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IMPACT ASSESSMENT

Accompanying the document

Proposal for a Council Directive

on a common system of financial transaction tax and amending Directive 2008/7/EC

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ANNEX 6

PROFITABILITY IN THE FINANCIAL SECTOR.

6.1. Profitability in the financial and non-financial sectors.

This annex uses information contained in the Orbis database on financial accounts of companies to investigate the profitability profile of the financial sector. The financial sector is defined as companies with a primary nace 4 digit code comprised between 6400 and 6699. The non-financial sector is composed of the other companies.

Profitability is defined as the return on shareholders' funds (RoE) and the return on assets (RoA). For each measure of the profit, 5 indicators are provided: the mean, the median, the standard deviation, the skewness and the kurtosis.

The standard deviation provides an indication of how values are concentrated around the mean. A high standard deviation corresponds to a large dispersion.

Next, the skewness is defined as
$$\frac{\frac{1}{n} \sum_{i=1}^n (x_i - \bar{x})^3}{\left(\frac{1}{n} \sum_{i=1}^n (x_i - \bar{x})^2 \right)^{3/2}},$$
 or the ratio of the third moment to the

standard deviation exponent 3/2. The Skewness of a distribution indicates its asymmetry. If negative, it is defined as left-skewed. It indicates that the tail on the left-hand side is longer than on the right-hand side. That is most of the observations are concentrated on the right and that the mean is driven down by a small number of small observations. Alternatively, when it is positive (or right-skewed), most observations are concentrated on the left with few extreme observations on the right.

Finally, the kurtosis is defined as
$$\frac{\frac{1}{n} \sum_{i=1}^n (x_i - \bar{x})^4}{\left(\frac{1}{n} \sum_{i=1}^n (x_i - \bar{x})^2 \right)^2} - 3.$$
 The kurtosis is an indication of how

many extreme observations are contained in the sample. A higher kurtosis indicates a higher presence of extreme observations (i.e. observations that diverge from the mean).

The results of the analysis for country-year pairs are presented in table (1). First, qualitatively, the choice of indicator between RoE and RoA does not change the relative performance of the financial and non-financial sector, that is if one indicator is higher in a sector compared to the other sector, then the same is true for the other indicator in almost all cases.

When considering RoE, the financial sector is more profitable than the non-financial sector in 47 of the 135 cases (i.e. 5 years times 27 Member States). The number is 45 cases when RoA is considered. The financial sector was more profitable than the non-financial sector in

10 Member States in 2005, in 9 in 2006, in 6 in 2007, in 8 in 2008 and in 14 in 2009. In particular, the sector was consistently more profitable in Greece, Spain, Hungary, Malta, Portugal, Romania, and the United Kingdom.

The results shall however be taken with extreme caution for several reasons. First, the sample is not necessarily representative because this annex uses all available information. For example, Belgium seems to be more complete than, say, Germany in terms of coverage of the total population of companies. Second, the number of observations varies across years. This means that we do not have a balanced panel. Third, the number of observations is small for several countries. This means that the presence of outliers will bear proportionally more on averages.

Table (1): Mean and Median Profitability per country and year.

MS	Year	Financial Sector							Non-Financial Sector						
		RoE			RoA				RoE			RoA			
		Number	Mean	Median	Sd	Mean	Median	Sd	Number	Mean	Median	Sd	Mean	Median	Sd
AT	2005	211	10.8	8.9	10.7	1.3	0.6	3.3	86	18.7	12.9	24.1	7.9	4.5	9.9
AT	2006	224	9.3	7.7	10.0	1.0	0.6	2.3	370	21.8	14.8	26.1	7.0	4.2	9.7
AT	2007	225	9.8	7.3	10.0	1.2	0.6	2.9	398	20.6	17.4	28.4	7.5	5.1	13.0
AT	2008	230	3.7	3.3	13.3	0.6	0.2	2.7	616	20.4	14.4	26.5	7.6	4.8	10.1
AT	2009	234	4.8	4.1	12.2	0.8	0.2	4.1	1,090	17.8	13.1	24.6	6.6	4.2	9.9
AT	Aver.	225	7.7	6.2	11.3	1.0	0.4	3.1	512	19.9	14.5	26.0	7.3	4.6	10.6
BE	2005	3,012	13.1	5.7	24.4	5.8	2.0	12.1	169,247	16.6	11.4	26.3	7.0	4.0	12.3
BE	2006	3,547	13.2	5.5	24.4	6.1	2.2	12.4	202,684	16.8	11.5	26.1	7.2	4.1	12.4
BE	2007	3,718	13.9	6.2	24.7	6.5	2.6	12.7	218,085	17.4	12.0	26.5	7.5	4.4	12.7
BE	2008	3,923	12.0	4.7	25.0	5.4	2.0	12.5	233,817	16.1	10.6	27.0	7.1	3.9	13.1
BE	2009	4,154	11.9	4.8	24.9	5.7	2.1	13.1	253,916	15.1	9.5	27.1	6.6	3.5	13.2
BE	Aver.	3,671	12.8	5.4	24.7	5.9	2.2	12.6	215,550	16.4	11.0	26.6	7.1	4.0	12.8
BG	2005	105	25.7	20.3	25.7	8.2	3.8	14.3	7,083	31.7	27.4	29.2	10.7	6.0	13.2
BG	2006	148	24.8	19.9	27.2	9.3	3.8	14.7	12,152	33.3	28.8	29.1	11.6	6.7	15.9
BG	2007	226	25.5	19.4	28.0	10.4	5.1	16.7	17,837	36.5	33.2	29.8	14.4	8.9	16.4
BG	2008	238	21.9	15.6	30.5	8.0	3.8	16.3	21,756	31.3	27.7	28.0	13.5	8.2	16.5
BG	2009	280	14.9	8.8	25.9	6.8	2.6	14.3	25,780	18.1	13.2	25.6	8.4	4.4	14.7
BG	Aver.	199	22.6	16.8	27.5	8.5	3.8	15.3	16,922	30.2	26.1	28.4	11.7	6.8	15.4
CY	2005	4	17.4	14.7	20.8	0.4	0.5	0.6	5	14.3	18.3	7.3	4.9	4.5	2.6
CY	2006	5	21.9	17.9	9.8	0.7	0.7	0.3	6	22.9	23.8	14.8	5.1	5.4	5.1
CY	2007	6	20.0	23.3	8.4	1.3	1.4	0.6	10	27.0	21.8	21.4	6.3	4.8	6.5
CY	2008	7	2.4	12.8	22.6	-4.6	0.1	12.3	10	21.5	27.5	16.1	6.8	6.2	6.5
CY	2009	7	20.5	15.4	24.4	5.8	0.9	13.2	12	12.6	13.7	12.6	4.6	4.1	6.4
CY	Aver.	6	16.5	16.8	18.5	0.7	0.7	8.1	9	19.7	21.0	15.2	5.5	5.0	5.6
CZ	2005	144	18.4	14.4	26.5	6.3	2.5	14.2	22,543	18.6	11.4	27.0	8.2	4.3	13.9
CZ	2006	171	15.4	12.8	19.9	5.2	2.1	10.6	28,633	20.0	12.5	27.8	8.7	4.6	14.4

MS	Year	Financial Sector							Non-Financial Sector						
		RoE			RoA				RoE			RoA			
		Number	Mean	Median	Sd	Mean	Median	Sd	Number	Mean	Median	Sd	Mean	Median	Sd
CZ	2007	192	16.2	11.3	23.3	5.7	2.3	10.7	34,236	20.7	13.5	28.1	9.3	5.0	14.8
CZ	2008	202	13.0	7.9	26.3	5.2	1.7	12.2	40,101	17.2	9.8	27.5	8.1	3.6	14.9
CZ	2009	224	16.2	9.8	27.1	6.6	2.9	13.9	46,662	13.3	5.5	27.4	5.7	1.9	14.1
CZ	Aver.	187	15.8	11.2	24.8	5.8	2.3	12.4	34,435	17.9	10.5	27.5	8.0	3.9	14.4
DE	2005	2,000	10.8	9.1	11.0	1.2	0.5	3.5	16,430	23.8	18.2	26.8	7.4	4.9	9.9
DE	2006	2,062	9.5	7.8	11.1	1.2	0.5	3.8	20,933	25.1	19.8	26.9	8.1	5.6	10.2
DE	2007	2,106	8.4	6.7	10.4	1.2	0.4	4.5	22,746	24.9	19.3	27.3	8.2	5.6	10.4
DE	2008	2,159	6.6	4.8	11.0	1.0	0.3	4.1	30,541	23.9	17.9	28.1	8.1	5.3	11.2
DE	2009	2,197	9.2	7.5	12.6	1.4	0.5	5.1	33,723	21.3	15.4	27.6	7.3	4.8	11.0
DE	Aver.	2,105	8.9	7.2	11.2	1.2	0.4	4.3	24,875	23.8	18.1	27.3	7.8	5.2	10.6
DK	2005	6,196	17.3	9.7	24.8	11.6	5.9	17.3	51,326	24.6	19.4	29.2	13.1	8.5	17.9
DK	2006	10,121	15.9	7.2	25.5	10.9	4.7	18.2	86,040	24.6	19.0	29.4	13.3	8.5	18.2
DK	2007	11,731	13.4	5.4	24.9	9.5	3.9	18.1	99,580	23.3	17.0	29.8	13.0	7.8	18.7
DK	2008	11,949	4.0	0.8	26.1	2.5	0.6	19.2	110,360	16.5	9.5	30.8	8.9	4.4	19.1
DK	2009	13,725	7.3	3.1	23.7	5.2	2.1	16.6	124,486	13.2	7.0	28.8	7.2	3.4	17.3
DK	Aver.	10,744	11.6	5.3	25.0	7.9	3.4	17.9	94,358	20.4	14.4	29.6	11.1	6.5	18.2
EE	2005	590	26.9	19.9	33.6	17.0	8.8	24.8	31,534	24.5	18.6	31.5	15.0	8.6	22.5
EE	2006	771	27.1	17.9	34.7	16.9	7.8	26.1	36,557	26.5	20.6	32.4	16.5	9.8	23.6
EE	2007	920	19.1	8.0	32.9	11.9	3.7	24.2	41,883	24.7	18.3	32.1	15.7	8.6	23.4
EE	2008	866	12.0	1.3	32.6	7.9	0.0	24.6	45,618	17.6	9.5	31.6	11.6	3.7	23.2
EE	2009	1,120	15.0	4.2	29.8	8.4	1.6	20.3	49,539	12.1	3.9	30.1	7.9	0.1	21.8
EE	Aver.	853	20.0	10.3	32.7	12.4	4.4	24.1	41,026	21.1	14.2	31.5	13.3	6.2	22.9
EL	2005	64	16.2	12.7	22.3	5.1	2.0	8.6	14,866	13.4	6.8	24.9	4.0	2.3	9.0
EL	2006	71	13.7	11.9	22.4	3.9	2.0	8.2	16,275	14.5	7.9	25.2	4.4	2.6	9.0
EL	2007	75	18.0	13.8	26.1	5.9	2.9	9.4	17,067	15.6	8.6	25.9	4.7	2.7	9.4
EL	2008	77	19.5	15.5	27.2	5.7	3.2	10.9	18,484	14.1	7.0	25.7	4.3	2.2	9.6
EL	2009	81	11.2	8.3	26.9	4.1	1.8	12.5	19,468	11.1	5.1	24.6	3.2	1.7	8.9
EL	Aver.	74	15.7	12.4	25.1	4.9	2.4	10.1	17,232	13.7	7.1	25.2	4.1	2.3	9.2
ES	2005	1,761	17.9	10.2	25.6	7.3	4.0	12.6	279,692	16.5	11.4	24.4	5.6	3.1	9.9
ES	2006	1,922	17.7	11.0	25.7	7.2	3.8	12.6	307,648	16.9	11.6	24.6	5.7	3.1	10.0
ES	2007	1,815	17.8	10.9	26.1	7.6	4.1	13.6	310,903	17.8	12.5	24.0	6.2	3.4	10.3
ES	2008	2,808	12.7	17.3	17.3	17.3	17.3	17.3	384,246	12.1	7.5	23.5	4.4	2.1	10.5
ES	2009	3,116	12.3	6.8	24.2	5.2	2.4	12.1	404,546	8.6	4.7	22.8	3.0	1.4	10.0
ES	Aver.	2,284	15.7	9.2	25.4	6.4	3.3	13.0	337,407	14.4	9.5	23.9	5.0	2.6	10.1
FI	2005	880	19.1	12.5	26.0	11.5	7.3	17.3	44,267	26.2	23.1	30.4	14.0	10.5	18.0
FI	2006	1,063	20.5	12.3	26.6	12.7	7.3	18.5	57,373	25.9	22.7	29.6	13.8	10.5	17.4
FI	2007	1,687	17.9	9.5	27.6	12.0	5.4	20.6	75,073	23.7	19.8	29.4	12.8	8.8	17.5
FI	2008	2,099	12.1	3.2	30.2	8.2	1.6	23.2	87,900	20.8	15.7	30.0	11.4	6.8	18.2

MS	Year	Financial Sector							Non-Financial Sector						
		Number	Mean	RoE		RoA		Sd	Number	Mean	RoE		RoA		Sd
				Median	Sd	Mean	Median				Median	Sd	Mean	Median	
FI	2009	2,515	14.0	5.1	27.5	9.5	2.9	20.8	98,575	17.5	11.1	29.9	9.4	4.8	17.7
FI	Aver.	1,649	16.7	8.5	27.6	10.8	4.9	20.2	72,638	22.8	18.5	29.8	12.3	8.3	17.8
FR	2005	3,922	17.6	10.5	27.3	8.0	4.3	14.2	382,336	26.5	21.7	30.0	10.3	7.3	13.5
FR	2006	4,791	18.0	10.4	27.2	8.6	4.5	14.7	466,651	27.1	22.2	30.3	10.6	7.5	13.9
FR	2007	5,545	18.2	10.6	27.8	8.8	4.7	15.1	521,123	28.0	23.4	30.5	11.1	8.0	14.2
FR	2008	6,360	16.6	9.2	28.2	7.9	4.2	15.2	578,152	25.7	20.8	30.9	10.3	7.1	14.5
FR	2009	7,492	15.6	8.3	27.5	7.5	3.8	14.4	655,703	23.1	17.9	31.3	9.3	6.2	14.7
FR	Aver.	5,622	17.2	9.8	27.6	8.2	4.3	14.8	520,793	26.1	21.2	30.6	10.3	7.2	14.2
HU	2005	512	18.8	15.4	26.7	10.2	6.2	16.6	115,363	17.1	11.2	27.8	9.4	5.1	17.4
HU	2006	241	22.6	20.1	23.2	10.2	7.3	12.0	46,339	19.9	14.2	25.1	8.6	5.4	12.5
HU	2007	476	21.6	17.0	27.9	10.5	6.7	16.1	98,866	18.6	12.3	27.2	9.5	5.3	16.4
HU	2008	569	19.8	14.1	29.6	9.8	5.7	16.9	108,357	17.5	10.8	28.1	9.1	4.8	17.3
HU	2009	1,035	16.9	10.6	30.3	8.6	4.0	18.4	203,419	14.9	8.2	28.7	7.6	3.5	17.7
HU	Aver.	567	19.9	15.4	27.6	9.8	6.0	16.1	114,469	17.6	11.4	27.4	8.9	4.8	16.4
IE	2005	186	19.6	14.1	24.9	7.4	11.4	12.8	4,730	20.3	6.2	29.3	11.4	2.2	19.8
IE	2006	212	19.1	14.6	24.8	5.7	12.6	12.0	5,400	20.8	6.6	29.4	11.5	1.7	19.6
IE	2007	294	17.9	13.9	23.3	5.3	11.4	10.6	6,237	19.9	6.0	28.7	11.0	1.3	18.8
IE	2008	344	18.4	9.9	27.8	5.2	8.8	11.5	7,166	15.9	4.2	28.9	8.8	1.1	19.1
IE	2009	459	17.2	6.7	27.5	4.5	8.3	12.0	9,066	14.2	2.7	30.2	7.6	0.4	19.6
IE	Aver.	299	18.5	11.8	25.7	5.6	10.5	11.8	6,520	18.2	5.1	29.3	10.1	1.3	19.4
IT	2005	1,953	14.2	8.2	22.7	3.8	1.3	8.5	291,491	23.8	18.5	29.8	5.2	2.9	8.8
IT	2006	2,137	15.6	10.2	24.0	4.3	1.5	9.3	322,930	25.7	20.5	30.4	5.7	3.2	9.2
IT	2007	4,202	10.6	5.7	23.0	3.6	1.3	10.6	494,947	19.9	14.0	31.0	4.7	2.3	10.6
IT	2008	4,456	8.5	3.4	23.7	3.0	0.9	11.2	554,326	17.1	10.2	30.2	4.1	1.8	10.7
IT	2009	4,834	8.0	2.5	23.7	2.5	0.6	10.5	628,180	14.8	8.1	29.8	3.4	1.5	10.4
IT	Aver.	3,516	11.4	6.0	23.4	3.4	1.1	10.1	458,375	20.2	14.3	30.2	4.6	2.4	10.0
LT	2005	8	24.8	24.3	19.0	11.7	11.1	10.5	878	25.5	20.9	25.3	10.8	7.7	12.6
LT	2006	11	30.0	27.2	24.0	14.7	11.5	12.6	1,003	29.2	24.6	26.0	12.1	8.9	12.7
LT	2007	11	28.4	30.4	32.3	14.7	18.9	13.0	1,055	28.9	25.5	26.6	12.4	9.7	13.0
LT	2008	11	30.1	26.9	30.3	9.7	5.2	10.1	1,262	21.1	16.6	28.8	9.3	5.9	13.8
LT	2009	12	24.7	24.3	30.9	10.4	8.0	16.3	1,308	11.5	6.4	25.9	4.9	2.4	13.0
LT	Aver.	11	27.6	26.6	27.8	12.2	10.9	12.7	1,101	23.3	18.8	26.5	9.9	6.9	13.0
LU	2005	74	18.8	17.5	13.8	1.6	0.7	4.6	197	25.3	19.7	27.7	9.6	6.6	12.3
LU	2006	79	20.6	18.5	15.2	1.6	0.7	3.9	297	23.0	16.9	26.1	8.7	6.6	11.3
LU	2007	93	19.3	16.9	16.7	1.7	0.7	2.6	337	24.0	17.8	29.5	8.8	6.4	12.4
LU	2008	96	12.5	12.0	18.4	0.9	0.5	2.5	374	18.8	13.2	28.1	8.0	4.8	13.1
LU	2009	100	13.6	12.6	15.5	1.1	0.7	2.9	505	19.7	12.8	27.8	7.8	4.6	12.2
LU	Aver.	88	17.0	15.5	16.0	1.4	0.7	3.4	342	22.1	16.1	27.8	8.6	5.8	12.3

MS	Year	Financial Sector							Non-Financial Sector						
		Number	Mean	RoE		RoA		Sd	Number	Mean	RoE		RoA		Sd
				Median	Sd	Mean	Median				Median	Sd	Mean	Median	
LV	2005	19	20.1	15.9	29.4	7.0	2.3	19.4	602	33.1	30.7	28.5	11.3	8.5	11.3
LV	2006	18	12.2	7.2	26.4	4.0	1.1	17.8	690	36.9	34.7	29.3	13.3	10.3	13.8
LV	2007	18	24.3	23.1	27.5	5.7	1.5	11.3	731	36.1	33.0	29.5	13.6	10.3	14.2
LV	2008	21	22.1	20.5	21.9	9.0	2.9	14.3	779	25.0	19.6	29.5	9.0	5.0	13.1
LV	2009	24	13.9	8.8	24.4	2.7	0.8	10.9	766	18.1	10.0	33.1	4.8	2.4	11.6
LV	Aver.	20	18.5	15.1	26.0	5.7	1.7	15.1	714	29.8	25.6	30.0	10.4	7.3	12.8
MT	2005	7	22.8	12.8	21.2	7.9	1.2	8.7	127	7.6	0.0	21.0	3.6	0.0	9.5
MT	2006	8	16.1	11.2	14.6	6.4	1.0	8.9	145	6.7	0.0	18.1	3.2	0.0	8.3
MT	2007	12	22.0	12.5	32.1	11.0	1.1	20.6	171	8.3	0.0	22.1	4.8	0.0	13.5
MT	2008	12	6.9	5.2	25.1	3.1	0.9	13.2	243	8.7	0.0	21.0	4.0	0.0	10.3
MT	2009	13	6.0	2.5	20.0	3.0	0.5	9.5	276	5.4	0.0	16.1	2.6	0.0	8.5
MT	Aver.	10	14.7	8.8	23.4	6.3	1.0	13.0	192	7.4	0.0	19.8	3.6	0.0	10.2
NL	2005	204	17.5	14.5	19.7	6.3	4.0	9.2	3,858	25.3	20.6	28.3	10.1	7.1	12.8
NL	2006	266	15.9	9.3	22.3	7.2	4.0	13.2	4,516	26.5	22.3	28.3	10.5	7.4	13.3
NL	2007	332	12.8	6.0	22.4	5.6	2.9	10.8	5,248	27.5	23.3	28.6	11.3	8.0	13.8
NL	2008	360	-1.3	0.0	27.7	-5.5	0.0	18.3	6,166	23.9	19.3	29.0	10.4	6.9	14.8
NL	2009	461	13.0	8.7	20.0	6.2	3.6	10.6	7,733	20.5	14.8	28.8	9.0	5.4	14.7
NL	Aver.	325	11.6	7.7	22.6	4.0	2.9	12.8	5,504	24.7	20.0	28.6	10.2	6.9	13.9
PL	2005	143	18.4	14.8	25.7	7.5	2.6	16.2	13,842	23.7	18.6	26.5	11.3	7.7	14.3
PL	2006	233	18.7	14.0	26.6	8.4	3.2	17.6	22,818	25.6	20.7	27.1	12.4	8.6	15.0
PL	2007	299	23.3	14.9	30.0	10.8	4.2	18.7	27,003	27.7	22.8	28.0	13.9	9.8	16.1
PL	2008	340	20.7	14.8	28.4	10.4	4.1	18.7	31,560	24.2	18.8	28.5	12.8	8.3	16.8
PL	2009	392	14.6	10.4	26.8	7.3	3.0	17.6	35,350	19.4	13.7	27.2	10.1	6.1	15.9
PL	Aver.	281	19.1	13.8	27.5	8.9	3.4	17.8	26,115	24.1	18.9	27.5	12.1	8.1	15.6
PT	2005	200	18.0	13.0	30.5	7.6	3.5	13.8	130,650	17.0	11.8	26.1	6.9	3.4	13.4
PT	2006	221	18.7	13.9	26.1	7.1	3.5	13.0	138,357	15.7	10.9	25.3	6.4	3.2	12.1
PT	2007	282	21.2	17.2	27.6	8.0	4.8	13.4	149,058	15.4	10.6	25.5	6.3	3.2	12.2
PT	2008	354	15.4	9.4	28.5	6.0	2.3	14.5	161,363	13.3	8.4	25.6	5.5	2.5	12.4
PT	2009	396	17.7	12.1	28.9	6.7	3.3	14.1	181,199	12.7	7.9	25.4	5.2	2.4	12.3
PT	Aver.	291	18.2	13.1	28.4	7.1	3.5	13.8	152,125	14.8	9.9	25.6	6.1	3.0	12.5
RO	2005	499	41.4	44.9	35.2	20.4	13.5	22.7	87,640	36.2	32.9	33.4	16.1	9.4	20.3
RO	2006	627	42.6	42.8	32.9	20.8	16.8	20.8	94,785	36.2	33.3	32.4	16.7	10.0	20.4
RO	2007	958	34.8	28.7	33.7	17.3	11.0	21.5	135,981	32.8	28.2	32.7	15.1	8.2	20.0
RO	2008	1,198	31.4	27.4	34.7	16.6	9.6	22.4	162,205	29.2	23.5	32.5	13.6	6.6	19.9
RO	2009	1,450	25.7	20.2	33.2	13.9	7.6	21.5	184,260	24.4	18.0	32.6	11.4	5.2	19.1
RO	Aver.	946	35.2	32.8	34.0	17.8	11.7	21.8	132,974	31.8	27.2	32.7	14.6	7.9	20.0
SE	2005	1,154	20.0	13.2	29.7	11.6	5.3	19.8	118,074	19.0	14.6	28.7	8.7	5.5	14.9
SE	2006	1,634	23.3	13.7	32.5	15.0	6.2	24.4	163,371	21.9	17.4	29.7	10.2	6.7	15.9

MS	Year	Financial Sector							Non-Financial Sector						
		RoE			RoA				RoE			RoA			
		Number	Mean	Median	Sd	Mean	Median	Sd	Number	Mean	Median	Sd	Mean	Median	Sd
SE	2007	1,848	19.7	9.8	32.5	13.3	4.3	24.3	177,112	23.2	18.7	30.8	11.2	7.3	17.2
SE	2008	1,992	16.8	4.1	36.7	11.4	1.7	28.3	190,621	21.5	16.6	31.8	10.6	6.4	18.1
SE	2009	2,434	16.6	6.7	31.7	11.1	2.8	23.4	211,252	19.8	14.4	31.5	9.8	5.4	18.0
SE	Aver.	1,812	19.3	9.5	32.7	12.5	4.1	24.2	172,086	21.1	16.3	30.5	10.1	6.3	16.9
SI	2005	11	7.1	10.3	11.9	1.6	0.8	2.4	650	18.6	14.1	22.8	7.1	4.8	10.1
SI	2006	36	11.4	9.6	25.2	4.2	0.9	10.7	5,298	19.5	14.5	22.5	6.9	4.6	9.6
SI	2007	41	14.7	9.3	22.1	5.2	1.3	9.0	5,588	20.7	15.5	23.0	7.4	4.5	9.8
SI	2008	41	11.0	6.5	28.0	3.4	0.9	11.6	5,827	17.5	12.3	23.0	6.4	3.5	9.9
SI	2009	48	11.9	9.0	27.0	3.9	1.4	7.5	5,983	11.5	7.0	22.2	4.1	2.0	9.1
SI	Aver.	35	11.2	8.9	23.6	3.7	1.0	8.9	4,669	17.5	12.7	22.7	6.4	3.9	9.7
SK	2005	17	11.0	11.3	21.7	3.5	1.2	7.8	2,474	20.6	14.2	27.4	7.6	4.1	12.1
SK	2006	19	17.6	15.1	18.1	7.1	1.2	11.6	3,105	23.6	17.1	28.8	8.7	5.2	13.1
SK	2007	24	20.0	17.7	15.5	5.5	1.9	8.0	3,470	23.2	16.7	28.6	9.1	5.2	14.0
SK	2008	29	13.6	11.6	18.4	4.4	1.9	7.5	2,906	21.0	14.9	26.7	8.7	5.3	13.7
SK	2009	43	17.1	14.2	23.4	8.3	3.8	13.6	6,412	16.0	7.9	29.0	7.3	2.5	16.2
SK	Aver.	26	15.8	14.0	19.6	5.7	2.0	10.0	3,673	20.9	14.2	28.1	8.3	4.5	13.9
UK	2005	3,741	23.3	14.4	29.7	9.6	4.1	16.2	78,116	21.6	13.4	30.5	12.0	5.8	20.8
UK	2006	4,639	23.9	15.1	29.6	10.0	4.6	16.2	101,517	21.1	12.9	30.2	11.7	5.6	20.3
UK	2007	5,215	24.1	14.9	30.0	9.9	5.0	16.2	113,267	21.1	12.8	30.3	11.8	5.6	20.4
UK	2008	5,781	21.7	13.2	30.8	8.6	3.9	16.7	124,407	19.5	11.2	31.0	11.0	4.8	20.8
UK	2009	6,624	19.6	10.5	30.6	8.0	2.9	16.8	147,927	19.1	10.3	31.7	10.5	4.1	21.3
UK	Aver.	5,200	22.5	13.6	30.1	9.2	4.1	16.4	113,047	20.5	12.1	30.7	11.4	5.2	20.7

Source: Orbis and own computations.

Next, we investigate the skewness of the sector. A first observation is that the skewness is in most cases positive with an average of 0.76 for RoE and 1.66 for RoA. As stated above, this indicates that most of the observations are concentrated on the left and that there are a few outliers that enjoy very high profitability. The skewness (for RoE) is strictly higher than the one in the non-financial sector in 60% of the country-year pairs (it is a tie in 6% of the cases). This figure had actually a tendency to gradually decline over time from 67% to 52% between 2005 and 2009. The skewness of the RoE and RoA distributions for the non-financial sector was on average 0.62 and 0.50 respectively.

We therefore identified that the financial sector contains a few highly-profitable outliers. The question is how often it is the case. The average kurtosis for the financial sector is 1.86 for RoE and 10.01 for RoA, to be compared to 1.49 and 4.82 for the non-financial sector. This indicates that there are more extreme high-profitability cases in the financial sector. The figure is particularly high in Germany and Luxembourg.

Table (1b): Skewness and Kurtosis in the profitability distributions.

MS	Year	Financial Sector					Non-Financial Sector				
		Number	RoE		RoA		Number	RoE		RoA	
			Skewness	Kurtosis	Skewness	Kurtosis		Skewness	Kurtosis	Skewness	Kurtosis
AT	2005	211	1.6	7.3	6.4	69.5	86	0.7	1.6	0.7	3.4
AT	2006	224	1.5	2.8	8.9	20.5	370	0.8	1.4	0.3	3.6
AT	2007	225	2.3	9.0	9.8	104.4	398	0.3	1.3	0.1	4.4
AT	2008	230	0.8	3.0	12.1	25.0	616	0.7	1.3	0.8	3.3
AT	2009	234	1.3	3.0	8.4	25.9	1,090	0.8	1.8	1.2	7.4
AT	Aver.	225	1.5	5.0	9.1	49.1	512	0.6	1.5	0.6	4.4
BE	2005	3,012	1.0	1.8	1.6	6.5	169,247	0.7	1.4	0.7	4.8
BE	2006	3,547	1.2	1.8	1.8	7.5	202,684	0.7	1.5	0.8	4.9
BE	2007	3,718	1.2	2.0	1.8	7.1	218,085	0.7	1.4	0.7	4.7
BE	2008	3,923	1.2	1.8	1.9	7.0	233,817	0.7	1.4	0.7	4.7
BE	2009	4,154	1.1	1.8	1.8	6.6	253,916	0.7	1.4	0.7	4.7
BE	Aver.	3,671	1.1	1.9	1.8	6.9	215,550	0.7	1.4	0.7	4.8
BG	2005	105	0.6	3.0	0.7	12.1	7,083	0.4	1.9	-0.4	5.3
BG	2006	148	0.8	2.5	0.9	7.8	12,152	0.4	1.9	-0.5	5.0
BG	2007	226	0.6	2.0	0.1	4.7	17,837	0.2	1.6	-0.6	2.9
BG	2008	238	0.5	1.6	0.0	4.4	21,756	0.4	1.5	-0.2	2.9
BG	2009	280	0.9	1.8	0.9	5.3	25,780	0.7	1.6	1.0	5.2
BG	Aver.	199	0.7	2.2	0.5	6.9	16,922	0.4	1.7	-0.2	4.3
CY	2005	4	0.4	-0.2	-1.1	-1.6	5	-0.5	1.0	-1.5	-0.4
CY	2006	5	0.3	0.7	-1.5	-0.6	6	-0.9	-0.7	0.0	-0.1
CY	2007	6	-1.0	-0.7	-0.4	-0.5	10	1.1	1.9	0.0	2.7
CY	2008	7	-1.2	-2.0	0.3	2.1	10	-0.6	0.1	-1.1	-0.9
CY	2009	7	0.7	2.0	-0.9	2.1	12	-0.1	1.7	-1.3	2.6
CY	Aver.	6	-0.2	0.0	-0.8	0.3	9	-0.2	0.8	-0.8	0.8
CZ	2005	144	1.0	3.3	1.4	15.4	22,543	0.8	1.5	0.6	4.5
CZ	2006	171	0.8	1.9	1.5	7.5	28,633	0.8	1.4	0.4	4.0
CZ	2007	192	1.1	2.2	1.7	5.3	34,236	0.8	1.4	0.4	3.9
CZ	2008	202	0.9	2.3	1.6	7.2	40,101	0.9	1.5	0.8	4.5
CZ	2009	224	0.8	1.6	0.6	3.9	46,662	1.1	1.6	1.6	6.0
CZ	Aver.	187	0.9	2.2	1.4	7.8	34,435	0.9	1.5	0.8	4.6
DE	2005	2,000	1.7	5.9	11.2	60.0	16,430	0.6	1.6	0.3	5.9
DE	2006	2,062	2.7	6.2	15.2	58.0	20,933	0.6	1.5	0.2	5.3
DE	2007	2,106	2.9	10.3	16.4	170.2	22,746	0.5	1.4	0.1	4.5
DE	2008	2,159	2.5	4.5	15.3	41.6	30,541	0.5	1.5	0.1	4.6
DE	2009	2,197	2.7	6.5	16.2	81.4	33,723	0.6	1.5	0.4	5.3
DE	Aver.	2,105	2.5	6.7	14.9	82.2	24,875	0.6	1.5	0.2	5.1
DK	2005	6,196	1.0	1.5	1.2	3.5	51,326	0.4	1.3	-0.1	2.7
DK	2006	10,121	1.2	1.8	1.5	4.4	86,040	0.5	1.3	-0.2	2.7

MS	Year	Financial Sector					Non-Financial Sector				
		RoE			RoA		RoE			RoA	
		Number	Skew ness	Kurto sis	Skew ness	Kurto sis	Number	Skew ness	Kurto sis	Skew ness	Kurto sis
DK	2007	11,731	1.2	1.8	1.8	4.4	99,580	0.5	1.3	-0.1	2.4
DK	2008	11,949	1.1	1.2	2.1	3.9	110,360	0.6	1.0	0.0	2.4
DK	2009	13,725	1.1	1.3	2.6	4.9	124,486	0.7	1.1	0.6	3.3
DK	Aver.	10,744	1.1	1.5	1.8	4.2	94,358	0.5	1.2	0.0	2.7
EE	2005	590	0.5	1.3	-0.5	1.6	31,534	0.4	1.0	-0.3	1.5
EE	2006	771	0.6	1.5	-0.5	2.2	36,557	0.4	1.0	-0.5	1.2
EE	2007	920	0.9	1.6	0.2	3.2	41,883	0.4	1.0	-0.4	1.2
EE	2008	866	0.9	1.5	0.7	3.3	45,618	0.6	1.1	0.0	1.8
EE	2009	1,120	1.0	1.7	0.7	4.8	49,539	0.8	1.3	0.5	2.7
EE	Aver.	853	0.8	1.5	0.1	3.0	41,026	0.5	1.1	-0.1	1.7
EL	2005	64	0.6	1.6	1.3	3.4	14,866	1.1	1.2	1.6	6.3
EL	2006	71	0.6	1.0	2.4	3.9	16,275	1.0	1.3	1.3	6.7
EL	2007	75	0.8	2.0	1.2	6.4	17,067	0.9	1.3	1.0	5.4
EL	2008	77	0.6	1.2	0.9	6.8	18,484	1.0	1.4	1.2	6.1
EL	2009	81	0.6	1.0	0.8	4.5	19,468	1.0	1.2	1.7	6.1
EL	Aver.	74	0.6	1.4	1.3	5.0	17,232	1.0	1.3	1.4	6.1
ES	2005	1,761	0.9	1.9	1.1	8.1	279,692	0.8	2.0	1.3	8.5
ES	2006	1,922	0.9	1.5	1.2	5.8	307,648	0.8	2.0	1.2	8.4
ES	2007	1,815	0.8	1.6	0.9	6.0	310,903	0.9	1.9	1.3	7.9
ES	2008	2,808	0.8	1.2	1.2	6.0	384,246	0.9	1.7	1.9	8.3
ES	2009	3,116	1.0	1.7	2.1	7.3	404,546	0.9	1.6	2.4	9.3
ES	Aver.	2,284	0.9	1.6	1.3	6.6	337,407	0.9	1.8	1.6	8.5
FI	2005	880	0.9	1.4	0.9	3.3	44,267	0.3	0.8	-0.2	1.4
FI	2006	1,063	1.0	1.6	0.7	3.4	57,373	0.3	0.8	-0.1	1.5
FI	2007	1,687	1.0	1.7	1.1	4.0	75,073	0.4	0.9	-0.1	1.7
FI	2008	2,099	1.0	1.6	1.0	3.6	87,900	0.5	0.9	0.1	2.1
FI	2009	2,515	1.1	1.7	1.5	4.6	98,575	0.6	1.0	0.4	2.8
FI	Aver	1,649	1.0	1.6	1.0	3.8	72,638	0.4	0.9	0.0	1.9
FR	2005	3,922	0.9	1.7	0.8	5.6	382,336	0.4	1.4	-0.2	3.9
FR	2006	4,791	0.9	1.7	0.7	5.1	466,651	0.3	1.4	-0.2	3.8
FR	2007	5,545	0.9	1.7	0.6	5.3	521,123	0.3	1.3	-0.3	3.6
FR	2008	6,360	0.8	1.4	0.7	4.5	578,152	0.3	1.3	-0.2	3.6
FR	2009	7,492	0.9	1.7	1.0	5.9	655,703	0.4	1.3	-0.1	3.9
FR	Aver	5,622	0.9	1.6	0.8	5.3	520,793	0.4	1.3	-0.2	3.8
HU	2005	512	0.4	0.6	0.2	1.8	115,363	0.6	1.1	0.5	2.7
HU	2006	241	0.5	0.7	0.5	1.0	46,339	0.7	1.2	0.8	3.9
HU	2007	476	0.5	0.7	0.2	2.1	98,866	0.7	1.2	0.6	3.3
HU	2008	569	0.5	0.8	0.0	1.4	108,357	0.7	1.1	0.5	3.0

MS	Year	Financial Sector					Non-Financial Sector				
		Number	RoE		RoA		Number	RoE		RoA	
			Skewness	Kurtosis	Skewness	Kurtosis		Skewness	Kurtosis	Skewness	Kurtosis
HU	2009	1,035	0.6	1.0	0.2	2.4	203,419	0.7	1.2	0.6	3.2
HU	Aver	567	0.5	0.8	0.2	1.7	114,469	0.7	1.1	0.6	3.2
IE	2005	186	1.1	3.1	1.5	13.5	4,730	0.8	1.6	0.7	4.2
IE	2006	212	0.8	1.8	1.1	4.7	5,400	0.7	1.6	0.6	4.4
IE	2007	294	0.9	2.9	0.9	14.0	6,237	0.8	1.6	0.7	4.1
IE	2008	344	1.2	1.7	1.4	5.3	7,166	0.8	1.6	0.9	4.8
IE	2009	459	0.9	2.6	1.2	11.2	9,066	1.0	1.7	1.0	5.1
IE	Aver	299	1.0	2.4	1.2	9.8	6,520	0.8	1.6	0.8	4.5
IT	2005	1,953	1.2	3.2	2.3	18.1	291,491	0.4	2.2	-0.1	10.5
IT	2006	2,137	1.2	3.0	2.1	15.4	322,930	0.4	2.3	-0.3	10.1
IT	2007	4,202	1.2	2.6	2.5	13.2	494,947	0.5	1.7	-0.2	8.4
IT	2008	4,456	1.3	2.6	2.7	13.7	554,326	0.6	1.8	0.1	9.2
IT	2009	4,834	1.3	2.6	2.9	15.9	628,180	0.6	1.6	0.2	9.2
IT	Aver	3,516	1.2	2.8	2.5	15.3	458,375	0.5	1.9	0.0	9.5
LT	2005	8	0.6	0.4	-0.5	-1.3	878	0.5	1.1	0.4	3.0
LT	2006	11	0.6	1.1	-1.0	0.8	1,003	0.5	1.4	0.1	3.1
LT	2007	11	-0.4	-0.4	-0.1	-0.7	1,055	0.4	1.2	0.3	2.4
LT	2008	11	0.9	0.5	-0.5	-1.6	1,262	0.6	1.3	0.3	3.3
LT	2009	12	-0.2	0.5	-1.1	0.1	1,308	0.9	1.5	1.4	6.2
LT	Aver	11	0.3	0.4	-0.7	-0.5	1,101	0.6	1.3	0.5	3.6
LU	2005	74	0.8	7.2	2.8	54.6	197	0.7	1.3	0.0	4.9
LU	2006	79	0.0	4.2	2.9	31.1	297	0.7	1.4	0.3	4.3
LU	2007	93	0.1	1.7	3.7	3.4	337	0.6	1.2	0.3	4.6
LU	2008	96	0.5	3.2	3.4	19.9	374	0.6	1.6	0.6	6.1
LU	2009	100	0.0	-1.8	3.6	19.4	505	0.7	1.3	0.2	3.6
LU	Aver	88	0.3	2.9	3.3	25.7	342	0.7	1.3	0.3	4.7
LV	2005	19	0.0	1.5	-0.5	2.1	602	0.2	0.9	-0.4	0.9
LV	2006	18	0.0	1.0	-0.5	2.5	690	0.2	1.3	-0.5	2.8
LV	2007	18	0.4	2.3	0.5	4.9	731	0.2	1.4	-0.5	2.3
LV	2008	21	1.4	1.6	2.6	0.9	779	0.5	1.3	-0.2	3.4
LV	2009	24	0.9	-0.2	1.7	3.8	766	0.5	1.5	-0.2	5.5
LV	Aver	20	0.6	1.2	0.8	2.8	714	0.3	1.3	-0.4	3.0
MT	2005	7	0.5	0.5	-1.3	-1.5	127	1.9	2.4	5.3	6.5
MT	2006	8	0.3	1.4	-1.6	0.8	145	1.5	1.6	4.5	4.5
MT	2007	12	0.8	1.0	0.2	0.3	171	1.5	4.4	3.8	24.2
MT	2008	12	0.0	1.1	0.3	1.4	243	2.3	3.2	5.9	14.6
MT	2009	13	0.0	0.7	-0.5	1.1	276	1.9	3.1	5.9	14.2
MT	Aver	10	0.3	1.0	-0.6	0.4	192	1.8	2.9	5.1	12.8

MS	Year	Financial Sector					Non-Financial Sector				
		Number	RoE		RoA		Number	RoE		RoA	
			Skewness	Kurtosis	Skewness	Kurtosis		Skewness	Kurtosis	Skewness	Kurtosis
NL	2005	204	0.5	1.3	1.4	7.7	3,858	0.4	1.4	0.0	4.2
NL	2006	266	1.5	3.0	3.1	13.6	4,516	0.4	1.4	-0.1	4.3
NL	2007	332	1.3	2.9	3.2	12.1	5,248	0.4	1.2	-0.1	3.4
NL	2008	360	0.8	0.1	1.2	2.5	6,166	0.4	1.3	0.0	4.3
NL	2009	461	1.4	2.6	3.0	12.9	7,733	0.6	1.6	0.3	5.3
NL	Aver	325	1.1	1.9	2.4	9.7	5,504	0.5	1.4	0.0	4.3
PL	2005	143	0.2	1.3	-0.2	3.0	13,842	0.6	1.4	0.3	3.5
PL	2006	233	0.6	1.2	0.4	3.0	22,818	0.6	1.3	0.1	2.9
PL	2007	299	0.8	1.5	0.0	2.9	27,003	0.5	1.3	-0.1	2.6
PL	2008	340	0.6	1.5	0.1	3.0	31,560	0.5	1.3	0.1	2.6
PL	2009	392	0.5	1.1	0.6	3.5	35,350	0.7	1.4	0.7	3.8
PL	Aver	281	0.5	1.3	0.2	3.1	26,115	0.6	1.3	0.2	3.1
PT	2005	200	0.6	1.9	0.4	4.7	130,650	0.7	2.6	1.0	12.2
PT	2006	221	0.7	1.8	0.7	7.0	138,357	0.7	1.9	1.1	7.7
PT	2007	282	0.5	1.8	0.3	6.1	149,058	0.7	1.9	1.1	7.6
PT	2008	354	0.7	0.7	0.6	2.9	161,363	0.8	1.9	1.2	8.1
PT	2009	396	0.6	0.8	0.5	3.6	181,199	0.8	1.9	1.3	8.3
PT	Aver	291	0.6	1.4	0.5	4.9	152,125	0.7	2.0	1.1	8.8
RO	2005	499	-0.2	0.8	-1.0	0.2	87,640	0.1	1.4	-0.8	1.9
RO	2006	627	-0.1	0.8	-0.9	0.3	94,785	0.1	1.3	-0.8	1.6
RO	2007	958	0.2	1.2	-0.8	1.5	135,981	0.2	1.3	-0.7	1.9
RO	2008	1,198	0.2	0.9	-0.8	0.7	162,205	0.3	1.4	-0.6	2.1
RO	2009	1,450	0.3	1.0	-0.5	1.2	184,260	0.4	1.4	-0.4	2.5
RO	Aver	946	0.1	0.9	-0.8	0.8	132,974	0.2	1.4	-0.7	2.0
SE	2005	1,154	0.8	2.0	0.4	5.1	118,074	0.5	1.4	0.2	4.7
SE	2006	1,634	0.8	1.7	-0.1	3.0	163,371	0.4	1.4	0.0	4.4
SE	2007	1,848	0.8	1.8	0.2	3.2	177,112	0.4	1.4	-0.2	4.0
SE	2008	1,992	0.8	1.5	-0.2	2.0	190,621	0.4	1.3	-0.3	3.6
SE	2009	2,434	0.9	1.8	0.4	3.6	211,252	0.4	1.3	-0.2	3.5
SE	Aver	1,812	0.8	1.7	0.2	3.4	172,086	0.4	1.4	-0.1	4.1
SI	2005	11	-1.1	1.2	0.5	0.7	650	0.8	2.3	1.4	11.6
SI	2006	36	1.0	1.7	2.8	4.3	5,298	0.8	1.8	1.2	8.5
SI	2007	41	1.2	1.8	2.1	2.6	5,588	0.9	1.9	1.0	6.7
SI	2008	41	0.9	-1.2	1.3	7.7	5,827	0.9	2.1	1.6	9.1
SI	2009	48	0.8	0.5	2.0	1.2	5,983	1.0	2.0	2.6	10.9
SI	Aver	35	0.6	0.8	1.8	3.3	4,669	0.9	2.0	1.6	9.4
SK	2005	17	-0.7	2.0	1.0	4.2	2,474	0.7	1.4	0.2	3.7
SK	2006	19	0.8	1.8	-0.1	1.6	3,105	0.6	1.5	0.0	4.3

MS	Year	Financial Sector					Non-Financial Sector				
		RoE		RoA			RoE		RoA		
		Number	Skewness	Kurtosis	Skewness	Kurtosis	Number	Skewness	Kurtosis	Skewness	Kurtosis
SK	2007	24	0.4	2.5	-0.3	6.4	3,470	0.6	1.6	0.1	4.8
SK	2008	29	0.0	0.3	0.7	0.7	2,906	0.7	1.5	0.3	5.2
SK	2009	43	0.2	1.4	1.3	3.9	6,412	0.8	1.8	0.5	4.8
SK	Aver	26	0.1	1.6	0.5	3.4	3,673	0.7	1.6	0.2	4.6
UK	2005	3,741	0.8	2.1	0.1	6.2	78,116	0.7	1.7	0.2	4.2
UK	2006	4,639	0.7	1.8	0.0	5.2	101,517	0.7	1.6	0.2	4.2
UK	2007	5,215	0.7	1.7	-0.1	4.6	113,267	0.7	1.6	0.2	4.0
UK	2008	5,781	0.6	1.6	-0.1	4.8	124,407	0.7	1.5	0.2	3.8
UK	2009	6,624	0.7	1.9	0.1	6.1	147,927	0.8	1.6	0.2	4.1
UK	Aver	5,200	0.7	1.8	0.0	5.4	113,047	0.7	1.6	0.2	4.1

Source: Orbis and own computations.

6.21. Profitability in the financial sector by size of the assets.

Next, we look at profitability of the financial sector by size of financial companies. The financial sector ranges indeed from local insurance retailers to large banking multinationals.

The size is defined by total assets. The categories are the following: (1) lowest quartile: total assets up to EUR 2.634 million, (2) second quartile: total assets from EUR 2.634 million to EUR 199.7 million, (3) third quartile: total assets from EUR 199.7 million to EUR 807.5 million, (4) category 75-90: total assets from EUR 807.5 million to EUR 2,381.1 million, (5) category 90-95: total assets from EUR 2,381.1 million to EUR 5,047.5 million (6) category 95-99: total assets from EUR 5,047.5 million to EUR 37,400 million, and (7) top 1%: total assets over EUR 37,400 million.

Table (2a): Mean and Median Profitability across size (total assets).

Size	Year	Financial Sector							
		RoE				RoA			
		Number	Mean	Median	Sd	Mean	Median	Sd	
Low quartl 0-25	2005	788	10.4	8.5	10.6	1.3	1.0	2.7	
	2006	788	11.4	10.3	9.8	1.5	1.2	3.2	
	2007	725	12.1	10.7	11.5	1.6	1.3	4.4	
	2008	791	8.7	8.1	10.0	1.1	0.9	2.9	
	2009	822	6.6	5.7	10.8	1.0	0.6	3.0	
	Aver	783	9.9	8.6	10.6	1.3	1.0	3.3	
Quart 25-50	2005	730	12.3	9.5	13.2	1.3	0.7	3.7	
	2006	773	10.8	8.8	12.3	1.1	0.7	3.4	
	2007	791	10.1	7.9	12.5	1.1	0.6	4.0	
	2008	806	7.2	5.6	13.7	0.7	0.4	4.5	

Size	Year	Financial Sector						
		Number	RoE			RoA		
			Mean	Median	Sd	Mean	Median	Sd
	2009	814	8.2	7.1	13.4	1.0	0.5	4.3
	Aver	783	9.7	7.8	13.0	1.0	0.6	4.0
Quart 50-75	2005	772	10.4	9.0	8.5	0.9	0.6	1.9
	2006	782	8.8	7.7	7.8	0.7	0.5	1.3
	2007	775	7.8	6.7	7.2	0.7	0.5	1.9
	2008	789	4.8	4.4	9.3	0.4	0.3	2.8
	2009	796	7.8	7.7	8.7	0.6	0.5	1.3
	Aver	783	8.0	7.1	8.3	0.7	0.5	1.9
Size 75-90	2005	430	10.2	9.1	8.8	0.9	0.5	1.8
	2006	446	8.5	7.6	8.7	0.9	0.4	3.0
	2007	467	8.0	6.7	7.9	0.7	0.4	2.3
	2008	494	5.5	4.5	10.3	0.3	0.3	3.3
	2009	512	7.9	6.9	9.9	0.8	0.4	3.9
	Aver	470	8.0	7.0	9.2	0.7	0.4	2.9
Size 90-95	2005	139	10.9	10.0	9.5	0.9	0.5	2.0
	2006	152	10.2	8.8	8.2	0.8	0.4	1.4
	2007	165	9.7	7.2	13.4	0.7	0.4	1.2
	2008	166	5.3	4.7	8.0	0.3	0.2	0.7
	2009	162	6.6	7.0	7.5	0.4	0.4	0.6
	Aver	157	8.6	7.5	9.6	0.6	0.4	1.3
Size 95-99	2005	111	11.6	9.0	12.6	0.7	0.4	0.9
	2006	123	12.4	8.8	15.6	0.8	0.4	1.3
	2007	127	10.1	7.2	12.0	0.7	0.4	1.5
	2008	133	5.3	3.4	13.2	0.4	0.2	1.6
	2009	131	8.2	6.2	13.2	0.5	0.4	1.3
	Aver	125	9.5	6.9	13.4	0.6	0.4	1.4
Top 1%	2005	24	11.0	8.8	11.0	0.7	0.4	1.0
	2006	28	11.1	10.1	10.3	0.6	0.4	1.0
	2007	30	12.5	9.4	12.3	0.5	0.3	0.7
	2008	37	12.7	9.0	17.2	0.5	0.3	0.9
	2009	38	12.2	7.4	14.2	0.5	0.3	0.6
	Aver	31	11.9	8.9	13.2	0.6	0.3	0.8

Source: Orbis and own computations.

Interestingly, we observe a form of U-shape function. Very small and very large companies are on average more profitable than middle-size companies in the financial sector. Skewness and Kurtosis show inverted U-shape relationships with size, indicating that groups of very small and very large companies are more uniform in terms of profitability (which is on average higher) and

that the proportion of highly-profitable outliers and their distance to the mean profitability is larger for middle-size companies.

Table (2b): Skewness and Kurtosis in the profitability distributions across size (total assets).

Size	Year	Financial Sector	RoE		RoA	
		Number	Skewness	Kurtosis	Skewness	Kurtosis
Low quartl 0-25	2005	788	1.8	8.9	10.0	137.6
	2006	788	1.5	12.2	8.9	133.0
	2007	725	2.4	16.7	17.0	359.9
	2008	791	1.5	11.9	10.1	150.3
	2009	822	1.1	11.7	11.0	151.0
	Aver	783	1.7	12.3	11.4	186.4
Quart 25-50	2005	730	2.5	12.3	7.3	61.1
	2006	773	1.9	10.4	4.5	58.1
	2007	791	1.6	9.2	3.1	73.3
	2008	806	1.3	9.6	5.7	79.3
	2009	814	2.1	14.6	4.4	47.3
	Aver	783	1.9	11.2	5.0	63.8
Quart 50-75	2005	772	1.5	12.0	8.4	87.2
	2006	782	3.3	32.8	7.3	81.0
	2007	775	2.7	16.7	13.7	224.9
	2008	789	2.2	30.0	3.3	193.8
	2009	796	1.8	22.1	8.1	114.1
	Aver	783	2.3	22.7	8.1	140.2
Size 75-90	2005	430	1.4	11.0	7.7	74.5
	2006	446	3.3	25.5	11.2	152.6
	2007	467	3.7	23.1	8.9	142.6
	2008	494	2.4	22.3	-0.8	115.9
	2009	512	2.6	15.6	12.1	172.3
	Aver	470	2.7	19.5	7.8	131.6
Size 90-95	2005	139	1.4	11.0	7.6	74.5
	2006	152	1.6	25.5	5.2	152.6
	2007	165	3.8	23.1	5.6	142.6
	2008	166	0.2	22.3	-1.3	115.9
	2009	162	-2.8	15.6	-1.6	172.3
	Aver	157	0.8	19.5	3.1	131.6
Size 95-99	2005	111	2.8	11.2	3.3	15.4
	2006	123	2.3	9.8	3.9	19.7
	2007	127	1.6	5.2	7.2	63.9
	2008	133	-0.6	4.6	5.0	46.0

Size	Year	Financial Sector				
		Number	RoE		RoA	
			Skewness	Kurtosis	Skewness	Kurtosis
Top 1%	2009	131	1.1	8.0	6.1	55.8
	Aver	125	1.4	7.8	5.1	40.2
	2005	24	0.4	0.3	2.5	5.8
	2006	28	1.7	3.3	3.4	12.2
	2007	30	1.2	1.0	2.6	8.0
	2008	37	1.2	1.0	1.7	4.4
	2009	38	1.2	1.4	0.9	0.4
	Aver	31	1.1	1.4	2.2	6.1

Source: Orbis and own computations.

6.3. Profitability across segments of the financial sector.

The financial sector is not uniform either in terms of its activities. Therefore we also look at profitability in various segments of the financial sector. The segments are: commercial banks, savings banks, cooperative banks, real estate and mortgage banks, investment banking, Islamic banks, Government-sponsored companies (Specialised Governmental Credit Institutions), central banks and multilateral government banks, investment and trust corporations, finance companies (credit card, factoring and leasing)¹.

Table (3a): Mean and Median Profitability across segments.

Size	Year	Financial Sector						
		Number	RoE			RoA		
			Mean	Median	Sd	Mean	Median	Sd
Islamic banks	2005	1	-15.8	-15.8	0.0	-7.2	-7.2	0.0
	2006	1	-27.8	-27.8	0.0	-7.5	-7.5	0.0
	2007	1	-27.8	-27.8	0.0	-4.2	-4.2	0.0
	2008	1	-31.2	-31.2	0.0	-3.3	-3.3	0.0
	2009	0	n.a.	n.a.	n.a.	n.a.	n.a.	0.0
	Aver	1	-25.6	-25.6	0.0	-5.5	-5.5	0.0
Government-sponsored companies	2005	26	9.4	5.9	13.3	2.1	0.5	3.5
	2006	27	6.3	6.2	6.2	2.0	0.7	4.4
	2007	29	6.9	5.7	6.4	1.9	0.6	3.2
	2008	32	4.9	3.9	4.3	1.1	0.4	1.6
	2009	32	4.1	2.7	8.0	0.8	0.2	1.6

¹ These categories are defined in Orbis. There was no usable information for the following categories: Other non banking credit institutions, bank holding and holding companies, micro-financing institutions, securities firms, private banking and asset management companies, clearing institutions and custody, group finance company. We also excluded insurances here.

Size	Year	Financial Sector						
		Number	RoE			RoA		
			Mean	Median	Sd	Mean	Median	Sd
Savings Banks	Aver	29	6.3	4.9	8.2	1.6	0.5	3.1
	2005	592	10.0	9.3	6.8	0.8	0.5	0.9
	2006	596	8.6	8.2	5.2	0.7	0.5	0.7
	2007	603	7.2	6.7	4.9	0.6	0.4	0.6
	2008	627	3.5	3.8	7.4	0.2	0.2	0.7
	2009	630	6.7	6.5	7.2	0.5	0.4	0.5
	Aver	610	7.2	6.9	6.4	0.6	0.4	0.7
Estate and mortgage	2005	77	10.0	9.2	7.9	1.0	0.4	4.2
	2006	87	8.0	7.2	6.3	0.5	0.4	0.7
	2007	88	8.5	7.4	6.1	0.5	0.4	1.0
	2008	94	4.7	5.0	9.8	0.3	0.2	0.7
	2009	94	7.1	5.6	8.3	0.7	0.4	1.6
	Aver	88	7.7	6.9	7.8	0.6	0.4	2.1
Investment and Trusts	2005	27	19.9	17.3	18.9	12.6	12.5	12.2
	2006	33	13.9	10.5	20.3	9.3	9.3	12.8
	2007	33	9.2	8.8	15.9	4.9	5.7	13.0
	2008	29	-0.1	3.2	27.0	-4.9	0.0	17.2
	2009	34	14.8	12.8	19.4	9.5	9.0	11.0
	Aver	31	11.5	10.5	20.6	6.3	7.3	13.4
Cooperative banks	2005	1,531	9.5	8.6	6.6	0.8	0.6	0.7
	2006	1,554	8.5	8.4	5.1	0.7	0.7	0.6
	2007	1,510	8.0	7.7	4.1	0.7	0.6	0.6
	2008	1,583	5.8	5.6	4.4	0.5	0.4	0.6
	2009	1,585	6.8	7.0	5.4	0.5	0.5	0.7
	Aver	1,553	7.7	7.5	5.2	0.6	0.6	0.6
Commercial banks	2005	598	12.7	11.0	13.8	1.3	0.9	2.8
	2006	633	13.2	11.2	14.3	1.4	0.9	3.7
	2007	632	13.2	11.1	15.0	1.2	0.9	3.1
	2008	651	9.4	8.2	16.6	1.0	0.6	4.3
	2009	700	7.4	6.3	16.3	0.9	0.6	4.5
	Aver	643	11.2	9.5	15.3	1.2	0.8	3.7
Investment and Trusts	2005	27	19.9	17.3	18.9	12.6	12.5	12.2
	2006	33	13.9	10.5	20.3	9.3	9.3	12.8
	2007	33	9.2	8.8	15.9	4.9	5.7	13.0
	2008	29	-0.1	3.2	27.0	-4.9	0.0	17.2
	2009	34	14.8	12.8	19.4	9.5	9.0	11.0
	Aver	31	11.5	10.5	20.6	6.3	7.3	13.4
Investment and Trusts	2005	41	14.5	12.5	22.8	3.6	0.6	7.6

Size	Year	Financial Sector						
		Number	RoE			RoA		
			Mean	Median	Sd	Mean	Median	Sd
	2006	48	17.8	14.4	19.6	3.2	0.7	5.8
	2007	52	20.5	15.9	19.6	4.1	1.3	6.3
	2008	55	11.2	12.9	19.7	2.1	0.6	7.6
	2009	58	13.5	11.4	19.1	3.1	1.0	8.2
	Aver	51	15.5	13.4	20.2	3.2	0.8	7.2
Central banks and int'l financial institutions	2005	22	15.9	9.7	21.9	0.9	0.8	0.8
	2006	22	16.2	11.4	16.5	0.8	0.6	1.0
	2007	21	18.0	15.1	19.5	0.8	0.9	0.7
	2008	22	17.6	16.5	15.4	0.9	0.8	0.8
	2009	25	22.1	12.4	18.1	1.1	0.8	0.7
	Aver	22	18.0	13.0	18.4	0.9	0.8	0.8
Credit cards, factoring and leasing	2005	79	26.6	23.6	25.9	2.6	1.3	5.8
	2006	91	23.0	18.6	25.8	2.2	1.1	6.0
	2007	111	22.5	17.3	27.3	3.9	1.1	11.9
	2008	122	18.6	13.7	23.0	3.0	0.8	8.2
	2009	117	18.1	12.3	21.8	2.3	0.9	6.7
	Aver	104	21.8	17.1	24.8	2.8	1.0	8.1

Source: Orbis and own computations.

As shown in table (3a), profitability varies widely across segments. Savings and mortgage banks are found to be less profitable than investment banks and credit cards, factoring and leasing companies. Compared to the average of the sector at 0.76, skewness is found to be even higher in government-sponsored companies, savings banks and central banks, which are on average with the exception of the latter less profitable than the average firm in the sector. In terms of kurtosis, compared to an average of 1.86 for the sector, the extent to which outliers are further than the average for the sector seems to be negatively linked to profitability. In other words, major highly-profitable outliers seem to be more concentrated in less profitable segments of the financial industry, in particular in savings banks.

Table (3b): Skewness and Kurtosis in the profitability distributions across segments.

Size	Year	Financial Sector				
		Number	RoE		RoA	
			Skewness	Kurtosis	Skewness	Kurtosis
Islamic banks	2005	1	n.a.	n.a.	n.a.	n.a.
	2006	1	n.a.	n.a.	n.a.	n.a.
	2007	1	n.a.	n.a.	n.a.	n.a.
	2008	1	n.a.	n.a.	n.a.	n.a.
	2009	0	n.a.	n.a.	n.a.	n.a.
	Aver	1	n.a.	n.a.	n.a.	n.a.

Size	Year	Financial Sector				
		Number	RoE		RoA	
			Skewness	Kurtosis	Skewness	Kurtosis
Government-sponsored companies	2005	26	2.9	8.7	2.0	2.7
	2006	27	1.1	0.9	3.4	11.4
	2007	29	1.2	1.3	2.5	6.3
	2008	32	0.6	-0.8	1.9	2.8
	2009	32	2.4	7.9	1.4	1.6
	Aver	29	1.6	3.6	2.2	5.0
Savings Banks	2005	592	2.3	15.4	2.7	7.9
	2006	596	1.2	15.8	2.6	9.2
	2007	603	0.7	4.9	2.2	6.5
	2008	627	-2.0	14.6	-1.4	13.8
	2009	630	6.7	90.2	1.8	16.1
	Aver	610	1.8	28.2	1.6	10.7
Estate and mortgage	2005	77	2.0	8.9	8.4	69.9
	2006	87	0.1	1.7	2.8	10.6
	2007	88	0.9	0.9	7.6	63.3
	2008	94	-1.7	9.9	1.2	8.2
	2009	94	1.1	4.3	5.2	28.4
	Aver	88	0.5	5.1	5.0	36.1
Cooperative banks	2005	1,531	1.2	6.2	4.0	63.8
	2006	1,554	-0.5	7.8	2.5	26.6
	2007	1,510	-0.6	7.3	-4.5	73.5
	2008	1,583	-1.6	13.1	2.1	67.0
	2009	1,585	-2.2	16.4	-14.2	383.0
	Aver	1,553	-0.7	10.2	-2.0	122.8
Commercial banks	2005	598	0.7	3.1	6.5	66.4
	2006	633	0.6	2.9	5.0	62.1
	2007	632	0.9	4.0	5.9	76.1
	2008	651	0.9	5.7	7.6	107.8
	2009	700	0.8	5.0	6.8	91.0
	Aver	643	0.8	4.1	6.4	80.7
Investment and Trusts	2005	27	1.1	0.7	0.7	-0.4
	2006	33	1.7	5.2	0.7	4.3
	2007	33	-0.6	4.0	-1.4	6.0
	2008	29	0.8	1.0	0.4	0.5
	2009	34	1.7	4.7	0.7	0.7
	Aver	31	0.9	3.1	0.2	2.2
Investment banking	2005	41	0.6	1.4	2.9	9.4
	2006	48	1.1	1.8	2.5	7.5

Size	Year	Financial Sector				
		Number	RoE		RoA	
			Skewness	Kurtosis	Skewness	Kurtosis
Central banks and int'l financial institutions	2007	52	0.4	-0.4	1.8	2.3
	2008	55	-0.2	1.0	-1.0	9.5
	2009	58	0.3	2.6	3.1	11.6
	Aver	51	0.4	1.3	1.8	8.0
	2005	22	2.5	7.2	1.0	0.7
	2006	22	1.2	0.6	1.0	3.5
	2007	21	0.6	0.3	0.1	-0.6
	2008	22	0.9	0.3	0.8	0.0
	2009	25	0.9	-0.4	0.9	0.5
	Aver	22	1.2	1.6	0.8	0.8
Credit cards, factoring and leasing	2005	79	0.7	1.0	5.1	29.1
	2006	91	1.0	1.4	5.2	30.4
	2007	111	0.7	0.5	5.7	37.9
	2008	122	0.7	0.6	4.3	18.5
	2009	117	1.0	1.2	5.2	28.2
	Aver	104	0.8	1.0	5.1	28.8

Source: Orbis and own computations.