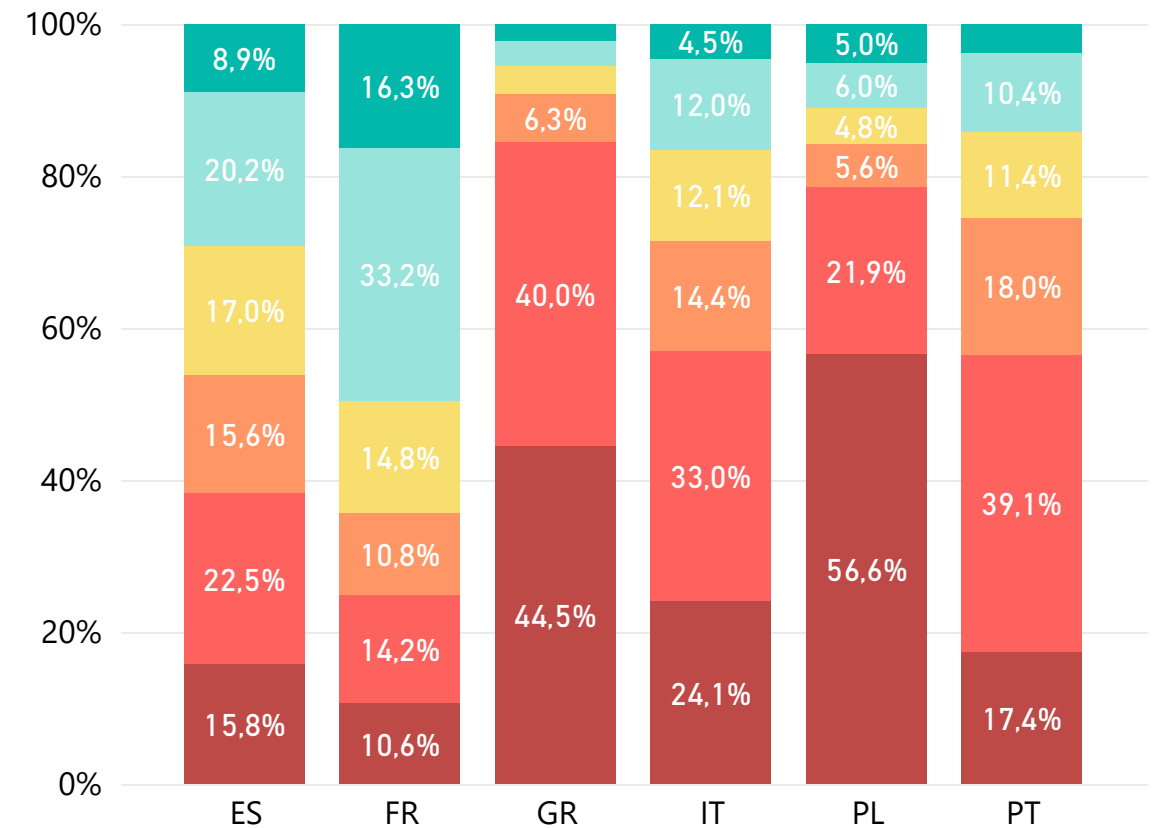


Figure 4b - Percentage of corporations, by class of financing costs (in %), in 2023



Legend: ES - Spain, FR - France, GR - Greece, IT - Italy, PL - Poland, PT - Portugal



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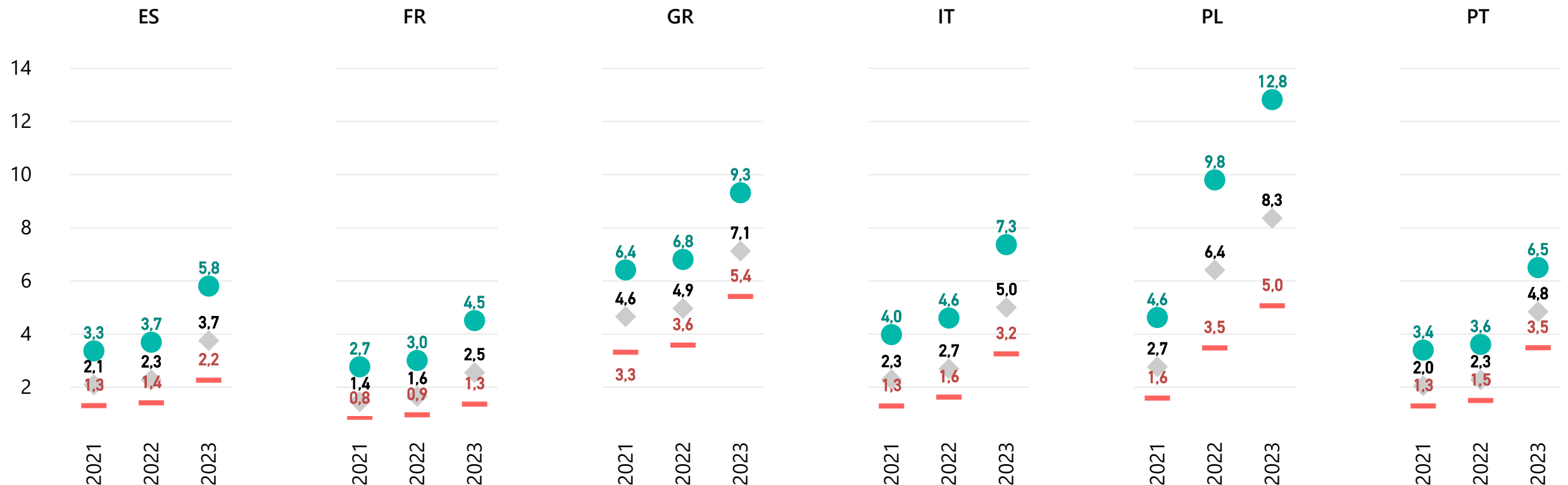
- P(75): Third quartile – 25% of the companies face financing costs equal to or greater than the third quartile.
- P(50): Second quartile (or median) – Half of the companies bear financing costs above the median.
- P(25): First quartile – 25% of the companies face financing costs equal to or less than the first quartile.

Comparing the last three years available (2021, 2022 and 2023) suggests, for all countries, an increase for all quartiles of financing costs from 2021 to 2023, amid a context of rising interest rates, more pronounced from 2022 to 2023.

Figure 5 - Quartiles of the financing cost distribution, by country (in %)

2021, 2022 and 2023

● P(75) ◆ P(50) — P(25)



Legend: ES - Spain, FR - France, GR - Greece, IT - Italy, PL - Poland, PT - Portugal



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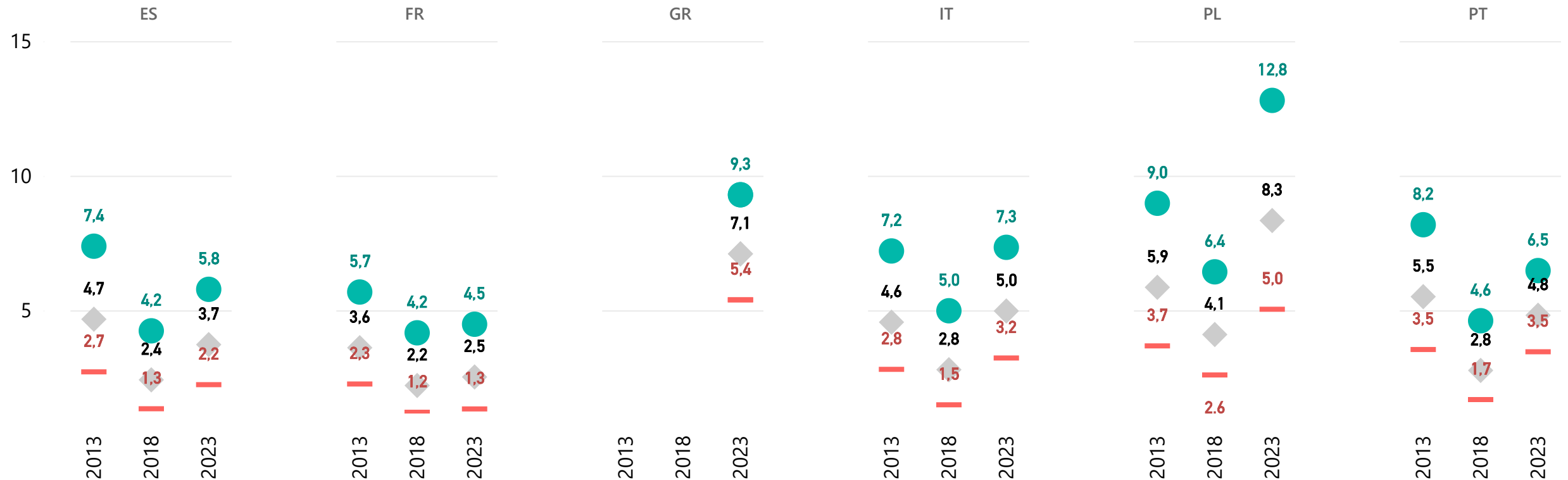
- P(75): Third quartile – 25% of the companies face financing costs equal to or greater than the third quartile.
- P(50): Second quartile (or median) – Half of the companies bear financing costs above the median.
- P(25): First quartile – 25% of the companies face financing costs equal to or less than the first quartile.

Comparing quartiles of the distribution of financing costs in 2013, 2018, and 2023 suggests that all quartiles substantially dropped from 2013 to 2018 while on the contrary increased from 2018 to 2023, even though to lower values than in 2013 (except from Italy and Poland).

Figure 6 - Quartiles of the financing cost distribution, by country* (in %)

2013, 2018 and 2023

● P(75) ◆ P(50) — P(25)



Legend: ES - Spain, FR - France, GR - Greece, IT - Italy, PL - Poland, PT - Portugal

* Data available for Greece since 2019.



Comparing the percentage of vulnerable firms (Figure 7a) and their debt (Figure 7b) across European countries between 2022 and 2023 suggests that all countries increased the percentage of vulnerable firms and their respective debt (with the exception of France). France, Greece and Poland are the ones with a higher percentage of vulnerable firms in 2023 (less than 18%). Spain, Italy and Portugal had lower vulnerable firm percentages in 2023, yet among the highest vulnerable debt proportions, only lower than that of France. With the exception of a slight decrease of debt held by French vulnerable firms in the last year, all the other countries increased their proportions, from 2022 to 2023.

Figure 7a - Percentage of vulnerable firms (ICR<2), by country (in %)

2021, 2022 and 2023

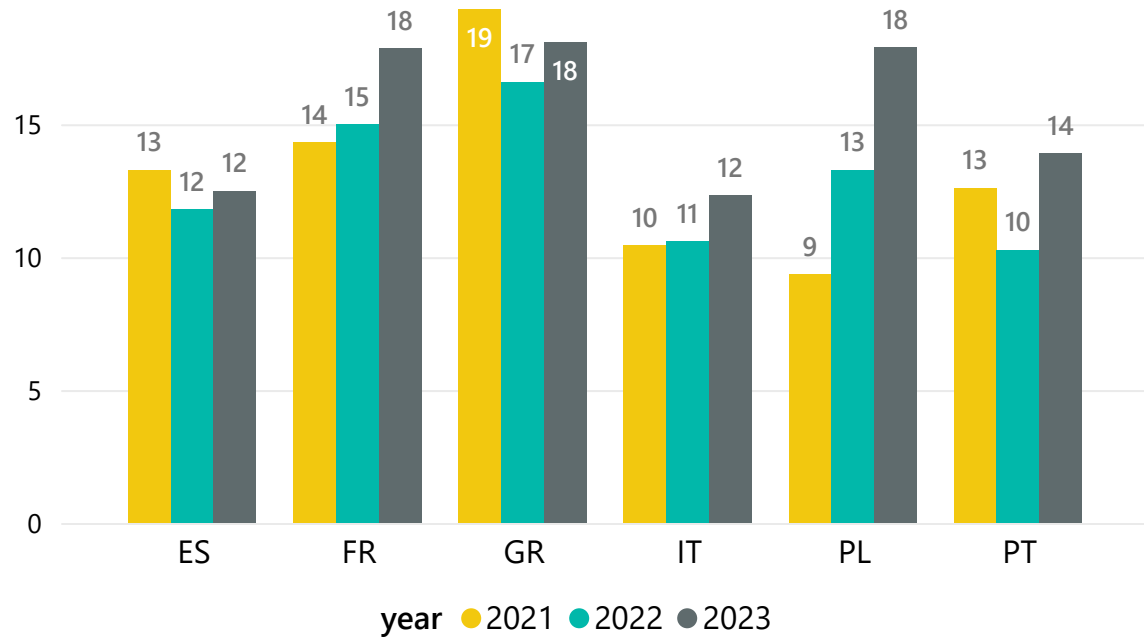
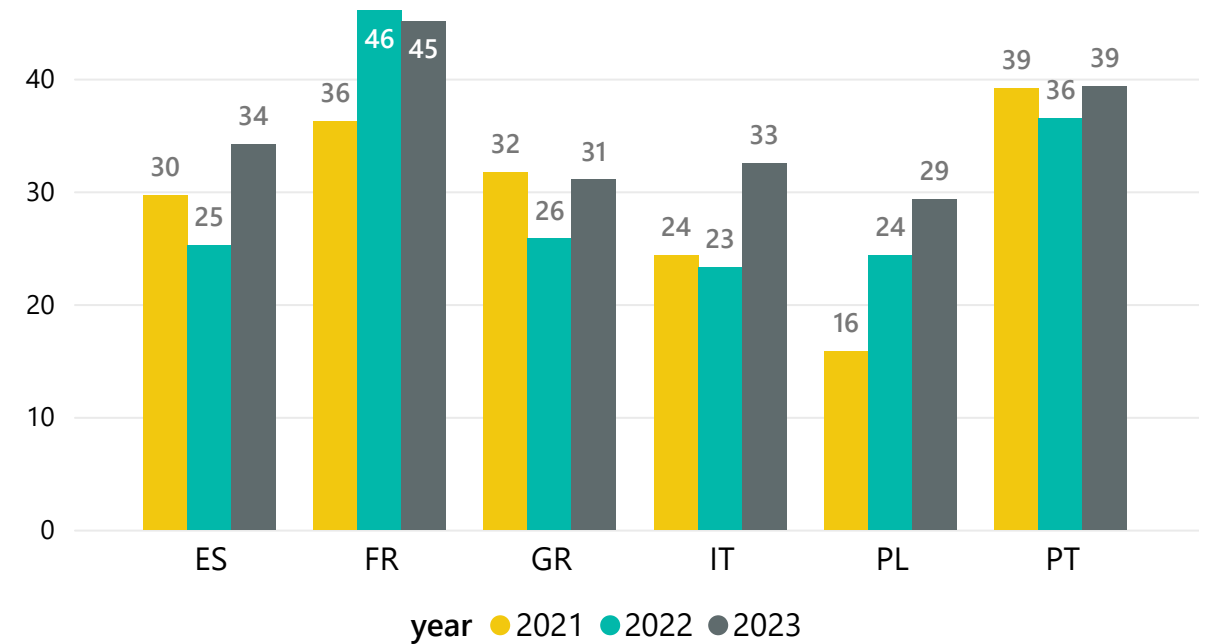


Figure 7b - Percentage of debt held by vulnerable firms (ICR<2), by country (in %)

2021, 2022 and 2023



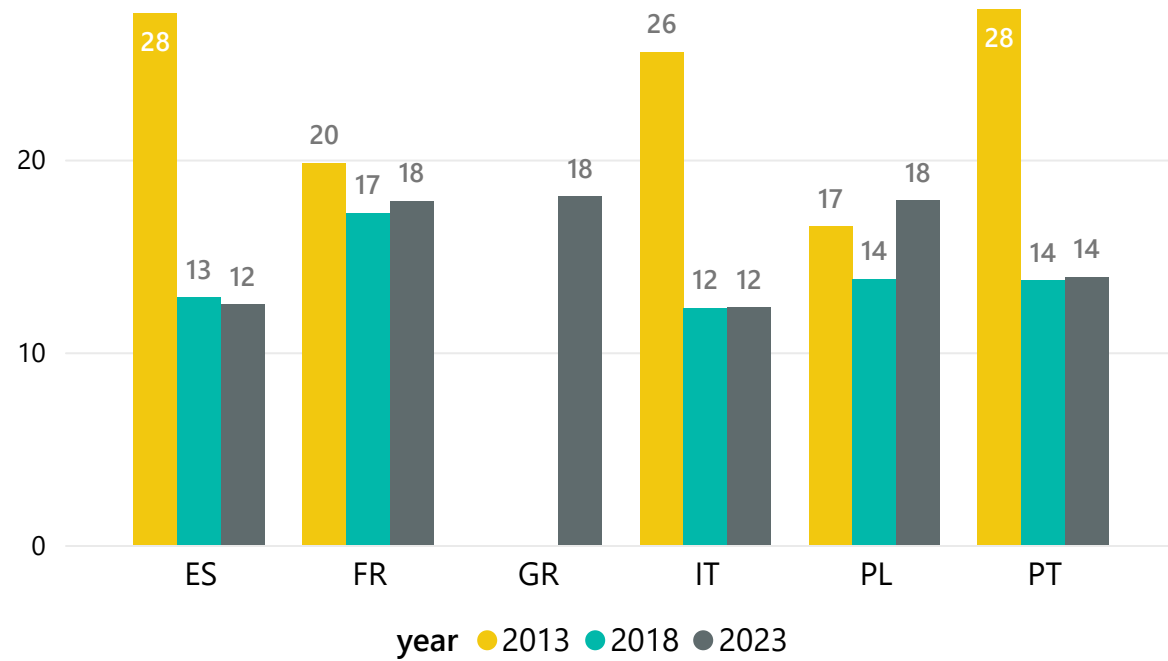


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Comparing the percentage of vulnerable firms (Figure 8a) and their debt (Figure 8b) across European countries in 2013, 2018 and 2023 suggests that countries where the percentage of vulnerable firms shrank the most were Spain, Italy and Portugal. In most countries also the percentage of debt held by vulnerable firms dropped from 2013 to 2018, but maintained or increased this proportion by 2023. In Spain and Portugal the percentage of vulnerable debt dropped from 56% in 2013, to 30-40% in 2018 and 2023.

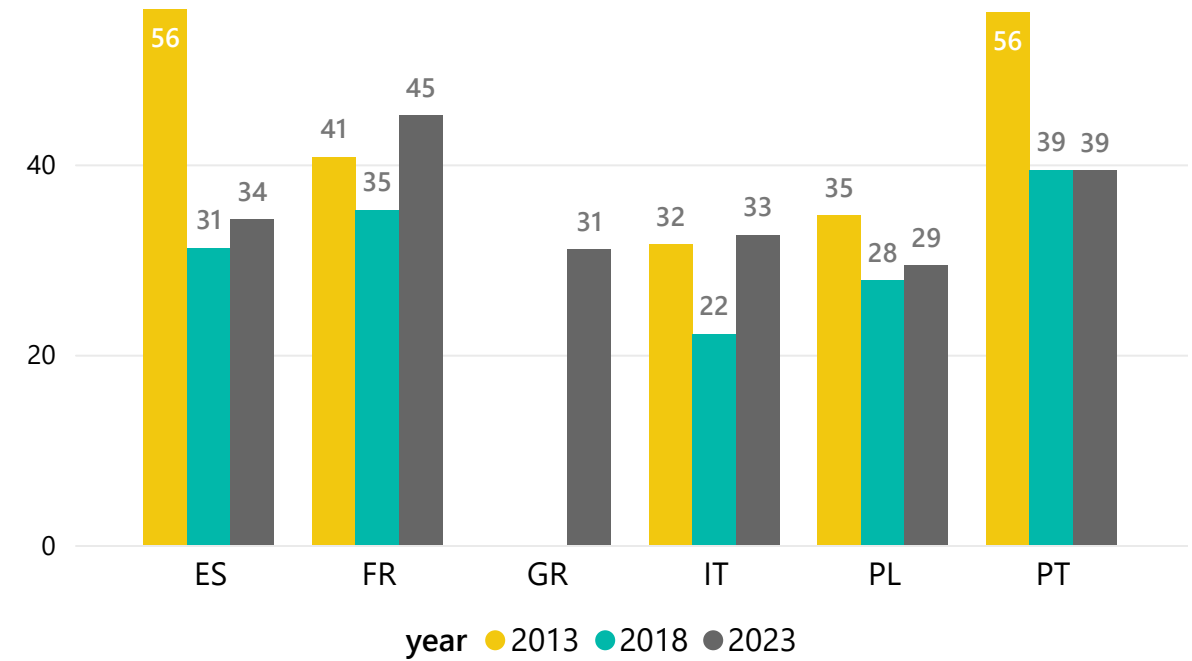
**Figure 8a - Percentage of vulnerable firms (ICR<2), by country*
(in %)**

2013, 2018 and 2023



**Figure 8b - Percentage of debt held by vulnerable firms (ICR<2),
by country* (in %)**

2013, 2018 and 2023



Legend: ES - Spain, FR - France, GR - Greece, IT - Italy, PL - Poland, PT - Portugal

* Data available for Greece since 2019.



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In 2023, the percentage of vulnerable firms (Figure 9a) was higher for large companies from Spain, France and Italy, while in Portugal medium companies have the highest proportion. In Greece and Poland small companies have the highest percentage of vulnerable firms. However, medium and small companies held together the highest percentage of vulnerable firms and vulnerable debt proportions, in all countries (Figure 9b).

Figure 9a - Percentage of vulnerable firms (ICR<2), by country and size class (in %), in 2023

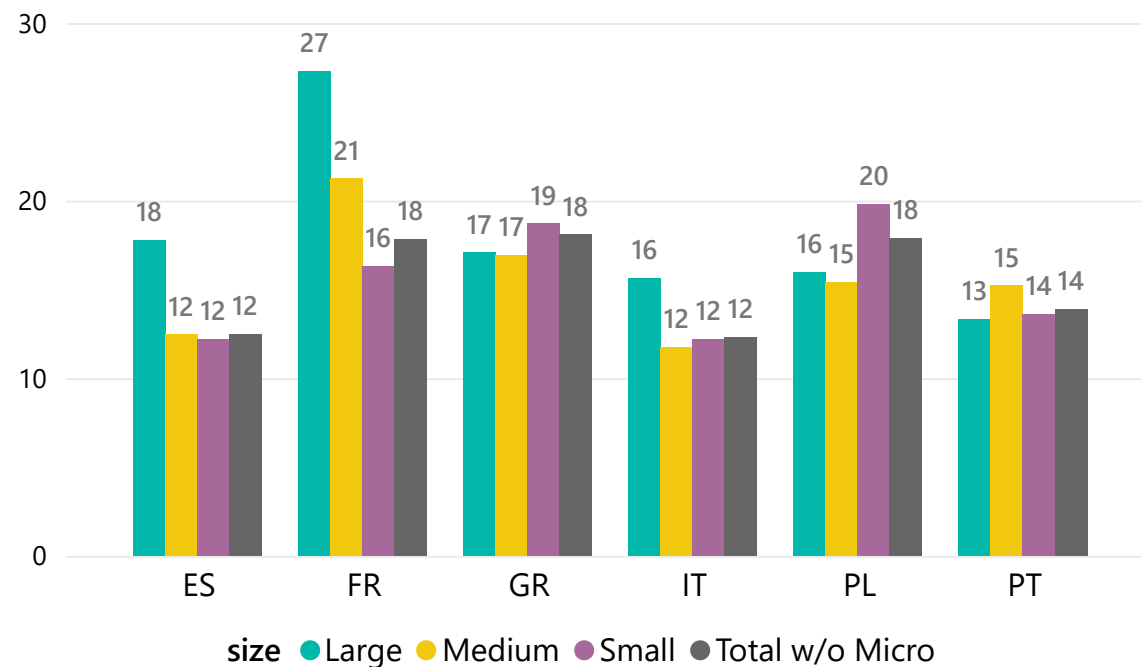
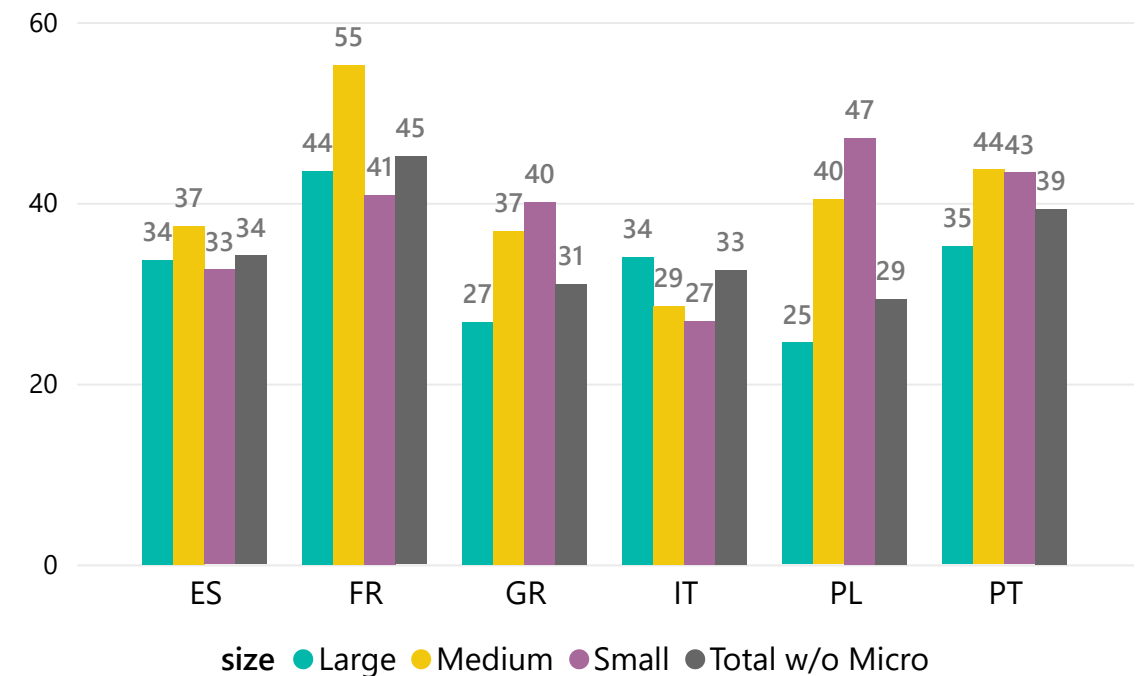


Figure 9b - Percentage of debt held by vulnerable firms (ICR<2), by country and size class (in %), in 2023



Legend: ES - Spain, FR - France, GR - Greece, IT - Italy, PL - Poland, PT - Portugal

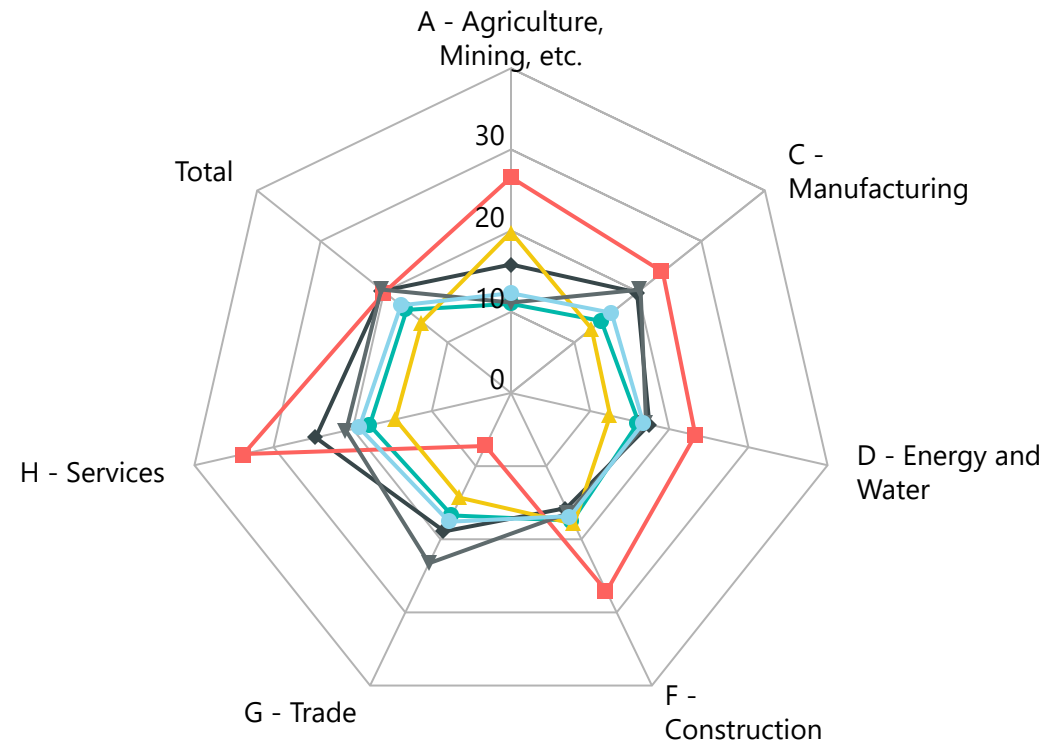


Comparing the percentage of vulnerable firms (Figure 10a) for different sectors across European countries in 2023 suggests that in most countries the Services sector had the highest percentage of vulnerable firms, with the exception of Agriculture sector in Italy and Trade in Poland.

Figure 10a - Percentage of vulnerable firms (ICR<2), by country and sector of activity (in %), in 2023

country

● - ES ● - FR ■ - GR ▲ - IT ▼ - PL ● - PT



Legend: ES - Spain, FR - France, GR - Greece, IT - Italy, PL - Poland, PT - Portugal

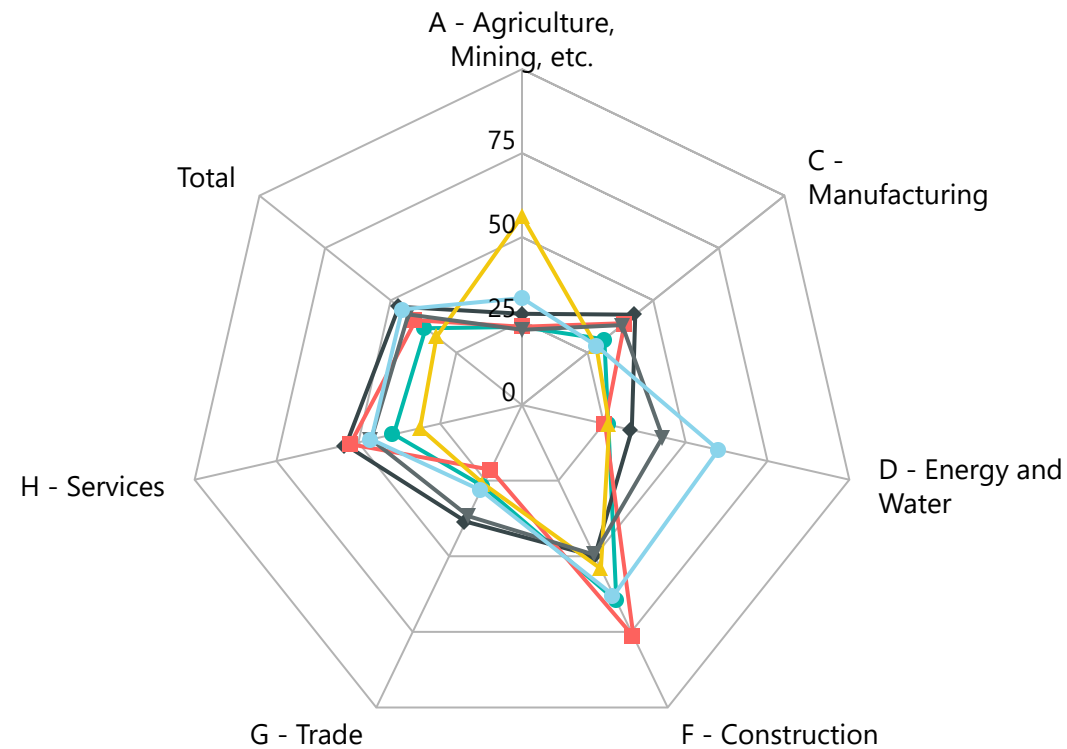


Comparing the percentage of debt held by vulnerable firms (Figure 10b) for different sectors across European countries in 2023 suggests that in most countries the Construction and Services sectors had the highest percentage (except for Agriculture sector in Italy and Energy and water sector in Portugal).

Figure 10b - Percentage of debt held by vulnerable firms (ICR<2), by country and sector of activity (in %), in 2023

country

● - ES ● - FR ■ - GR ▲ - IT ▼ - PL ● - PT



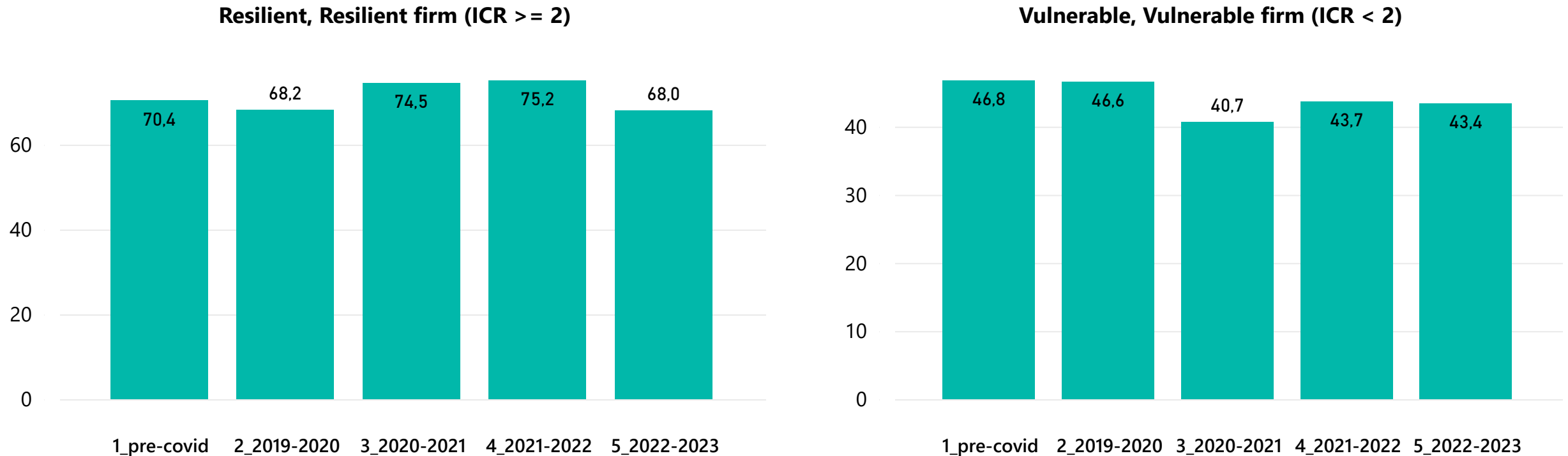
Legend: ES - Spain, FR - France, GR - Greece, IT - Italy, PL - Poland, PT - Portugal



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The transition matrices across ICR categories reveal that, on average for the six countries in our sample (Spain, France, Greece, Italy, Poland, and Portugal), about 70% of the resilient firms in one year remained resilient on the following year, while about 45% of the vulnerable firms (ICR<2) stayed vulnerable on the following year. Between 2022 and 2023, and on average for the six countries, the percentage of resilient firms that remained resilient decreased to 68%, and the proportion of vulnerable firms that remained vulnerable slightly decreased to 43,4%.

Figure 11 - ICR transition matrices (average of 6 countries*, in %) - ICR lead, ICR classification



Legend: ES - Spain, FR - France, GR - Greece, IT - Italy, PL - Poland, PT - Portugal

* Data available for Greece since 2019.



Annexes

Annex I: Methodology

Financial Cost indicator (FC)

The financing cost ratio was computed according to the definition in the BACH database. Table 1 provides more detail on the calculation.

Table A.I.1 - Composition of the Financing Cost Indicator

Financing Cost indicator	
Numerator	I_{10}
Denominator	$L_1 + L_2 + L_{31}$
FC (%)	$\frac{I_{10}}{L_1 + L_2 + L_{31}}$

Legend:

I_{10} : Interests on financial debts

L_1 : Bonds and similar obligations

L_2 : Amounts Owed to Credit Institutions

L_{31} : Other financial creditors

Data selection

Some exclusion criteria were applied to the database to avoid statistical noise and outliers that could bias the results. More precisely, there were three groups of data excluded:

- a) Outlier observations, classified as observations that satisfy any of the following conditions:

$$FC < P25 - 6 \times IQR$$

$$FC > P75 + 6 \times IQR$$

where FC is the financing cost indicator, P25 is the 25th percentile (or first quartile) of FC, P75 is the 75th percentile (or third quartile), and IQR is the interquartile range (which is equal to: $ICR = P75 - P25$).

- b) Companies with outstanding debt, but without financial expenses;
c) Companies without debt, but with financial expenses.

For reasons of confidentiality, the results for samples with less than 30 companies are not disclosed.



Annexes

Annex I: Methodology (cont.)

Interest coverage ratio (ICR)

The interest coverage ratio is calculated according to the formula presented in Table 2 (based on BACH database items definitions).

Table A.I.2 - Composition of Interest Coverage Ratio

Interest coverage ratio (ICR)	
Numerator	$EBITDA = I_1 + I_2 + I_3 + I_{41} + -I_5 - I_6 - I_7 - I_{81}$
Denominator	I_{10}
ICR (%)	$\frac{EBITDA}{I_{10}}$

Legend:

I_1 : Net turnover

I_2 : Variation in stocks of finished goods and work in progress

I_3 : Capitalised production

I_{41} : Operating subsidies and supplementary operating income

I_5 : Cost of goods sold, materials and consumables

I_6 : External supplies and services

I_7 : Staff costs

I_{81} : Operating taxes and other operating charges

I_{10} : Interests on financial debts

Annex II: Sector of activity and size criteria

Table A.II.1 - Sector of activity

Sector	Code	NACE Rev. 2
Agriculture, Mining, etc.	A	A, B
Manufacturing	C	C
Energy and Water	D	D, E
Construction	F	F*
Trade	G	G
Services	H	H, I, J, L, M**, N, P, Q, R, S
Total	To	(All NACE codes, except F43.1, M70.1, K, T and U)

* except F43.1 - "Demolition and site preparation"

** except M70.1 - "Head Offices"

Table A.II.2 - Size criteria

Sizes	Code	Sales Thresholds*, in €M (millions of euros)
Micro	SZ1	Sales ≤ €2M
Small	SZ2	€2M < Sales ≤ €10M
Medium	SZ3	€10M < Sales ≤ €50M
Large	SZ4	Sales > €50M
Total without Micro	SZ0	Sales > €2M

* 2015 base year, deflated by HICP (Harmonized Index of Consumer Prices) in each year



Annex III: Number of firms considered FC analysis, in Total w/o Micro

(only firms with financial debt are considered)

year	ES	FR	GR	IT	PL	PT
2013	75276	196102		134632	30818	27086
2014	76916	196614		140406	31322	27558
2015	82944	197362		143112	32054	28040
2016	87530	201382		135562	32486	28956
2017	89686	204572		144004	32342	30932
2018	92572	206874		147826	33198	31836
2019	92440	212658	6568	151004	33428	33938
2020	81882	219626	6650	141138	31792	31558
2021	86650	237234	9520	159244	32972	35332
2022	102094	244470	9174	176084	35328	38138
2023	85110	240966	8034	161398	35536	37898