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News release:

RECENT TRENDS IN CUSTOMER AND SUPPLIER PAYMENT PERIODS:

A Statistical Analysis based on Accounting Data

FSA (Financial Statement Analysis) WG

European Committee of Central Balance Sheet Data Offices (ECCBSO)

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1. Motivation

Trade credits play a major role in the financing of the companies, and an essential financial device in business. The motivation for the creditor is often a marketing consideration for further business relationships in the future, while for the debtor, trade credit may be used as an alternative to other credit channels. It gives the company the time to control the purchased goods or services in due time or the possibility of using an asset as input in the production process before it has been paid.

However, these business-to-business payments only played a secondary role in financial statement analysis in the past. That is why Financial Statement Analysis Working Group (FSA WG) assesses the trade credit collection and payment periods by means of two key financial ratios: Days Sales Outstanding (DSO) and Days Payables Outstanding (DPO).

This news release aims at presenting the most recent trends in trade credits of European non-financial corporations, using accounting information provided by financial statements. Results relate to three sectors, all sizes except micro and the eight countries participating in the working group: Belgium, Germany, France, Italy, Poland, Portugal, Spain and Turkey. This report covers the results of the previous report[1] and extends the period of analysis to 2017 (the latest year for which data are available).

2. Summary Table and Key Results

The table below is the overview of DSO and DPO in 2017, in terms of weighted mean (WM) and quartiles (Q1 to Q3). These indicators show us different results among the countries: some of them have wider interquartile range (Q3-Q1) than others have, or indicate higher or lower weighted mean. FSA WG analysis allows a homogenous comparison (in terms of values and trends) of DPO and DSO in the major European countries according to company size and sector.

Table 1 – DSO and DPO (quartiles and weighted means, 2017), by country (micro companies excluded)

DSO	Q1	Q2	Q3	WM
Belgium	25	52	78	49
France	12	47	77	44
Germany	13	25	41	20
Italy	50	95	136	75
Poland	22	44	69	41
Portugal	25	65	104	58
Spain	26	59	92	46
Turkey	21	58	108	62

DPO	Q1	Q2	Q3	WM
Belgium	32	54	83	64
France	36	57	80	60
Germany	11	25	44	25
Italy	68	103	139	90
Poland	29	49	77	56
Portugal	31	61	99	64
Spain	29	55	84	61
Turkey	17	54	109	59

[1] https://www.eccbso.org/wba/pubblica/pubblicazioni/file/NEWS%20RELEASE_Recent%20trends%20in%20customer%20and%20supplier%20payment%20periods_updated%20with%202016%20data.pdf

There are some key ideas that can be kept in mind from our study concerning the customer and supplier payment periods of non-financial corporations. Likewise, the previous news release, the shortest payment days are observable in Germany, whereas longest ones are observable in Italy, other countries showing intermediate values. As was already concluded in previous works of the Working Group, this variety of behaviors can be explained by many factors: at the macroeconomic level, the difference in legislations 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.

In 2017, large companies have the shortest days in terms of customer payments and the difference between large firms and small and medium sized ones is more obvious in customer than supplier payments. Construction is the sector with the longest payment days for almost all countries and the highest volatility through the observed period. In 2017, more than 50% of companies in all countries, except Italy and Portugal, have average payment periods below the legal limits, exceeding 75% in Germany.

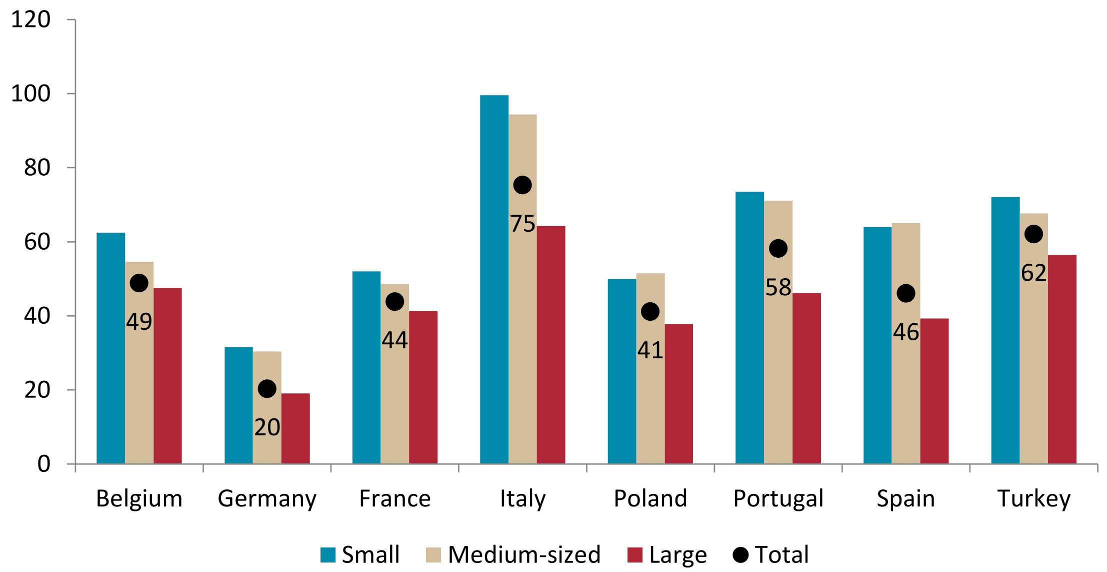
Most countries have managed to decrease all quartile values of these indicators from 2008 to 2017. In 2017, interquartile ranges are lower for supplier than for customer payments. Some countries have seen an increasing percentage of companies with payment periods exceeding 90 days. However, we can observe the decline in both customer and supplier payments over 90 days for Portugal, Spain and France from 2008 to 2017.

3. Detailed results

3.1. DSO and DPO results in 2017, by sector and size

Figures 1 and 2 show the weighted means of DSO[2] for all countries at size and sector breakdown. The shortest delays belong to large companies, however in some countries like Belgium and France, there is a small dispersion between size classes. In Spain, Italy and Portugal the differences between size classes are more significant, mainly between large companies, on one hand, and small and medium-sized ones, on the other.

Figure 1 – DSO (weighted means, 2017), by country and size (micro companies excluded)

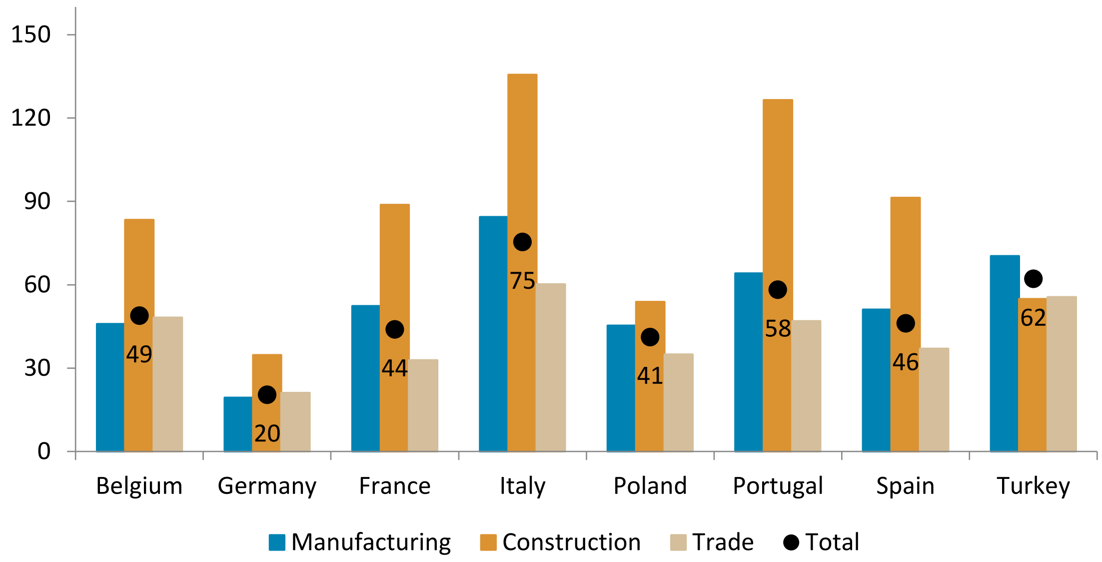


Italian and Turkish large companies have the highest DSO values. Small companies have the longest delays in almost all countries, except in Spain and Poland (with very small differences when compared with medium-sized companies). Overall, small and medium-sized companies have similar collecting behaviors, which are separated from large companies.

DSO by sector show that construction has the longest delay for almost all countries except Turkey. Belgium and Germany present their lowest DSO values in the manufacturing sector, while for all the other countries the trade sector shows the lowest results.

[2] Micro companies are excluded.

Figure 2 – DSO (weighted means, 2017), by country and sector (micro companies excluded)



Figures 3 and 4 show weighted means of DPO for all countries at the same breakdown. Small companies have the highest DPO averages in all countries. Compared to Figure 1, we observe that DPO averages are higher than DSO for almost all countries. DPO values can be lower than DSO when the sectors tend to work with prepayments. If similar collecting behavior of small and medium size was observed for DSO values, it is not the case for DPO.

Figure 3 – DPO (weighted means, 2017), by country and size (micro companies excluded)

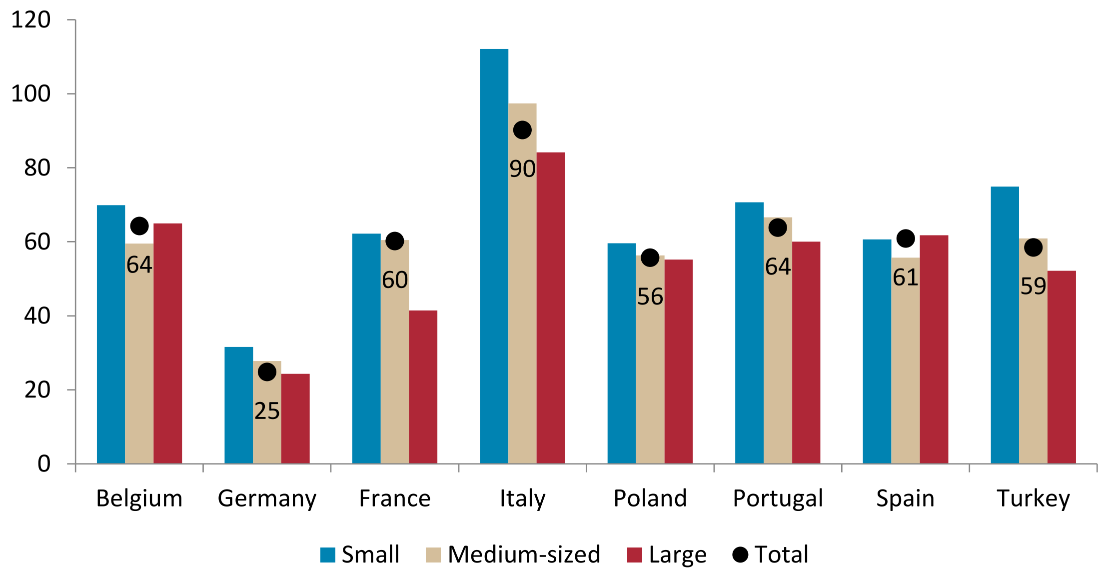
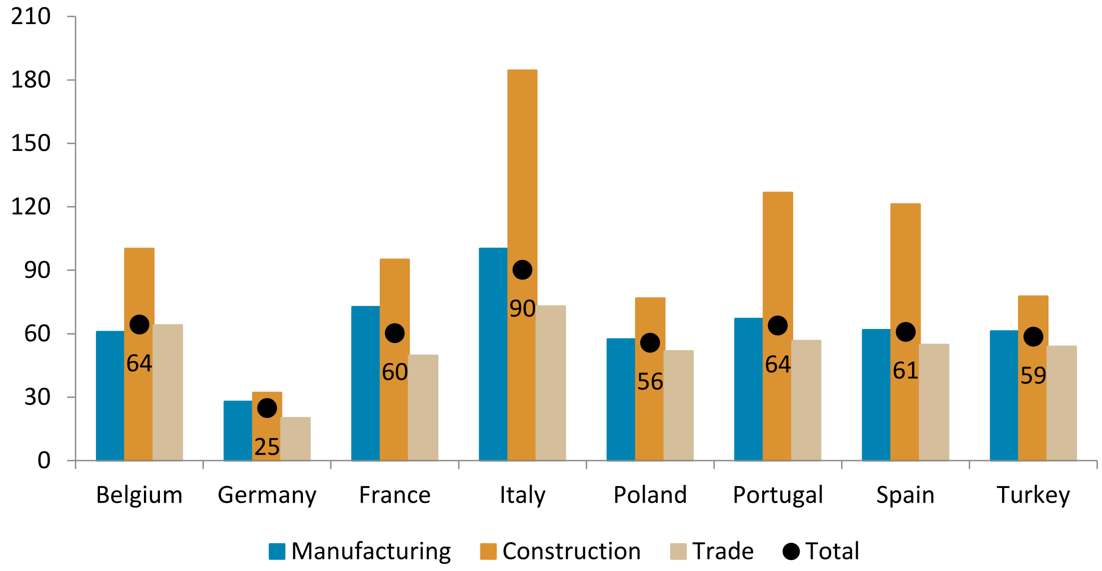


Figure 4 – DPO (weighted means, 2017), by country and sector (micro companies excluded)



In line with the DSO results, the construction sector has the highest DPO values. For almost all countries, the trade sector has the lowest DPO as expected from the nature of the business.

Table 2 displays the trade credit balance (TCB), which shows the liquidity advantage, calculated from the difference between DSO and DPO (see **Annex 1**). Negative figures are highlighted for the main sectors (manufacturing, construction and trade). For the majority of the countries, TCB is negative in the trade sector. This result is related to the retail trade sector, which has the lowest TCB; in this sector, payables are usually higher than receivables. The manufacturing sector has a positive TCB for most of the countries. Some countries seem to easily finance themselves through trade credits. This is the case for Poland, Spain, Belgium and Italy, which have negative TCBs in two of the three main sectors.

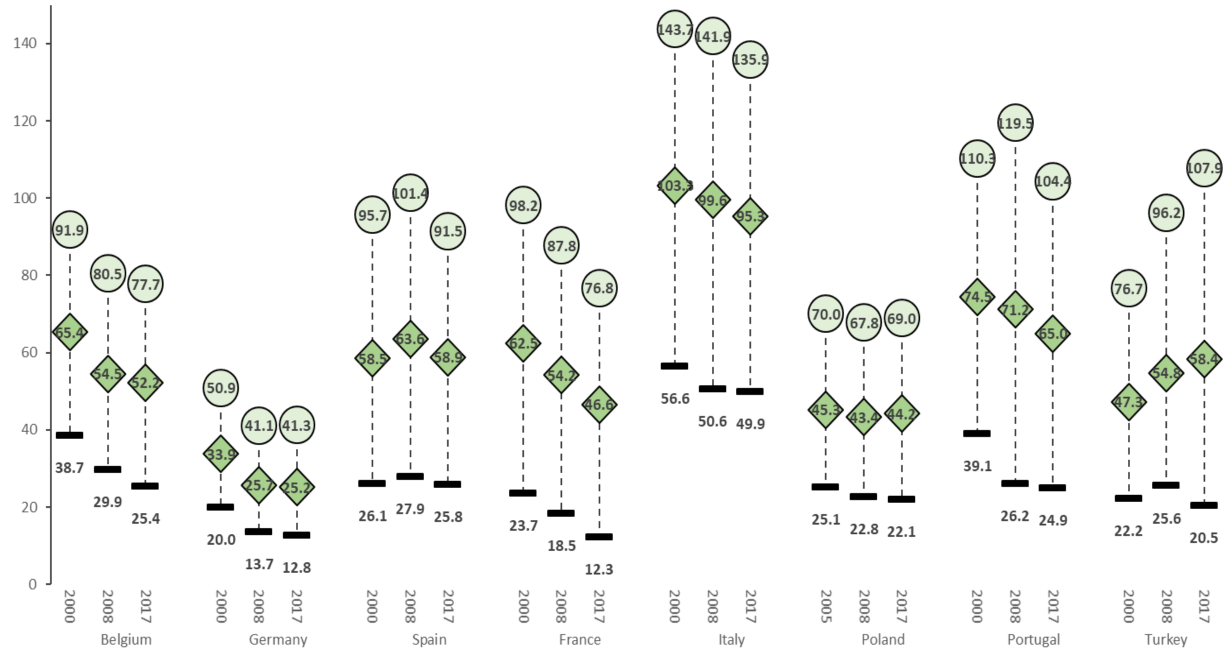
Table 2 – Trade Credit Balance (TCB) (weighted means, 2017), by country and sector (micro companies excluded)

2017		Belgium	France	Germany	Italy	Poland	Portugal	Spain	Turkey
Sector	Code	BE	FR	DE	IT	PL	PT	ES	TR
Manufacturing	C	-6	11	1	6	1	11	0	20
Construction	F	6	38	13	-1	-6	35	-1	-14
Trade	G	-12	-9	4	-6	-10	-4	-11	8
Motor Vehicle Trade	G-45	-14	-23	3	-26	-6	-18	-23	11
Wholesale Trade	G-46	-7	4	9	16	2	19	8	16
Retail Trade	G-47	-28	-30	-13	-46	-38	-38	-37	-23

3.3. DSO and DPO, comparison between 2000, 2008 and 2017

This section focuses on the comparison between three years. Figure 5 and 6 exhibits the quartile measures for DSO and DPO in 2000[3], 2008 and 2017. The DSO distribution shows that in Belgium, France and Italy, all quartile values decreased between 2000 and 2017. In 2017, the lowest quartile of France become very close to that of Germany. We can also observe an increase in all quartiles between 2000 and 2008 for Spain and Turkey. In 2017, all quartiles values decreased for Spain; for Turkey,[4] the interquartile range has widened. For most of the countries, the lowest DPO quartile is higher than that of DSO and interquartile ranges are lower for DPO figures. In 2017, the lowest ranges belong to Germany and France; the median DPO values decreased for all countries except for Italy and Turkey.

Figure 5 - Quartiles of the DSO distribution, by country: values for 2000, 2008 and 2017 (micro companies excluded)



[3] The earliest available data for Poland starts from 2005

[4] The data of Turkey has a break from the year 2009 due to the transformation from sample to administrative records. The selected sample until 2009 reflects financially healthier corporates with positive loan balances, whereas after 2009 the indicators show the result of all companies. That may be one of the reason of increase in DSO, DPO or interquartile range of Turkish figures between 2008 and 2017.

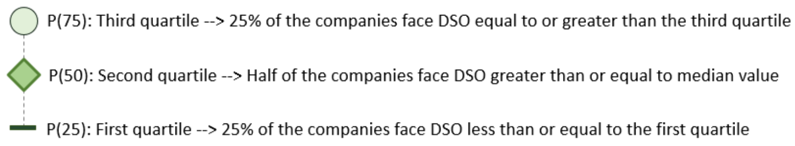
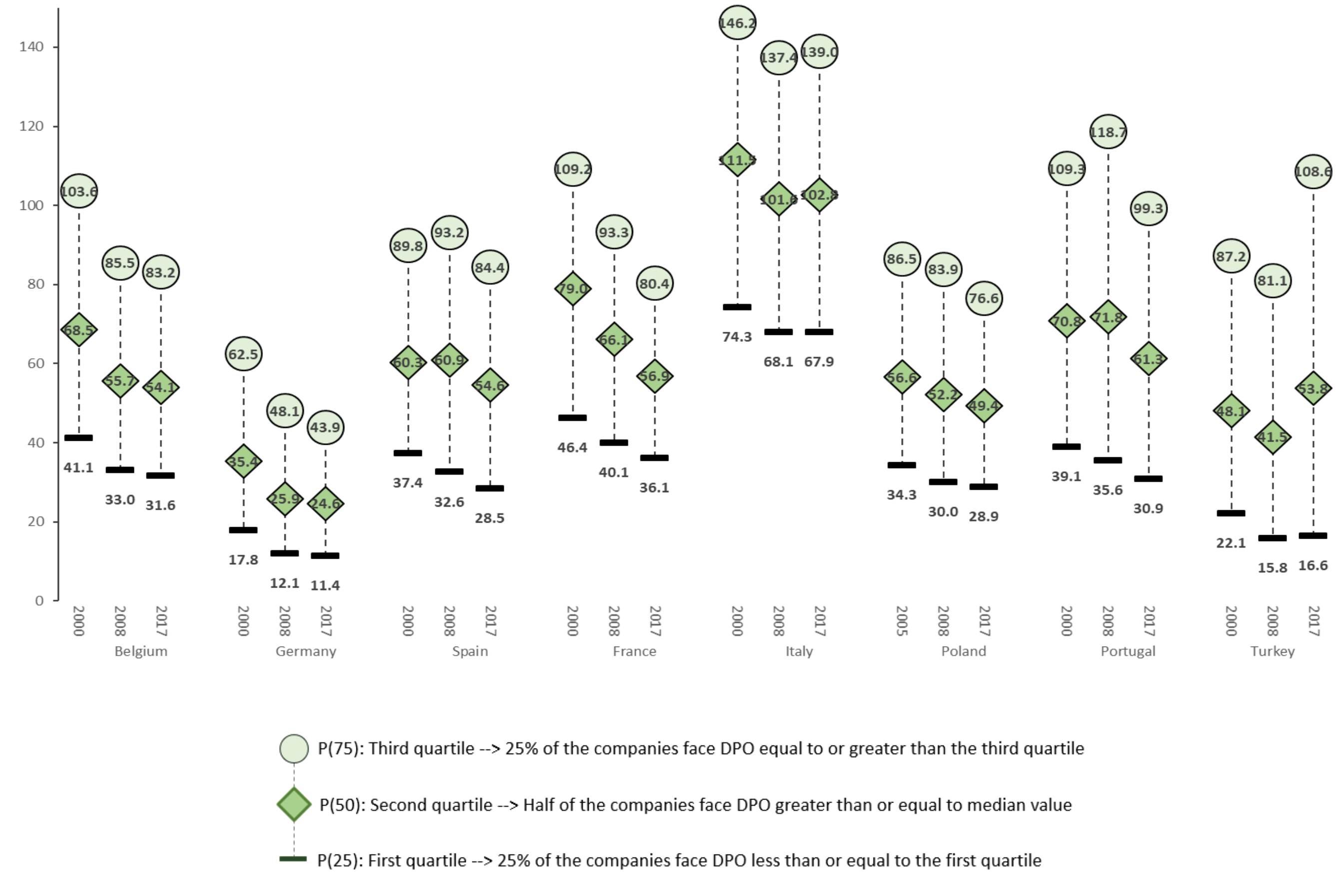


Figure 6 – Quartiles of the DPO distribution, by country: values for 2000, 2008 and 2017 (micro companies excluded)



Due to the effect that late payments have on the liquidity and survival of companies, mainly on SMEs, national governments, according to European Directives, have established laws to limit the maximum payment period allowed in commercial transactions. These laws are summarized in Table 3, which show a convergence of payment limits from 2013 onwards due to the transposition of the 2011/7/EU Directive. The comparison of this table with the information in Figures 5 and 6 shows that in 2008 around 50% of companies in Germany, Spain and France complied with the current legislation. In 2017, more than 50% of companies in all countries except Italy and Portugal have their average payment periods below the legal limits, exceeding 75% in Germany.

Table 3 – Maximum suppliers payment period (days, business to business – B2B) allowed by law, by country

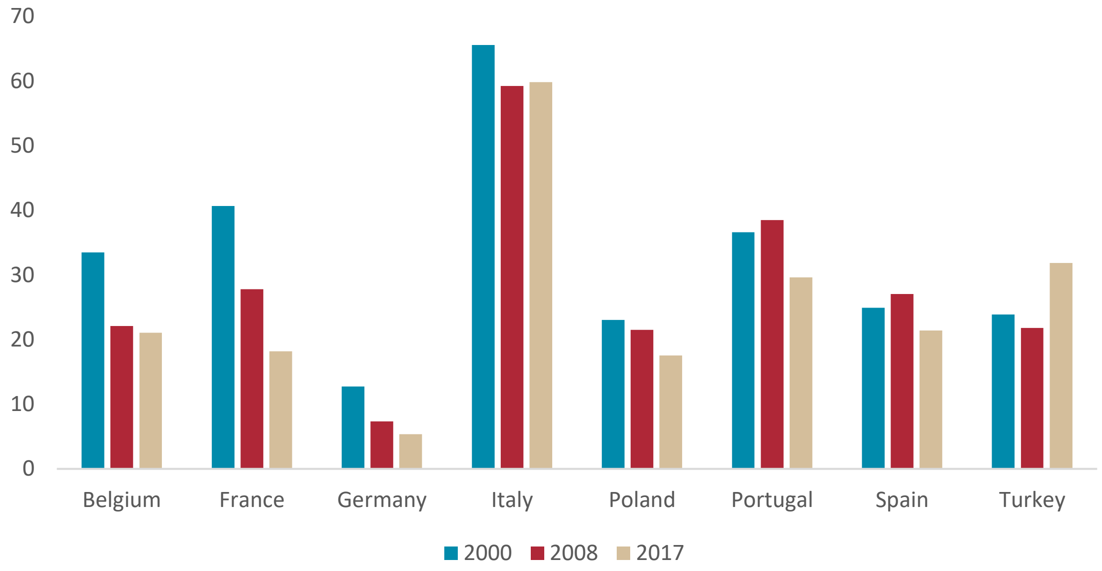
Country	Legislation	Maximum suppliers payment period (days) permitted by law (B2B)					
		2008	2009	2010	2011	2012	2013 and onwards
Belgium (1)	Law 02/08/2002 (1*)	30	30	30	30	30	
	Law 22/11/2013(1**)						30/60
France (2)	Law LME 2008-776	60	60	60	60	60	60
Germany (3)	Law 286 BGB	30	30	30	30	30	60
	Law 271a BGB/ 2014						
Italy (4)	Law 1/2012						60
	Law 192/ 2012						60
Poland (5)	Law 139/ 2003	30	30	30	30	30	30/60
	Law 403/ 2013						
Portugal (6)	Law 62/2013						60
Spain (7)	Law 3/2004	60	60				
	Law 15/2010			85	85	75	60
Turkey (8)	Law 6102/2011				60	60	60

(See **Annex 5** for details.)

Figures 7 and 8 show the percentages of companies that have DSO and DPO over 90 days. We can observe the decline in both customer and supplier payments over 90 days for Portugal, Spain and France.

Figure 7 – Percentage of companies with DSO over 90 days, by country in 2000, 2008 and 2017 (micro companies excluded)

Figure 8 – Percentage of companies with DPO over 90 days, by country in 2000, 2008 and 2017 (micro companies excluded)



Annexes

Annex I: Methodology

Data description

This FSA WG research project, like the previous ones, has been conducted based on extensive samples of financial statements included in the databases managed by each country. For this study, we consider 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 observations cover a time span ranging from 2000 to 2017, which is the most recent year with data available 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 is selected as the base year for calculations. For Poland and Turkey, the threshold values are converted into the national currencies by using each country's real effective exchange rate versus the Euro Area-18 trading partners. Micro companies are excluded from the analysis, because these firms are not directly comparable across countries due to different data collection methods and suffer from outliers and volatility in the ratios.

Ratio Definition

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

Days Sales Outstanding (DSO) is the average number of days the customer receivables is "on the books". The lower DSO means the sooner the customers pay to firms.

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 in managing 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, are excluded:

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

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

P25 (or Q1): 25th percentile (or first quartile)

P75 (or Q3): 75th percentile (or third quartile)

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

Annex II – Participating countries and sector/size criteria

Participating Countries	Code
Belgium	**BE**
France	**FR**
Germany	**DE**
Italy	**IT**
Poland	**PL**
Portugal	**PT**
Spain	**ES**
Turkey	**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"

Sizes	Code	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

YEAR	COUNTRY	Large	Medium	Small	Total without micro	Micro	Total
	Belgium	1,571	4,052	1,974	**7,597**	1,138	8,735
	France	5,219	17,515	56,664	**79,398**	64,424	143,822
	Germany	4,209	7,631	8,663	**20,503**	5,469	25,972
	Italy	4,440	16,478	39,399	**60,317**	99,466	159,783
	Poland	833	4,098	7,738	**12,669**	6,092	18,761
	Portugal	570	2,351	9,953	**12,874**	131,027	143,901
	Spain	1,133	3,859	20,534	**25,526**	177,957	203,483
2017	Turkey	4,096	18,260	57,600	**79,956**	154,392	234,348

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

YEAR	COUNTRY	Manufacturing	Construction	Trade	Total	Motor Vehicle Trade	Wholesale Trade	Retail Trade
	Belgium	2,327	929	4,341	7,597	732	2,922	687
	France	21,142	13,030	45,226	79,398	6,667	21,172	17,387
	Germany	8,845	2,926	8,732	20,503	1,527	5,693	1,512
	Italy	29,135	5,662	25,520	60,317	3,185	16,481	5,854
	Poland	6,244	1,511	5,636	13,391	572	3,640	1,424
	Portugal	4,342	1,207	7,325	12,874	843	4,160	2,322
	Spain	8,248	2,325	14,953	25,526	1,611	9,885	3,457
2017	Turkey	30,242	8,636	41,078	79,956	2,882	29,390	8,806

Annex V – Explanation about legislation in countries

(1*) From 2002 onwards (Directive 2000/35/EU), the common delay in B2B transactions is maximum 30 days, except express agreement between parties.

(1**) Since the Law of 22 Nov 2013 (Directive 2011/7/EU), the delay in B2B transactions is maximum 30 days, but firms can agree on a longer period (even more than 60 days, which is the maximum delay according to the EU directive) if it can't be considered as unfair for the creditor.

(2) 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.

(3) 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.

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

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

(6) 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.

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

(8) 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.