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News release:

CUSTOMER AND SUPPLIER PAYMENT OF NON-FINANCIAL CORPORATIONS

An International Comparison

FSA (Financial Statement Analysis) WG

European Committee of Central Balance Sheet Data Offices (ECCBSO)

FSA Working Group
eccbso
European Committee of Central Balance Sheet Data Offices

Members of the Financial Statement Analysis Working Group (FSA WG):

Merve Artman (Chairwoman)

Central Bank of the Republic of Türkiye

Nicoletta Berardi

Banque de France

João Falcao Silva (Vice-chairman)

Banco de Portugal

Olivier Gonzalez

Banque de France

Santiago Martinez

Banco de España

Gonca Zeynep Özdemir

Central Bank of the Republic of Türkiye

Carolin Schuerg

Deutsche Bundesbank

Diogo Barbosa

Banco de Portugal

Valentina Nigro

Banca d'Italia

Ewa Sokolowska

Narodowy Bank Polski

Letizia Sampoli

Cerved Group Spa

Heraklios Lykiardopoulos

Bank of Greece

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.

Contents

1. Introduction

This news release aims to present the most recent trends in trade credits (TC) of European non-financial corporations (NFCs), using accounting data derived from companies' financial statements. The analysis focuses on the three most important sectors that have significant weight in the GDP of countries: manufacturing, trade, and construction. This release updates past reports with 2021 data (the latest available).Results relate to the six countries participating in the working group: France, Italy, Poland, Portugal, Spain, and Türkiye.[1]

FSA WG analysis allows a homogenous comparison – in terms of values and trends – of DPO (Days Payables Outstanding) and DSO (Days Sales Outstanding) across major European countries according to company size and sector. Data provided in this report and in the ECCBSO database aim to provide a picture of structural differences among countries and of their trends in recent years.

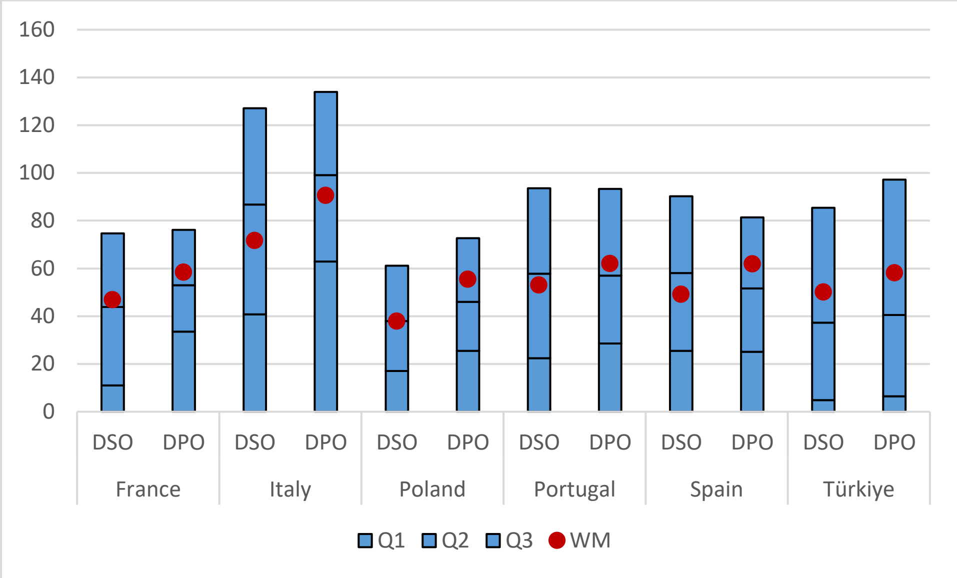
After the outbreak of the pandemic, the tensions on firms' liquidity needs (especially in particular sectors) led in many countries to a lengthening of payment terms. In 2021, customer payment periods appear to have recovered their pre-Covid value, while supplier payments seem to have continued to lengthen. This could suggest a firm strategy to finance its business with trade debt. Our analysis can also be seen as a starting point, going forward, to measure the impact of crises on corporate supply chain finance.

2. Summary Statistics

The charts below provide an overview of the distribution of DSO and DPO in 2021, in terms of weighted mean (WM) and quartiles (Q1 to Q3). We exclude from the analysis micro enterprises, due to their different sample coverage across countries. These distributions are heterogeneous across countries. Like in the previous news release, the longest payment days are observable in Italy, while the shortest (at least in terms of Q1 and median) are observable in Türkiye (Figure 1).

[1] Previous reports included German data; see the section publication on the website https://www.eccbso.org/wba/working-groups.

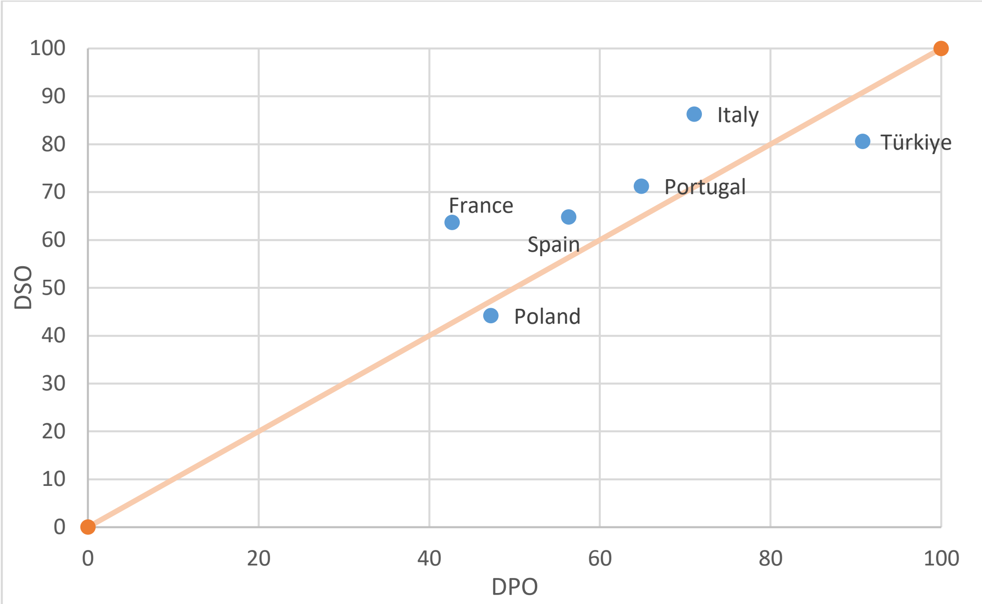
Figure 1 – Box-plot by country (2021, in days)



The bottom and top of each box are the first and third quartiles, the middle band is the median and the red marker is the weighted mean.

Looking at the interquartile ranges (IQR), a measure of variability, larger values are observed in Italy and Türkiye, both for DSO and DPO (Figure 2). Additionally, Poland has tighter distributions. France and Italy exhibit the highest differences between DPO and DSO interquartile ranges, with DSO interquartile ranges higher than DPO's. This gives some insights into the dispersion of behaviors that exist in some countries' companies, mainly in days sales outstanding.

Figure 2 – DSO and DPO interquartile range by country (2021, in days)

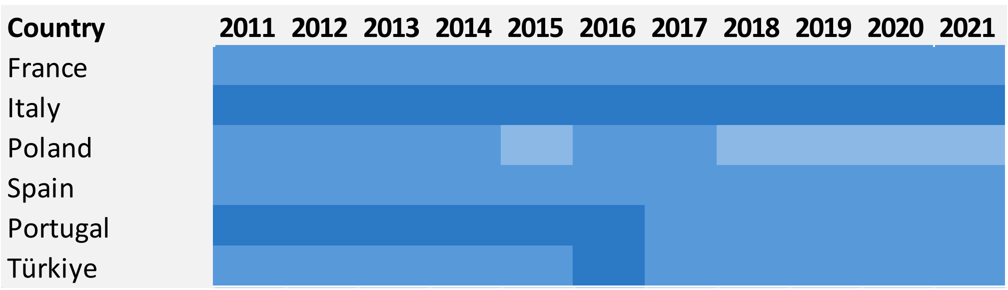


Heat maps show trends in the payment periods. In DSO only Poland and Portugal present a reduction in since 2017-2018 (Figure 3). In DPO it is evident a worsening during the pandemic for Italy and Spain.

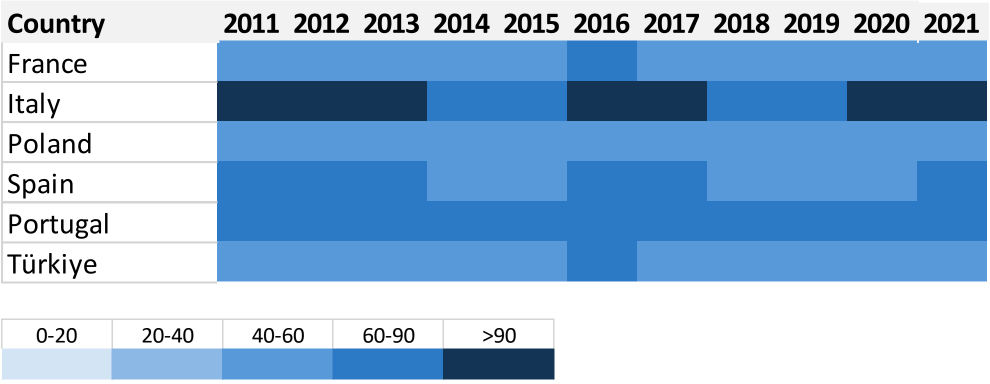
Overall, in most of the years DPO tends to be higher than DSO, for the majority of countries. As already concluded in previous works of the Financial Statement Analysis Working Group, this heterogeneity of behaviors can be explained by many factors: at the macroeconomic level, the difference in legislations (see Annex V) and payment cultures, and at the microeconomic level, the difference in corporation structure (e.g. firms belonging to a group or not), in bargaining power and in commercial policy.

Figure 3 – DSO and DPO, 2011 to 2021, by number of days intervals (heat maps)

DSO (weighted means – in days)



DPO (weighted means – in days)



3. Detailed Results

3.1. DSO and DPO results in 2021 by size and sector

In this section, the focus is on the 2021 results of DSO and DPO by firm size (excluding micro enterprises) and sector.

Figures 4 and 5 show the weighted means of DSO and DPO for all countries by firm size. For all countries, the shortest DSO characterize large companies; the largest differences with respect to the other size classes are observable in Italy, Portugal and Spain. Conversely, in the other countries there is less dispersion across size classes. Small companies have the longest delays in almost all countries, except for Poland and Türkiye (with very small differences when compared with medium-sized firms). Italian companies confirm the highest DSO values across size classes. Recent trends show a reduction in DSO in 2021 for small and medium firms in all countries; this drop was especially strong in Italy and Türkiye.

Regarding the DPO, the pattern across size classes is less clear-cut. In some countries, like Spain, Poland and France large companies have the highest average values; conversely, in the other countries small firms continue to have the longest supplier payment periods. DPO slightly reduced in 2021 for small and medium firms only for France, Italy, and Türkiye.

Figure 4 – DSO by country and size (weighted means, 2021, in days)

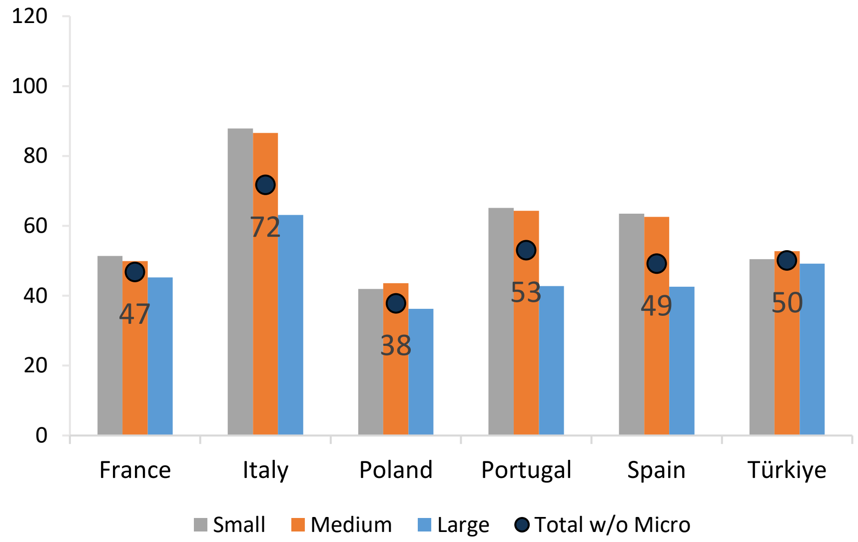
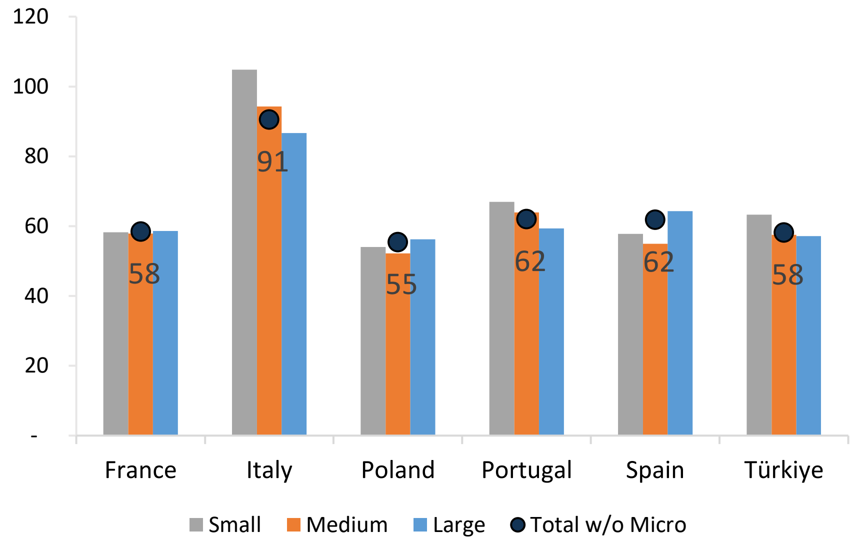


Figure 5 – DPO by country and size (weighted means, 2021, in days)



Figures 66 and 77 show figures by sector of economic activity. Construction has the longest DSO for almost all countries despite the reduction in payment days in 2021, while trade presents the lowest DSO values (except in Portugal and Türkiye, as expected due to the nature of business).

The construction sector has also the highest DPO values, except in Portugal where trade presents higher values and in Türkiye where construction is similar to the manufacturing sector. For almost all countries, the trade sector has the lowest DPO, possibly linked to its short DSO. In 2021, there was a particularly strong reduction in DPO in the Italian construction sector and, to a lesser extent, also in France, Poland and Portugal. On the contrary, there was a mild increase in Türkiye.

Figure 6 – DSO by country and sector (weighted means, 2021, in days)

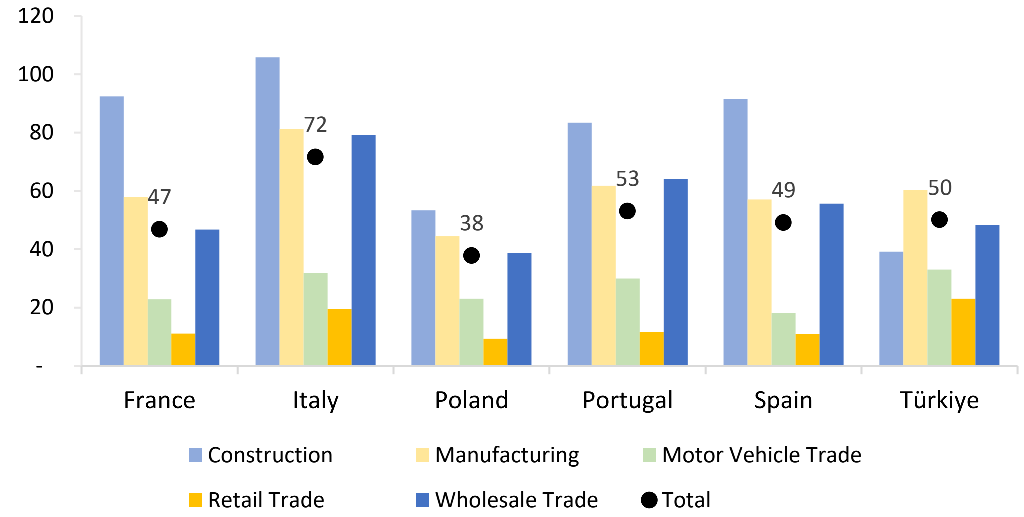


Figure 7 – DPO by country and sector (weighted means, 2021, in days)

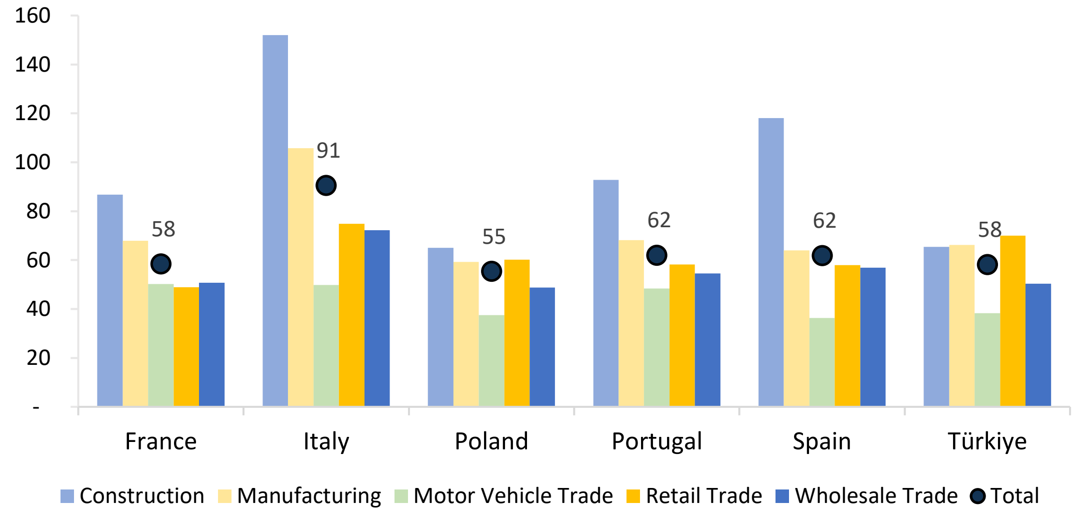


Table 1 presents the Trade Credit Balance (TCB), which shows the liquidity advantage, calculated from the difference between DSO and DPO (see Annex 1). The lower the TCB, the more the company is successful in managing its liquidity. In all countries, trade credit balance is negative in the trade sector, owing to the motor vehicle trade and the retail sectors, where payables are usually higher than receivables. Italy and Poland are characterized by negative trade credit balance in almost all sectors.

Table 1 – TCB by country and sector (weighted means, 2021, in %)

		France	Italy	Poland	Portugal	Spain	Türkiye
Sector	**Code**	**FR**	**IT**	**PL**	**PT**	**ES**	**TR**
Construction	F	31	-7	3	16	6	-18
Manufacturing	C	5	-2	-1	7	4	7
Trade	G	-9	-4	-15	-20	-10	-4
Motor Vehicle Trade	G-45	-22	-14	-11	-15	-15	-1
Wholesale Trade	G-46	3	15	-4	15	5	2
Retail Trade	G-47	-29	-44	-40	-39	-37	-33

3.2. DSO and DPO distribution over time

This section focuses on time dynamics. Figures 8 and 9 exhibit the quartile measures for the years 2011, 2019, 2020 and 2021. In the last ten years, payments habits have been changing, moving towards shorter time. This trend is common to DSO and DPO, for all countries and the overall period.

After the outbreak of the pandemic there was a slightly worsening in the customer payment periods in Italy and in Spain. However, in 2021, they went back, respectively, totally, and partially to pre-crisis values.

Similarly, supplier payment periods have slightly lengthened during Covid-19, but, unlike DSO, a widespread deterioration has also occurred in 2021 (except in France and Türkiye), suggesting that companies may have financed the activity recovery with trade debt.

Figure 8 – Quartiles of the DSO distribution over time by country (in days)

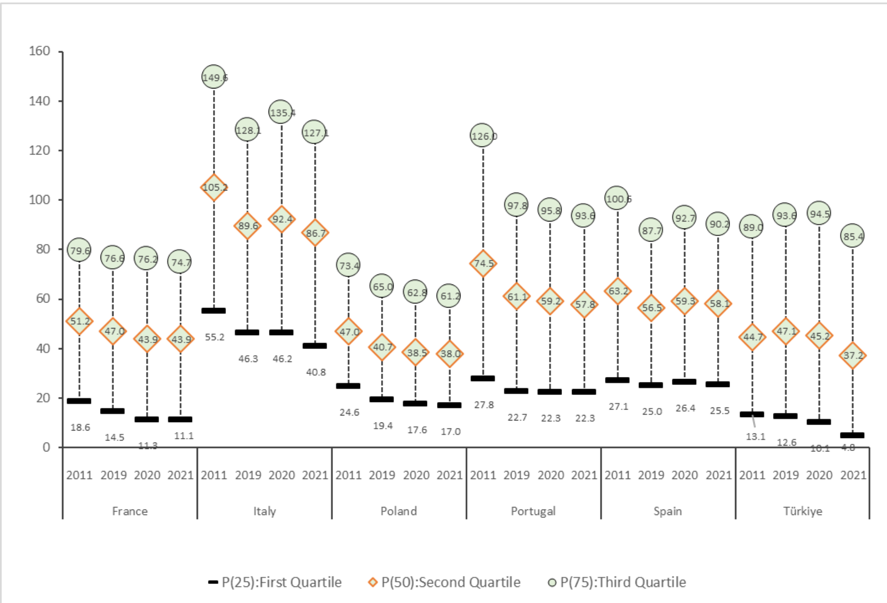
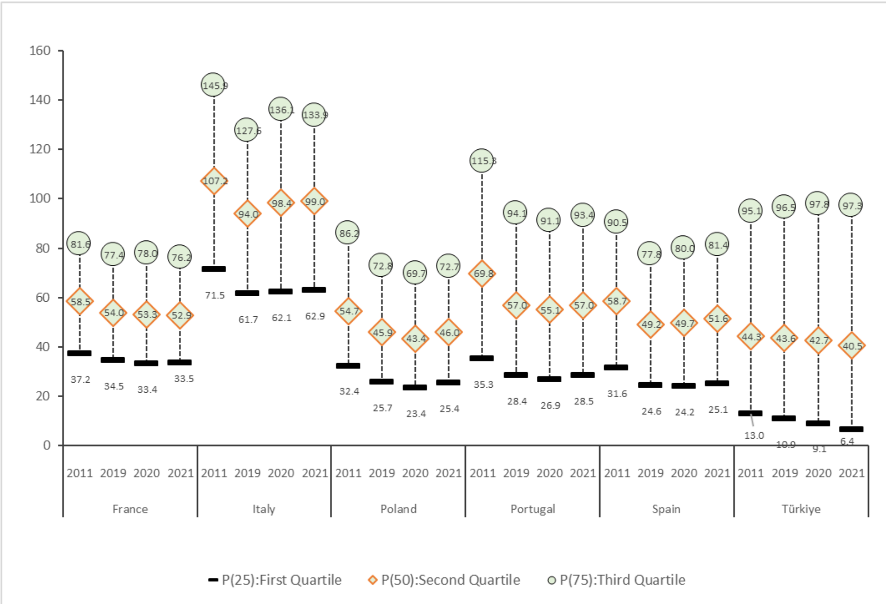


Figure 9 – Quartiles of the DPO distribution over time by country, (in days)



P(75): Third quartile → 25% of the companies face DPO greater than or equal to third quartile

P(50): Second quartile → Half of the companies face DPO greater than or equal to median value

P(25): First quartile → 25% of the companies face DPO less than or equal to first quartile

Likewise, the percentage of companies that have 90 days and over DSO values have reached low levels compared to the past (Figure 9). These over 90 days companies have the lowest percentages in Poland followed by France and the highest in Italy. Similar conclusions can be reached for DPO (Figure 10).

Figure 10 – Percentage of companies with DSO over 90, by country (in days)

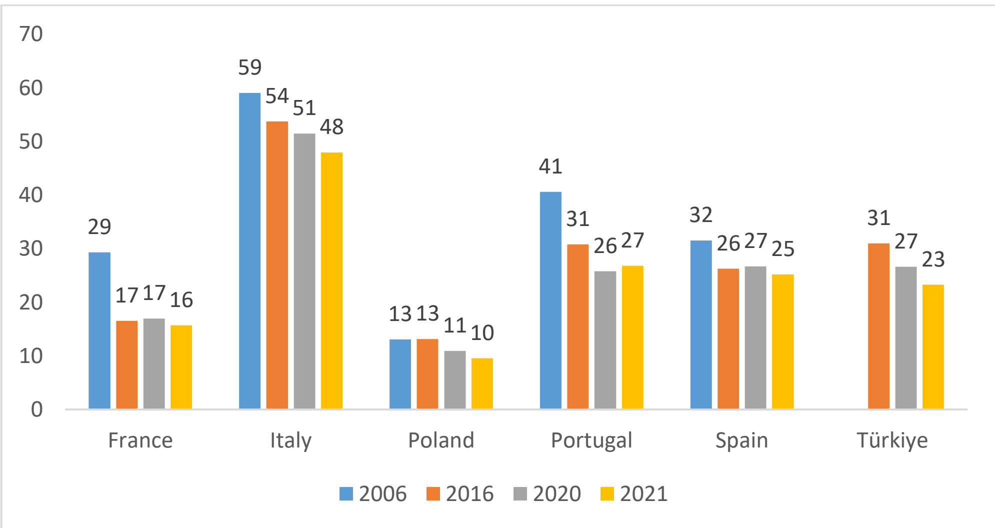
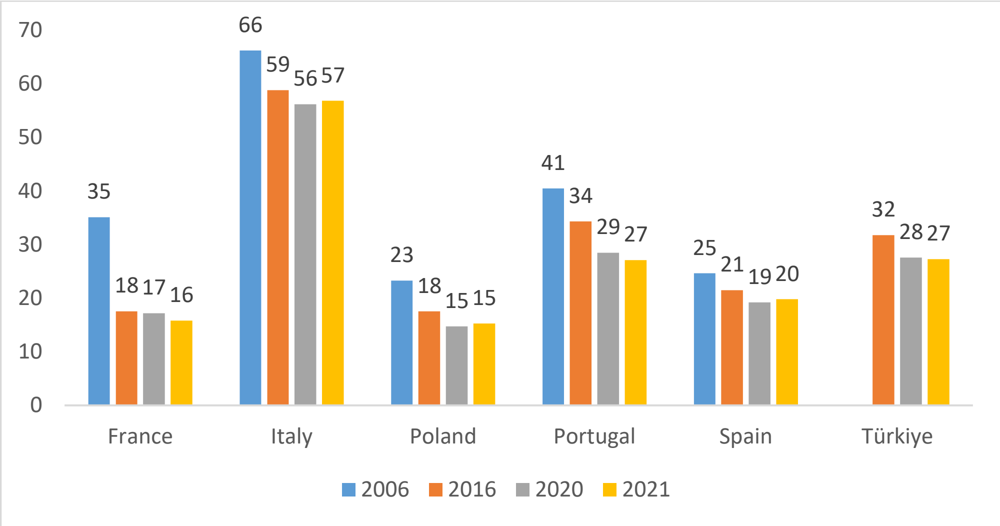


Figure 11 – Percentage of the companies DPO over 90, by country (in days)



Annexes

Annex I: Methodology

Data description

Like previous research projects of the FSA WG, this one has been conducted on the basis of extensive samples of financial statements included in the databases managed by each country. For this study we have only considered entities belonging to the non-financial sector, which is mainly composed by the legal forms of corporations and cooperatives. By definition, sole proprietors are not included in this study as they are not considered as part of the non-financial sector, according to the *European System of National and Regional Accounts* (ESA 2010).

The database covers a time span ranging from 2000 to 2021, which is the most recent year with available data for all countries. This study uses individual financial statements and focuses on the manufacturing, construction, and trade sectors, because these branches are amongst the most homogeneous ones in terms of activity and market conditions.

This study follows the EU Commission Recommendation concerning the definition of micro, small, medium-sized, and large enterprises, by using the turnover criterion. The thresholds are deflated using the Harmonized Index of Consumer Prices (HICP) of the Euro area. Year 2015 was selected as the base year for calculations. For Poland and Türkiye, the threshold values were converted into the national currencies by using each country's real effective exchange rate versus the euro area-18 trading partners. Micro-corporations have been excluded from the analysis, because these firms are not directly comparable across countries due to different data collection methods and suffer from outliers and ratio volatility.

Ratio Definition

FSA WG decided on a net approach (net amount of money exchanged with the clients/suppliers of the companies by prepayments)

Days Sales Outstanding (DSO) is the average number of days the customer receivables are "on the books". The lower DSO, the sooner the firm tends to be paid by its customers.

Numerator	360X (Trade receivables-customer prepayments)
Denominator	Net turnover

Days Payables Outstanding (DPO) is the average number of days a company takes before paying its suppliers. The lower DPO, the faster a company pays its trade credit.

Numerator	360X (Trade payables-advances to suppliers)
Denominator	Purchases

Trade Credit Balance (TCB) is the difference between days sales and days payables outstanding. The lower the TCB, the more successful the company to manage its liquidity.

Numerator	360X [(Trade receivables-customer prepayments)- (Trade payables-advances to suppliers)]
Denominator	Net turnover

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

$$P25(DSO\ or\ DPO) - 6 \times IQR$$

$$P75(DSO\ or\ DPO) + 6 \times IQR$$

P25: 25^{th} percentile (or first quartile)

P75: 75^{th} percentile (or third quartile)

IQR: Interquartile range (which is equal to P75-P25)

Annex II – Participating countries and sector/size criteria

Participating Countries	Code
France	**FR**
Italy	**IT**
Poland	**PL**
Portugal	**PT**
Spain	**ES**
Türkiye	**TR**

Sector	Code	NACE Rev.2
Manufacturing	**C**	C
Construction	**F**	F*
Trade	**G**	G
Motor Vehicle Trade	**G-45**	G-45
Wholesale Trade	**G-46**	G-46
Retail Trade	**G-47**	G-47
Total	**To**	To

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

		Sales Thresholds* in 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 companies by country and size (2021)

Country	Small	Medium	Large	Micro	Total w/o Micro	Total
France	172.378	51.399	14.662	206.534	238.439	683.412
Italy	108.980	43.972	12.030	263.057	164.982	593.021
Poland	17.862	10.556	4.536	11.647	32.954	77.555
Portugal	28.353	6.865	1.553	357.042	36.771	430.584
Spain	66.351	15.823	3.204	525.691	85.378	696.447
Türkiye	162.673	49.309	12.777	800.429	224.759	1.249.947

Annex IV – Number of companies by country and sector (2021, micro companies excluded)

Country	Construction	Manufacturing	Motor Vehicle Trade	Retail Trade	Wholesale Trade	Trade	Total
France	15.573	22.435	7.852	22.868	23.421	54.141	92.149
Italy	8.604	31.767	3.432	6.706	17.942	28.080	68.451
Poland	1.620	6.391	543	1.426	3.675	5.644	13.655
Portugal	1.753	4.616	894	2.541	4.576	8.011	14.380
Spain	3.859	10.699	2.213	4.189	12.352	18.754	33.312
Türkiye	7.726	28.746	4.365	11.282	34.958	50.605	87.077

Annex V – Maximum suppliers payment period permitted by law

		Maxiumum suppliers payment period (days) permitted by law					
Country	**Legislation**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013 and onwards**
France (1)	**Law LME 2008-776**	60	60	60	60	60	60
Italy (3)	**Law 1/2012**						60
	Law 192/2012						60
Poland (4)	**Law 139/2003** **Law 403/2013**	30	30	30	30	30	30/60
Portugal (5)	**Law 62/2013**						60
Spain (6)	**Law3/2004**	60	60				
	Law15/2010			85	85	75	60
Turkey (7)	**Law 6102/2011**				60	60	60

(1) The maximum legal payment period is 30 days for road freight transport and car rental, in accordance of the Law n°2006-10 enacted in 2006. It is 30 and in some cases 20 days for perishable goods.

(2) In response to the Directive 2011 /7/EU Germany enacted a law in 2014, which states a payment period of 60 days for B2B. Before that, there was no law especially for B2B but an overall payment period of 30 days.

(3) Law 1/2012 applies to food retailers vs. food producers. Law 192/2012 is the adoption of Directive 2011/7/EU.

(4) From 2013 and onwards, for public companies, the payment period is 60 days, and for private it is 30 days.

(5) Despite the 60 days rule, the Portuguese Law (like the Directive 2011/7/EU) says that there may be circumstances in which undertakings require more extensive payment periods. It should therefore remain possible for the parties expressly agree on payment periods longer than 60 calendar days, provided, however, that such extension is fair to the creditor.

(6) Modified in 2010 response to the economic crisis with high levels of late payments, since it had a low applicability in the business reality.

(7) It should be possible for the parties expressly agree on payment periods longer than 60 calendar days, if such extension is fair to the creditor. However, the payment period shall not exceed 60 days in cases where the creditor is small or medium enterprises or agricultural or animal producer.