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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

News release:

Customer and supplier payments periods and financial distress

Payments periods are different between countries

Some analysis have been developed within FSA-WG in order to provide insights about days sales and payables outstanding (DSO and DPO). The investigation allowed us to conclude that customer and supplier payment periods differ between countries, probably due to different payment traditions, legal environments, corporate structures or commercial negotiating policies. Nevertheless, also the business cycle seems to impact these indicators, as the DPO and DSO were seemingly influenced by the recent international crisis.

This note presents the results gathered in an *ad hoc* analysis, which had the purpose of answering the question if the customer and supplier payment periods were related with corporations' financial distress. In fact, with the rise in bankruptcies and insolvencies over the recent years, it was considered useful to study whether the payment periods could be a symptom of financial vulnerability of firms.

For answering this question, six of the FSA-WG participating countries could collect data related with the failure of corporations: Belgium, France, Italy, Portugal, Spain and Turkey. Then, by using individual data, we tested the differences between failing and non-failing corporations days sales outstanding (DSO) and days payables outstanding (DPO).

Failing firms have larger payment periods than non-failing

In most of the cases, DPO and DSO are larger for failing firms than for non-failing firms. On the one hand we observe that the smaller size classes' corporations present more significant differences between the payment periods than the larger ones. On the other hand the differences are higher for supplier payment periods than for customer payment periods.

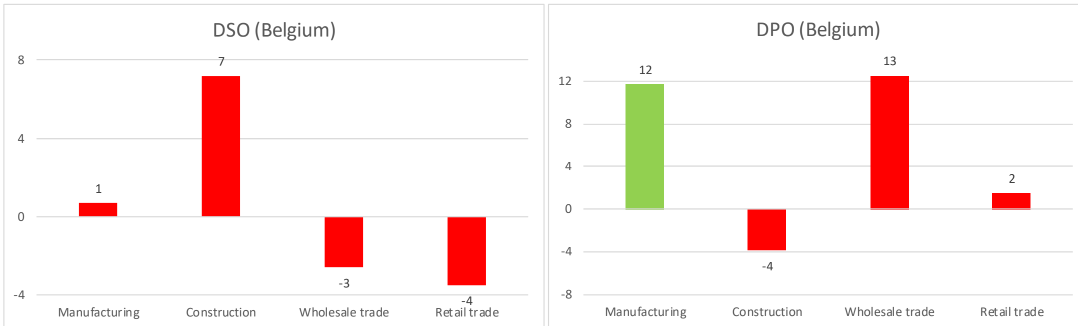
The results display that DSOs and DPOs might help detecting firms in financial distress, for the micro, small and medium size classes' firms. For larger companies it is not possible to draw a definite conclusion. It is possible, for example, that these companies could more easily influence their costumers to pay, by using their bargain power.

For almost all the analysed countries the statistical differences, between failing and non-failing firms' averages, were significant. It is interesting to notice that the differences between the groups are larger in payments to suppliers' periods. This payment periods probably depend more on the financial situation of firms than the customers' payment periods. So, firms in financial distress probably late their payments to suppliers.

Regarding the fact that the methodologies and detail present is somehow different between the countries, the results are presented for each country separately.

In the last part of the document, a brief methodological appendix is presented.

Chart 1. Belgium – Differences of averages for failing and non-failing firms (large firms)[1]



p-value <= 0.2 the difference is statistically significant

p-value > 0.2 the difference is not statistically significant

Chart 2. France – Differences of averages for failing and non-failing firms

[1] Green columns: probability of not rejecting the null hypothesis is below 20%; p-value <= 0.2 (the hypothesis of the equality of averages is rejected, so the groups have probably different payments periods);
Red columns: probability of not reject the null hypothesis is higher than 20%; p-value > 0.2 (the hypothesis of the equality of averages is not rejected, so the groups do not have probably different payments periods).
Null hypothesis is: the difference between the averages of the two groups (failing and non-failing) is zero.

Chart 3. Italy – Differences of averages for failing and non-failing firms

Chart 4. Portugal – Differences of averages for failing and non-failing firms

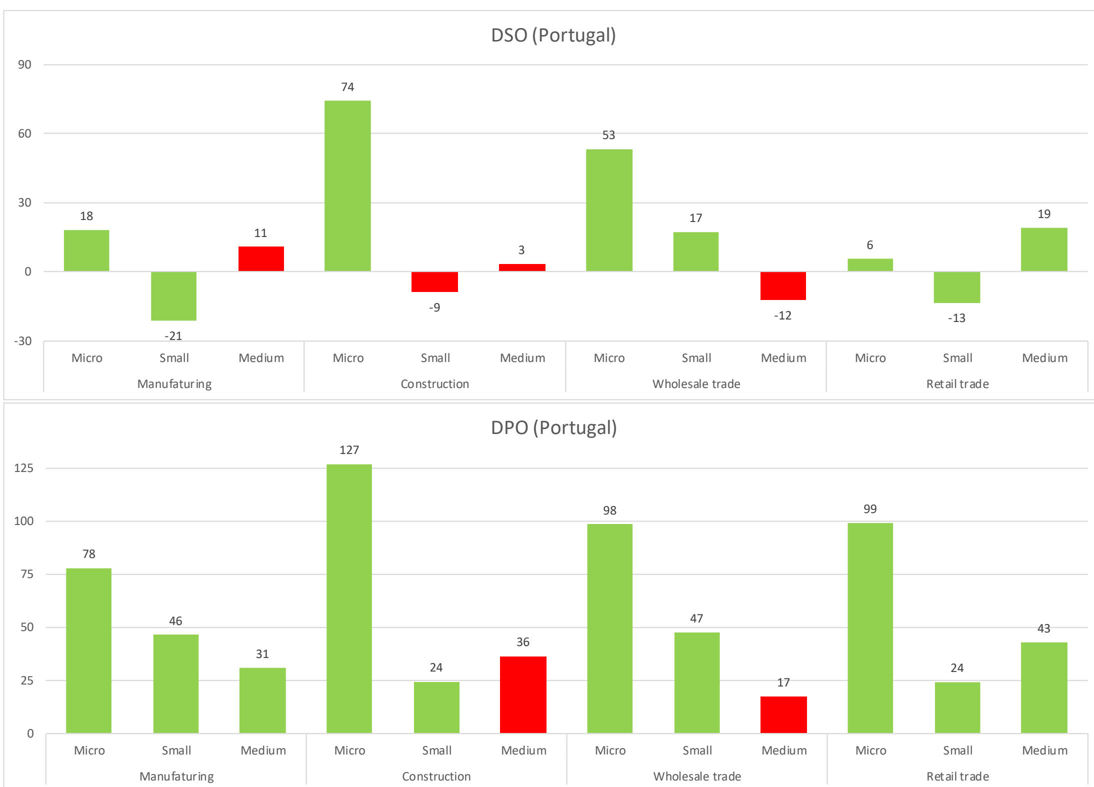


Chart 5. Spain – Differences of averages for failing and non-failing firms

Chart 6. Turkey – Differences of averages for failing and non-failing firms

Methodological appendix:

The tests were provided, whenever possible, by sector of activity (for manufacturing, construction, wholesale trade and retail trade) and size class (micro, small, medium and large firms).

The data were winsorised for the 5th and 95th percentiles in order to neutralise the impact of extreme values on the calculation of the average. The difference between the averages of the two groups was tested by means of the Student's t-test. The result of that test is synthesised by the p-value, which represents the probability of an error in the event of rejection of the assumption that the two averages are equal. In simple terms, that means that the lower the probability, the more credible it is that the two averages diverge.

The groups of failing and non-failing firms only included firms for which it was possible to calculate DPO and DSO.

In general the countries identified the bankruptcies proceedings in three years, beginning in the reference year[2] of the business data.

Some specificities in the definition of groups

BELGIUM

The analysis investigates the differences between failing and non-failing companies, a company being regarded as failing if bankruptcy proceedings are brought against it within 1 095 days (i.e. three times 365 days) following the year-end date of its annual accounts. All other companies are regarded as non-failing. This was the definition used for developing the financial health indicator included in the Belgian CBSO company files[3].

FRANCE

The various procedures relating to bankruptcy law differ in terms of their amicable (non-collective proceedings) or legal (collective proceedings, that is involving all of those with a stake in the firm's liabilities) nature and depending on whether they come into play upstream or downstream of the point at which payments are suspended (when the firm is no longer in a position to cover its current liabilities with its available assets).

<u>Legal procedures:</u>

• The safeguard procedure (*procédure de sauvegarde*) established by the Companies' Safeguard Act allows a legal unit to anticipate its difficulties and to reorganize itself in order to avoid the cessation of payments.

[2] Reference year, by country: Belgium 2011; France 2012; Italy 2012; Portugal 2013; Spain 2012; Turkey 2012.
[3] See Vivet D. (2011), *Development of a financial health indicator based on companies' annual accounts*, National Bank of Belgium, Working paper 213.

• The judicial settlement (*redressement judiciaire*) provides for a legal unit that is no longer able to pay its debts.

• The court-supervised liquidation (*liquidation judiciaire*) terminates the activity of the legal unit or organizes a transfer, either global or partial.

In this study we consider the “hard bankruptcies”, i.e the last two collective proceedings.

ITALY

The analysis investigates the differences between failing and non-failing companies in terms of credit periods; it considers the relevant default events filed with public registers such as Italian Chambers of Commerce, Land Registry Offices and Technical Tax Offices (real estate mortgages and seizures), which encompass:

- Bankruptcy and other legal proceedings (legal default)
- Debt restructuring (legal default)
- Missed or delayed disbursement of a contractually required interest or principal payment, if this information is available in public sources, such as relevant protest (on trade bill or check) or other prejudicial actions (judicial mortgages, distrait of property).

All other companies are regarded as non-failing. This is the public default definition adopted in Cerved in credit risk models development and, in particular, to develop Cerved Group Score and Cerved Group Rating[4].

PORTUGAL

For this analysis, only firms with insolvency processes initiated within the Ministry of Justice, in the three years after the reference year, were considered failing firms. All the others were classified as non-failing. Any creditor – employees, suppliers, banks, Government – or the firm itself may start a legal proceeding for an insolvency process.

There are firms using an out-of-court recovering process, through which a debtor in financial distress or in an imminent insolvency situation may begin negotiations with creditors, in order to reach an agreement for promoting its recovery. These firms were not included in non-failing group.

SPAIN

When a Spanish company goes through difficulties or its survival is threatened, there are different mechanisms of second chance or rearrangement of resources in the Spanish legal system to, as far as possible, protect the rights of creditors and debtors in the process of debt

[4] In 2008, Cerved obtained External Credit Assessment Institutions (ECAI) recognition from the Bank of Italy, becoming the first Italian credit rating agency whose credit ratings can be used for the calculation, based on standard methods, of prudential capital ratios of banks based on the Basel II Accord.

restructuring, either in order to continue with business, or to liquidate available resources in the most orderly way possible.

These mechanisms are mainly legislated by law 22/2003 of July 9 or bankruptcy law (and some others), giving rise to the so-called bankruptcy and pre-bankruptcy situations. For the elaboration of this note Banco de España has accessed to the list of companies in bankruptcy and pre-bankruptcy registered in the Mercantile Registers.

TURKEY

The falling companies are defined as the companies that have non-performing loans with banks and non-bank financial institutions for five years from 2012 to 2016. CBRT database covers the firms that have positive and sound loan balances with financial institutions; therefore for calculating DSO and DPO for falling and non-falling firms, financials from Enterprise Data System is used. Enterprise Data System is operated under Turkish Ministry of Science, Industry and Technology and covers the administrative records of various institutions and compiles the financials of enterprises on common standards.

Table 1. Number of firms included and percentage of failing and non-failing, by country

		Belgium			France			Italy			Portugal			Spain			Turkey		
Sector	Size	Non-failing	Failing	Total (number)	Non-failing	Failing	Total (number)	Non-failing	Failing	Total (number)	Non-failing	Failing	Total (number)	Non-failing	Failing	Total (number)	Non-failing	Failing	Total (number)
Manufacturing	Micro	-	-	-	93.7%	6.3%	14 296	91.5%	8.5%	4 331	96.5%	3.5%	28 291	97.5%	2.5%	46 358	99.7%	0.3%	58 193
	Small	-	-	-	95.0%	5.0%	14 091	92.8%	7.2%	17 512	97.3%	2.7%	2 585	94.2%	5.8%	6 562	99.6%	0.4%	10 089
	Medium	-	-	-	95.7%	4.3%	5 197	94.2%	5.8%	8 122	98.6%	1.4%	784	96.6%	3.4%	1 503	99.7%	0.3%	3 008
	Large	98.3%	1.7%	3 111	98.5%	1.5%	1 907	96.6%	3.4%	2 164	-	-	-	97.7%	2.3%	482	-	-	-
Construction	Micro	-	-	-	90.2%	9.8%	17 771	89.9%	10.1%	4 272	97.1%	2.9%	27 023	97.9%	2.1%	59 173	98.9%	1.1%	28 524
	Small	-	-	-	92.5%	7.5%	10 882	84.6%	15.4%	5 235	93.8%	6.2%	756	88.9%	11.1%	2 347	97.0%	3.0%	3 157
	Medium	-	-	-	96.6%	3.4%	1 758	82.1%	17.9%	953	95.7%	4.3%	141	88.8%	11.2%	338	94.6%	5.4%	539
	Large	97.9%	2.1%	1 395	99.1%	0.9%	319	80.9%	19.1%	157	97.1%	2.9%	34	97.1%	2.9%	103	-	-	-
Wholesale trade	Micro	-	-	-	95.6%	4.4%	11 143	92.7%	7.3%	5 118	97.3%	2.7%	23 351	98.5%	1.5%	41 820	99.3%	0.7%	54 558
	Small	-	-	-	97.2%	2.8%	14 024	93.2%	6.8%	16 321	98.0%	2.0%	2 857	97.0%	3.0%	8 835	99.2%	0.8%	11 408
	Medium	-	-	-	98.2%	1.8%	5 377	94.0%	6.0%	5 978	99.4%	0.6%	624	97.2%	2.8%	1 440	99.4%	0.6%	2 793
	Large	99.0%	1.0%	3 947	99.3%	0.7%	1 498	96.3%	3.7%	1 491	99.2%	0.8%	129	96.1%	3.9%	204	-	-	-
Retail trade	Micro	-	-	-	96.0%	4.0%	18 648	92.5%	7.5%	1 979	97.7%	2.3%	36 898	99.0%	1.0%	43 163	-	-	-
	Small	-	-	-	97.9%	2.1%	10 682	93.0%	7.0%	3 876	97.7%	2.3%	1 619	97.3%	2.7%	3 161	-	-	-
	Medium	-	-	-	99.6%	0.4%	2 416	95.0%	5.0%	1 001	97.9%	2.1%	239	97.6%	2.4%	253	-	-	-
	Large	98.6%	1.4%	1 047	98.5%	1.5%	594	96.0%	4.0%	297	-	-	-	97.2%	2.8%	109	-	-	-
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