



Small and medium sized entrepreneurship: build-up of strength



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In last year's edition of the now well-established annual sectoral assessment of small and medium sized (SME) entrepreneurship, we had wondered whether the improvement in the financial statements of SMEs that we had observed would be temporary or would be the beginning of a new recovery. The data we present in this study (based on a sample of over 19.5 thousand companies with financial statements in 2014) leaves room for optimism, since signs of stabilisation and a build-up of strength are recorded after the improvement observed in last year's edition. This conclusion stems from the fact that the index of sectoral performance assessment (BIC Index) shows a marginal improvement to 38.8 points compared to 38.1 points last year, as a result of the improvement in profitability and capital structure and the stabilisation of liquidity.

At the same time, the average rating of the sectors remains at "b", reflecting a balance of 20 upgrades versus 8 downgrades of sectors compared to last year's assessment. With regard to the ranking of the sectors, the improvement in the food and beverage services (due to improved tourism figures) and, to an even greater extent, in the sector of water transport (also as a result of tourism, but mainly of the drop in fuel prices) is impressive. On the other hand, the last positions are occupied by sectors associated with household consumption and entertainment, and also by the sectors of energy and of manufacturing basic metals.

Despite the optimistic messages of our study, the Greek economy still faces increasing challenges. Therefore, it will be very interesting to see in our next study (incorporating the financial statements of 2015) the degree and the extent of the impact of capital controls on Greek SMEs.



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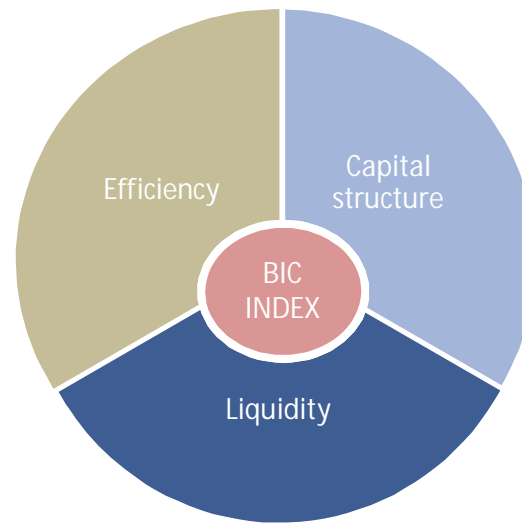
1. Purpose of the study – key findings

The purpose of this study is to update:

- the BIC Index and
- the BIC Rating System
 - in order to assess the sectoral performance, *regarding Small and Medium Enterprises (SMEs)* for 2014.

The BIC Index is the main analytical tool used to carry out analysis and ranking of business sectors, with emphasis on SMEs.

Initially, the performance of each sector of economic activity is evaluated along three axes, which summarize the key dimensions of measuring entrepreneurial activity, namely liquidity, efficiency and capital structure.



Thereafter – in order to facilitate the drawing of robust conclusions – these three axes are used to compile an overall sectoral performance index which we call the Best in Class (BIC) Index.

Based on the score of each sector in the BIC Index, we are able to assess and rank the performance of the 50 most essential sectors of the Greek economy from 2007 to 2014.

Note: the methodologies adopted for calculating the BIC Index and the BIC Rating System are presented in the sections of appendices 4a and 4b respectively.

The BIC Index allows us to rank the performance of sectors of economic activity from the strongest to the weakest separately for each year from 2007 to 2014.

In order to move on to a longitudinal analysis of the development of sectoral performance throughout the period 2007-2014, we have developed a rating system of sectoral performance – the BIC Rating System.

According to this system, each sector is ranked on a 12-grade rating scale. Any improvement or decline in the BIC Index score of each sector from year to year is reflected by a corresponding upgrade or downgrade of the specific sector.

BIC Rating System

Score range	Score	Rating	BIC Index Performance
≥40	≥63	a+	outperformers
	[51-63)	a	
	[40-51)	a-	
36-40	[39-40)	b+	good performers
	[37-39)	b	
	[36-37)	b-	
32-36	[35-36)	c+	medium performers
	[33-35)	c	
	[32-33)	c-	
<32	[24-32)	d+	underperformers
	[16-24)	d	
	<16	d-	

The sectors with the strongest performance, 2014

50	Water transport
E	Water supply; sewerage, waste management and remediation activities
68	Real estate activities
56	Food and beverage service activities
29	Manufacture of motor vehicles, trailers and semi-trailers
62+63	Computer programming, consultancy and related activities. Information service activities
32	Other manufacturing
M	Professional, scientific and technical activities
27	Manufacture of electrical equipment
20	Manufacture of chemicals and chemical products

Sectors associated with tourism, such as water transport (50) and food and beverage services (56) are in the top performance positions in 2014. The sector of water supply etc. (E) remains among the top performers for another year, while the real estate sector (68) seems to be recovering.

Programming and information services (62+63) show resistance to the crisis and retain their good performance, whilst there are manufacturing sectors, such as the manufacturing of vehicles (29), of electrical equipment (27) and of chemicals (20), that present a positive picture.

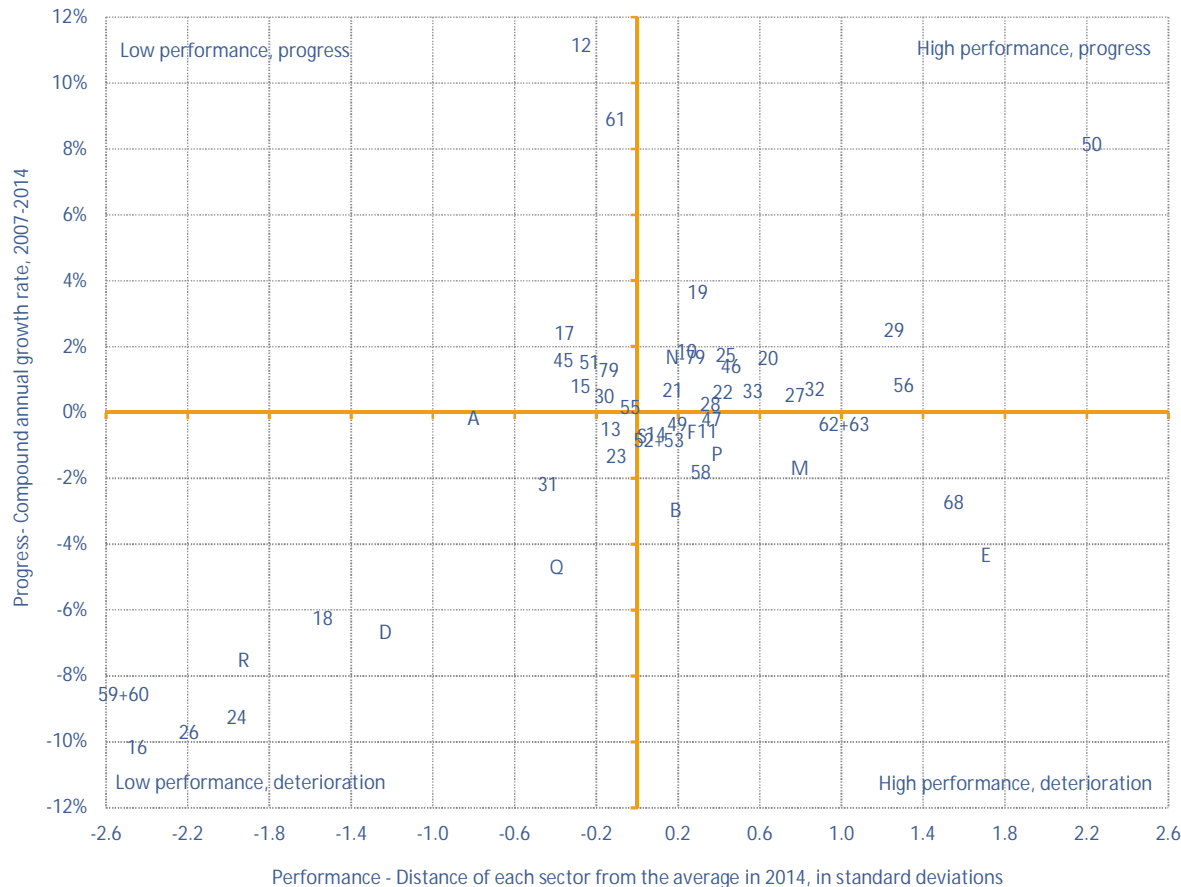
The sectors with the weakest performance, 2014

59+60	Motion picture, video and television programme production, sound recording and music publishing activities. Programming and broadcasting activities
16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
26	Manufacture of computer, electronic and optical products
24	Manufacture of basic metals
R	Arts, entertainment and recreation
18	Printing and reproduction of recorded media
D	Electricity, gas, steam and air conditioning supply
A	Agriculture, forestry and fishing
31	Manufacture of furniture
Q	Human health and social work activities

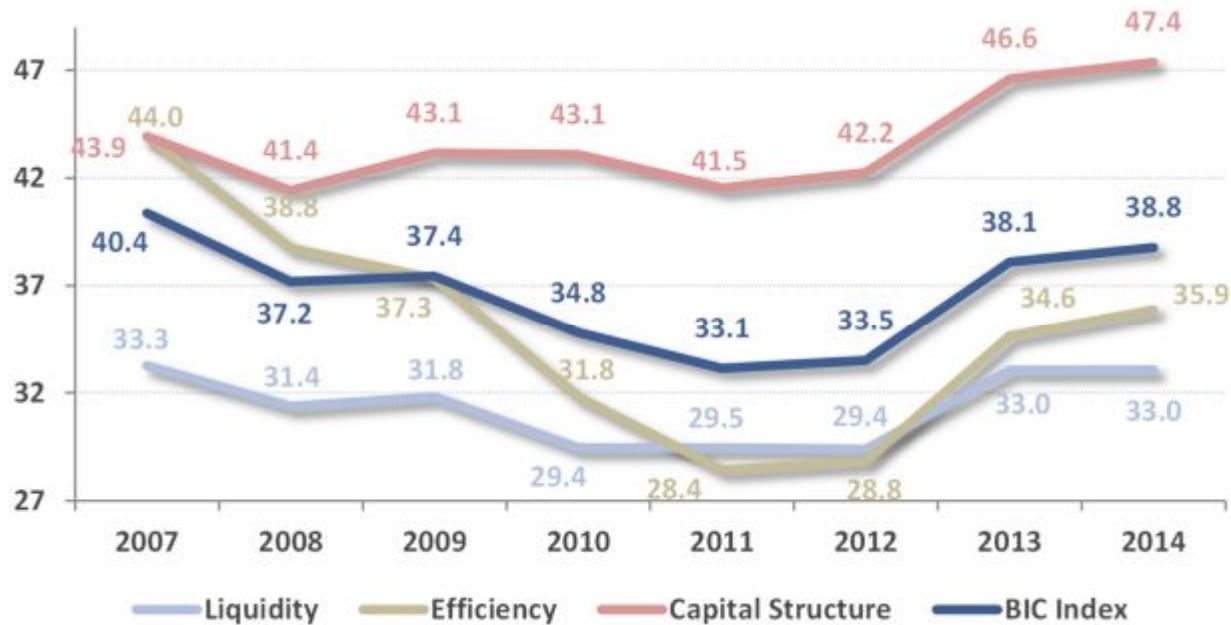
The trend of poor performance continues to prevail in the sectors of the media (59+60), of entertainment (R) and of wood (16) and furniture (31) manufacturing.

The average performance of the primary sector (A) was slightly lower than in the previous year, while the performance of the sectors of energy (D) and of health (Q) showed intense signs of decline, especially in terms of liquidity and profitability.

30% of the sectors record above-average performance along with improvement in the period 2007-2014. The sector of water transport (50) displays the best performance and progress. On the other hand, the sectors of media (59+60) and of wood manufacturing (16) show at the same time the lowest performance and the sharpest deterioration in the period 2007-2014. Finally, the sectors of water supply etc. (E) and of real estate (68) record the best performances other than that of water transport; however, their scores have declined between 2007 and 2014.



In 2014, the average performance of domestic small and medium-sized enterprises remained at a level similar to that of the previous year, but at a higher level than that which prevailed during the period of the deep recession 2011-2012.



BIC Rating System 2007-2014: The average rating in 2014 remained at the high level in 2013



Sectors	BIC Rating							
	2007	2008	2009	2010	2011	2012	2013	2014
50	c	d	c+	d+	c	a-	d+	a
E	a+	a	a	a	a	a	a	a
68	a+	a-	a	a-	a-	c+	a-	a
56	a-	b+	a-	b	b-	b	a-	a-
29	a-	b	b-	b	d+	d	a-	a-
62+63	a-	a-	a-	b-	b+	a-	a-	a-
32	a-	a-	a-	a-	a-	b+	a-	a-
M	a	a-	a-	a-	b	b-	a-	a-
27	a-	a-	a-	a-	a-	a-	a-	a-
20	b+	b	b	b	c	b-	b+	a-
33	a-	a-	a-	a-	a-	a-	a-	a-
46	b	b-	b-	c	c	b-	a-	a-
25	b	b	b	b	c+	b+	a-	a-
22	a-	b	b+	b-	c	c	b	a-
P	a-	a-	a-	a-	b+	a-	a-	a-
47	a-	b+	b	c+	b-	b	a-	a-
28	a-	b	b	c	b	c+	b	a-
11	a-	b+	b	b-	b-	a-	a-	a-
58	a-	a-	a-	b	d+	d+	a-	a-
19	c-	d+	c+	c	d+	c	b	a-
F	a-	b+	b+	c+	d+	c-	b-	a-
10	c+	b-	b-	b-	c+	b-	b+	a-
N-79	b-	b	b	b-	c	c+	a-	a-
49	a-	b	b	b	b-	c+	a-	a-
B	a-	a-	c+	d+	c-	a-	a-	a-
21	b	b	b	c	d+	b	b	a-
52+53	a-	a-	a-	a-	d+	c-	b	b+
14	a-	b+	b+	c	c-	b-	b	b+
S	a-	c+	a-	d+	c	c	a-	b
55	b	c	d+	d+	d+	d+	c	b
23	a-	b	b-	c+	d+	d+	c	b
61	d	d	d+	d+	b+	a-	a-	b
13	b+	c	c-	d+	d+	d+	c+	b
79	c	d+	d+	d+	d+	d+	b	b
30	b-	b	c	c+	c-	d+	c	b
51	c	d	d+	d+	b+	d+	a-	b-
12	d	d+	b	c-	d+	c+	d	b-
15	c	d+	d+	d+	d+	d+	c	b-
17	d+	d+	d+	d+	d+	d+	c	c+
45	d+	d+	d+	d+	d+	d	d+	c+
Q	a-	a-	a-	a-	b+	a-	a-	c+
31	a-	b	b-	d+	d+	d	c-	c
A	d+	d	d+	c	c-	d+	c	d+
D	a-	a-	b-	a-	b	b	a-	d+
18	b+	b	b	d+	d+	c-	b+	d+
R	b	c+	c	d+	d	d	d	d
24	a-	b-	d+	c+	c-	d	b	d
26	b+	b+	a-	d+	d-	d	d	d
16	c+	c-	c	d+	d	d-	d	d
59+60	d+	d+	d+	d-	d-	d-	d	d
Average	a-	b	b	c	c	c	b	b

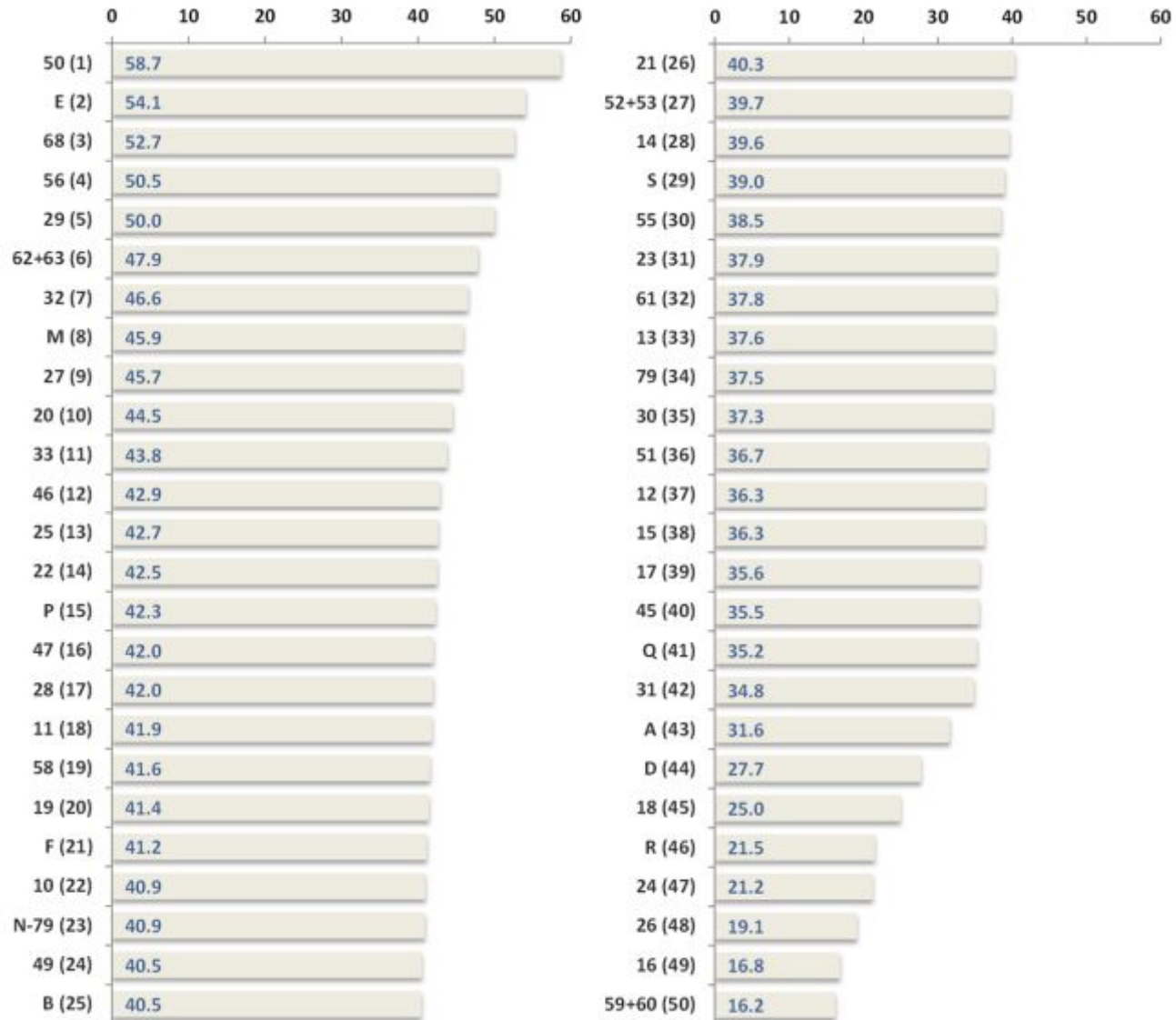
The average rating of the 50 sectors remained "b" in 2014, higher than the "c" recorded in 2012, without reaching the "a-" seen in 2007.

* Ranking of sectors based on 2014 data

- In 2014, the average rating of small and medium sized enterprises seems to have stabilised at a higher level, with grade “b” from “c” in the previous years of deep recession.
- About the half of the sectors (26 out of 50) are characterised as “outperformers” with ratings of “a-” or in a few instances “a” in 2014.
- The important developments in the ratings of the sectors in 2014 are summarised below:
 - the water transport sector (50) significantly improved, achieving its highest rating (“a”) during the examined period,
 - the construction sector (F) was upgraded to “a-” from “b-”,
 - the sectors of electrical equipment manufacturing (27) and equipment repairing (33) have maintained their “a-” rating during the period 2007-2014,
 - on the other hand, the sectors of health (Q) and of energy (D) which consistently exhibited good performance in previous years, were downgraded to “c+” and “d+” respectively in 2014, from “a-” in 2013.

2. Presentation of BIC Index results

BIC Index: ranking and scores, 2014

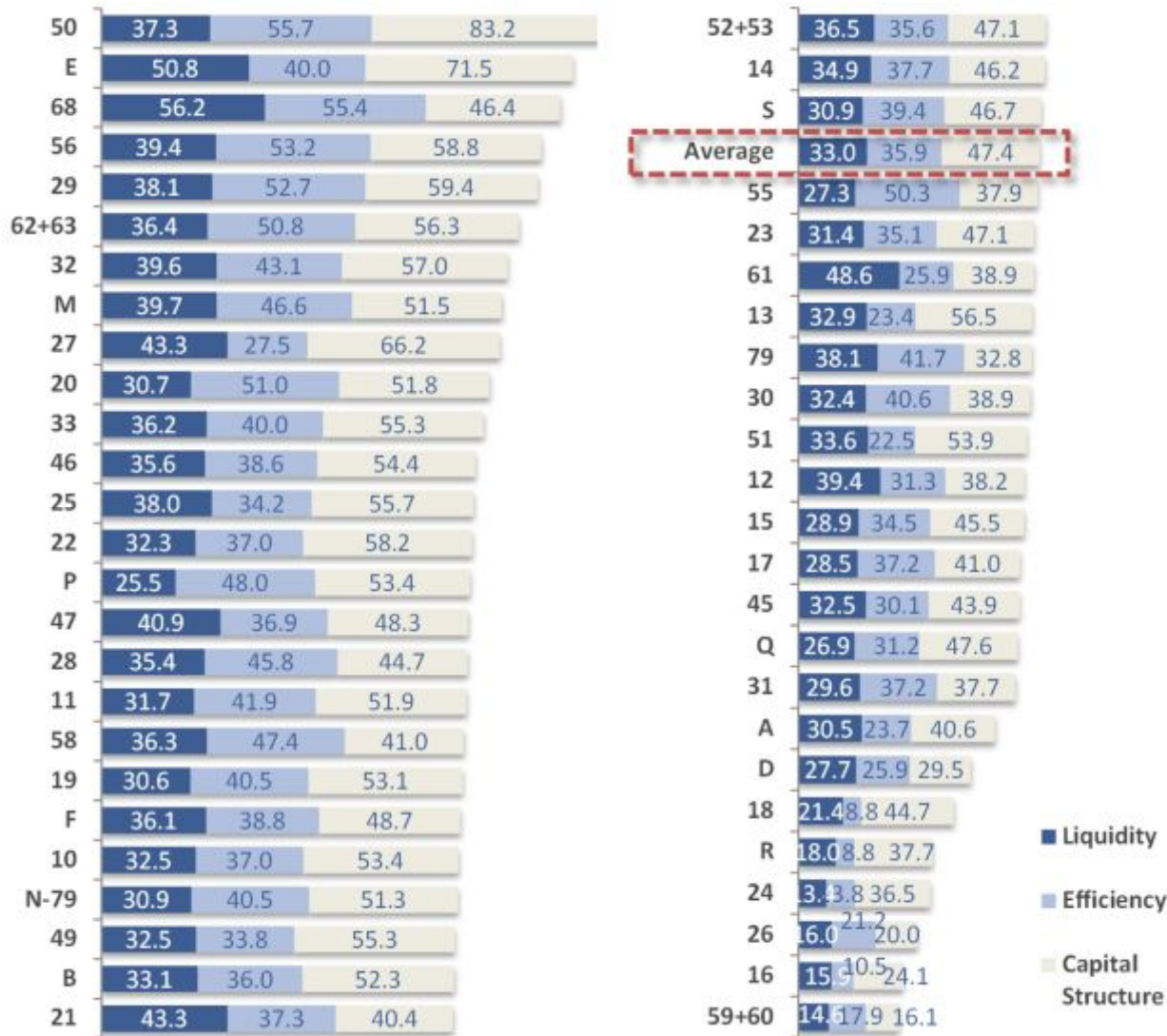


*In brackets the ranking of sectors and in the histograms their scores

Sectors 2014	BIC Index		Liquidity		Efficiency		Capital Structure		Sectors 2014	BIC Index		Liquidity		Efficiency		Capital Structure	
	Score	Rank	Score	Rank	Score	Rank	Score	Rank		Score	Rank	Score	Rank	Score	Rank	Score	Rank
50	58.7	1	↗ 37.3	14	↕ 55.7	1	↕ 83.2	1	21	40.3	26	↕ 43.3	5	↗ 37.3	24	↘ 40.4	38
E	54.1	2	↕ 50.8	2	↗ 40.0	18	↕ 71.5	2	52+53	39.7	27	↗ 36.5	15	↘ 35.6	31	↘ 47.1	26
68	52.7	3	↕ 56.2	1	↕ 55.4	2	↘ 46.4	29	14	39.6	28	↗ 34.9	22	↗ 37.7	23	↘ 46.2	30
56	50.5	4	↕ 39.4	10	↕ 53.2	3	↕ 58.8	5	S	39.0	29	↘ 30.9	33	↗ 39.4	20	↘ 46.7	28
29	50.0	5	↕ 38.1	12	↕ 52.7	4	↕ 59.4	4	55	38.5	30	↘ 27.3	42	↕ 50.3	7	↘ 37.9	42
62+63	47.9	6	↗ 36.4	16	↕ 50.8	6	↕ 56.3	9	23	37.9	31	↘ 31.4	32	↘ 35.1	32	↘ 47.1	27
32	46.6	7	↕ 39.6	8	↕ 43.1	12	↕ 57.0	7	61	37.8	32	↕ 48.6	3	↘ 25.9	40	↘ 38.9	40
M	45.9	8	↕ 39.7	7	↕ 46.6	10	↗ 51.5	21	13	37.6	33	↗ 32.9	25	↘ 23.4	43	↕ 56.5	8
27	45.7	9	↕ 43.3	4	↘ 27.5	39	↕ 66.2	3	79	37.5	34	↕ 38.1	11	↗ 41.7	14	↘ 32.8	46
20	44.5	10	↘ 30.7	35	↕ 51.0	5	↗ 51.8	20	30	37.3	35	↘ 32.4	29	↗ 40.6	15	↘ 38.9	39
33	43.8	11	↗ 36.2	18	↗ 40.0	19	↕ 55.3	11	51	36.7	36	↗ 33.6	23	↘ 22.5	44	↗ 53.9	14
46	42.9	12	↗ 35.6	20	↗ 38.6	22	↕ 54.4	13	12	36.3	37	↕ 39.4	9	↘ 31.3	36	↘ 38.2	41
25	42.7	13	↕ 38.0	13	↘ 34.2	34	↕ 55.7	10	15	36.3	38	↘ 28.9	39	↘ 34.5	33	↘ 45.5	31
22	42.5	14	↘ 32.3	30	↘ 37.0	27	↕ 58.2	6	17	35.6	39	↘ 28.5	40	↘ 37.2	26	↘ 41.0	35
P	42.3	15	↘ 25.5	44	↕ 48.0	8	↗ 53.4	16	45	35.5	40	↘ 32.5	26	↘ 30.1	38	↘ 43.9	34
47	42.0	16	↕ 40.9	6	↘ 36.9	29	↗ 48.3	24	Q	35.2	41	↘ 26.9	43	↘ 31.2	37	↗ 47.6	25
28	42.0	17	↗ 35.4	21	↕ 45.8	11	↘ 44.7	32	31	34.8	42	↘ 29.6	38	↗ 37.2	25	↘ 37.7	44
11	41.9	18	↘ 31.7	31	↕ 41.9	13	↗ 51.9	19	A	31.6	43	↘ 30.5	37	↘ 23.7	42	↘ 40.6	37
58	41.6	19	↗ 36.3	17	↕ 47.4	9	↘ 41.0	36	D	27.7	44	↘ 27.7	41	↘ 25.9	41	↘ 29.5	47
19	41.4	20	↘ 30.6	36	↗ 40.5	16	↗ 53.1	17	18	25.0	45	↘ 21.4	45	↘ 8.8	50	↘ 44.7	33
F	41.2	21	↗ 36.1	19	↗ 38.8	21	↗ 48.7	23	R	21.5	46	↘ 18.0	46	↘ 8.8	49	↘ 37.7	43
10	40.9	22	↘ 32.5	28	↘ 37.0	28	↗ 53.4	15	24	21.2	47	↘ 13.4	50	↘ 13.8	47	↘ 36.5	45
N-79	40.9	23	↘ 30.9	34	↗ 40.5	17	↗ 51.3	22	26	19.1	48	↘ 16.0	47	↘ 21.2	45	↘ 20.0	49
49	40.5	24	↘ 32.5	27	↘ 33.8	35	↕ 55.3	12	16	16.8	49	↘ 15.9	48	↘ 10.5	48	↘ 24.1	48
B	40.5	25	↗ 33.1	24	↘ 36.0	30	↗ 52.3	18	59+60	16.2	50	↘ 14.6	49	↘ 17.9	46	↘ 16.1	50

- The green colour indicates the sectors whose scores are above the median score of every dimension among the sectors, in contrast with the red colour, which indicates scores below the median score.
- The arrow indicates the intensity of the direction of each sector relative to the median score of the corresponding dimension.
- ↕ score ≥ 75% of score range
- ↗ 50% ≤ score < 75%
- ↘ 25% ≤ score < 50%
- ↘ score < 25%

BIC Index: Structure of the final score per sector, 2014



*The BIC Index is the average result of the scores of each dimension

The sectors with the strongest performance, 2014

50	Water transport
E	Water supply; sewerage, waste management and remediation activities
68	Real estate activities
56	Food and beverage service activities
29	Manufacture of motor vehicles, trailers and semi-trailers
62+63	Computer programming, consultancy and related activities. Information service activities
32	Other manufacturing
M	Professional, scientific and technical activities
27	Manufacture of electrical equipment
20	Manufacture of chemicals and chemical products

Sectors associated with tourism, such as water transport (50) and food and beverage services (56) are in the top performance positions in 2014. The sector of water supply etc. (E) remains among the top performers for another year, while the real estate sector (68) seems to be recovering.

Programming and information services (62+63) show resistance to the crisis and retain their good performance, whilst there are manufacturing sectors, such as the manufacturing of vehicles (29), of electrical equipment (27) and of chemicals (20), that present a positive picture.

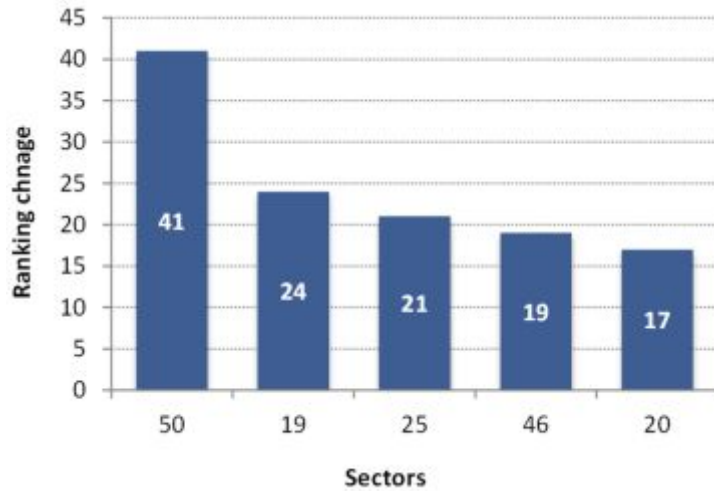
The sectors with the weakest performance, 2014

59+60	Motion picture, video and television programme production, sound recording and music publishing activities. Programming and broadcasting activities
16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials
26	Manufacture of computer, electronic and optical products
24	Manufacture of basic metals
R	Arts, entertainment and recreation
18	Printing and reproduction of recorded media
D	Electricity, gas, steam and air conditioning supply
A	Agriculture, forestry and fishing
31	Manufacture of furniture
Q	Human health and social work activities

The trend of poor performance continues to prevail in the sectors of the media (59+60), of entertainment (R) and of wood (16) and furniture (31) manufacturing.

The average performance of the primary sector (A) was slightly lower than in the previous year, while the performance of the sectors of energy (D) and of health (Q) showed intense signs of decline, especially in terms of liquidity and profitability.

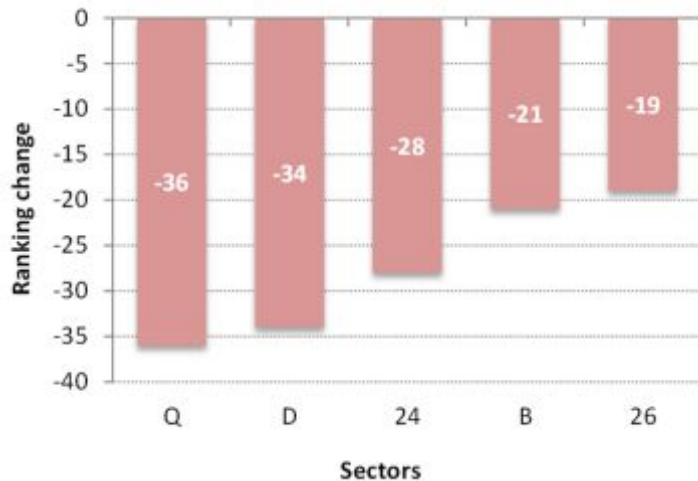
Sectors with the 5 largest positive cumulative changes in the ranking of BIC Index, 2007-2014



Rising sectors

The sectors of water transport (50) and of oil refining (19) have considerably improved their performance compared to 2007, while the picture is also positive for the sectors of metal products manufacturing (25) and wholesale (46).

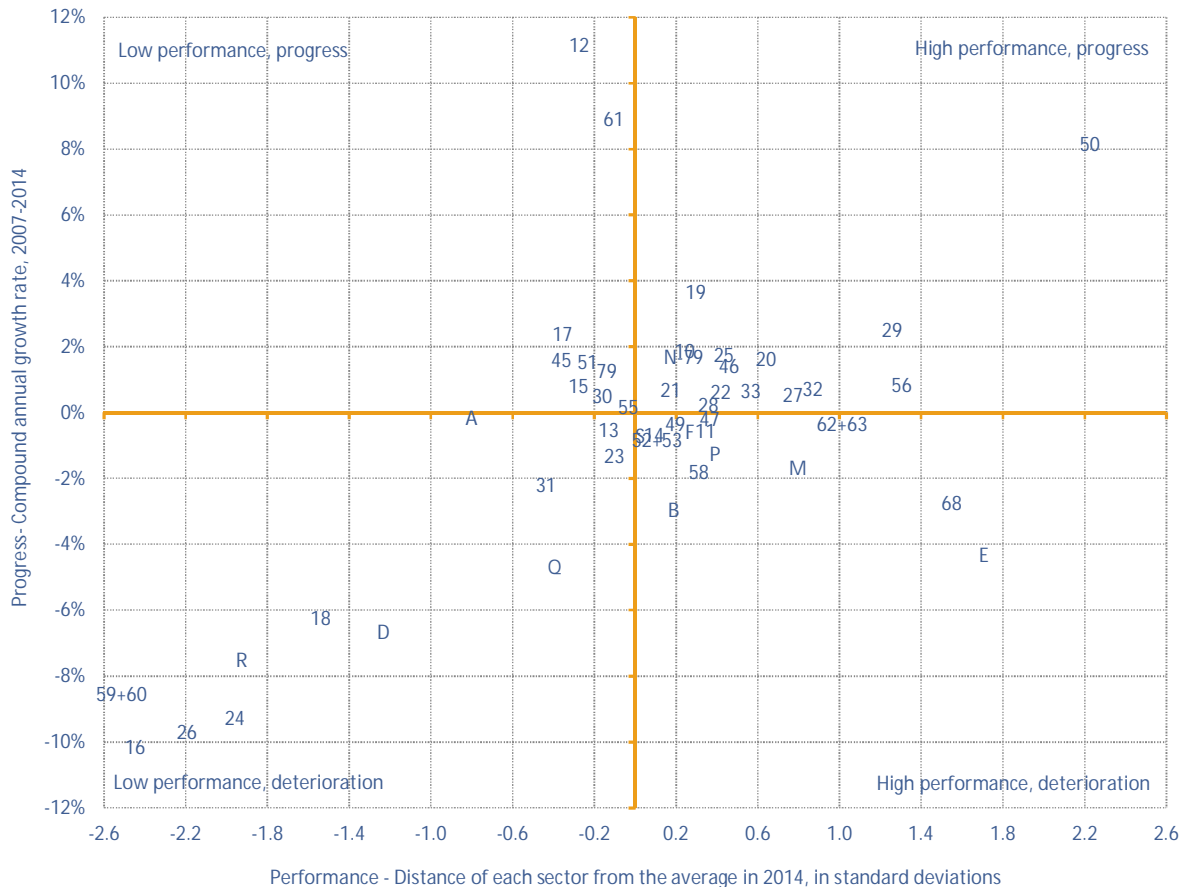
Sectors with the 5 largest negative cumulative changes in the ranking of BIC Index, 2007-2014

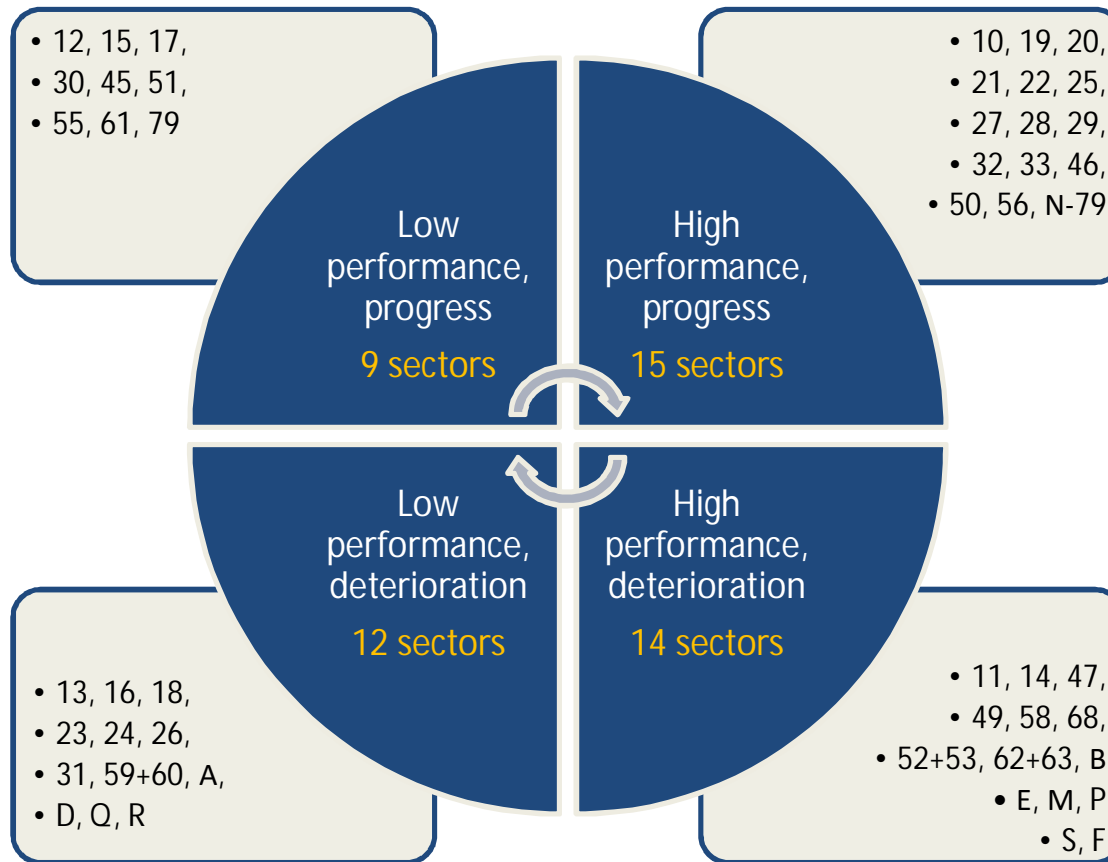


Declining sectors

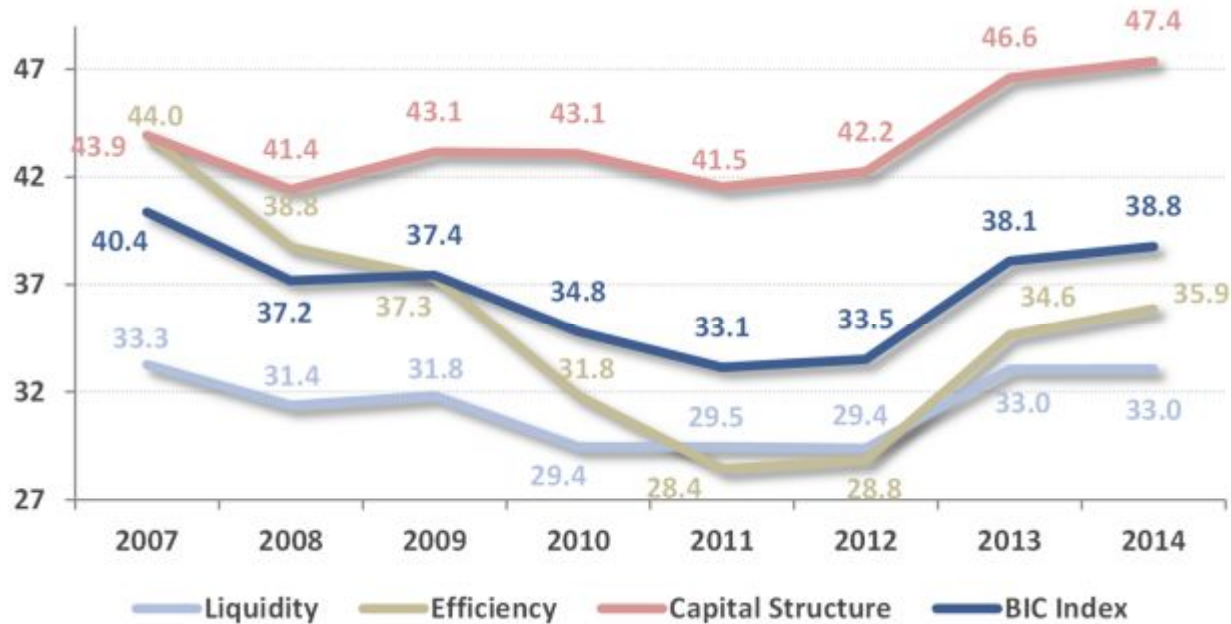
The performance of SMEs in the health sector (Q) has significantly declined in 2014 compared to 2007, especially in terms of profitability. The energy sector (D) has suffered from intense pressure in all the examined dimensions when compared to the pre-crisis period (2007). The computers etc. manufacturing (26) and mining and quarrying (B) sectors continue to achieve lower performance than in 2007.

30% of the sectors record above-average performance along with improvement in the period 2007-2014. The sector of water transport (50) displays the best performance and progress. On the other hand, the sectors of media (59+60) and of wood manufacturing (16) show at the same time the lowest performance and the sharpest deterioration in the period 2007-2014. Finally, the sectors of water supply etc. (E) and of real estate (68) record the best performances other than that of water transport; however, their scores have declined between 2007 and 2014.





In 2014, the average performance of domestic small and medium-sized enterprises remained at a level similar to that of the previous year, but at a higher level than that which prevailed during the period of the deep recession 2011-2012.



3. BIC Rating System

Classification of sectors per year based on the BIC Rating System



Rating	2007			2008			2009			2010			2011			2012			2013			2014			Rating
a+	E	68																							a+
a	M			E			E	68		E			E			E			E			50	E	68	a
a-	B	Q	62+63	M	62+63	68	Q	62+63	M	68	M	27	68	33	27	33	62+63	27	29	61	51	56	29	62+63	a-
	56	58	P	Q	B	27	32	P	33	D	33	32	32			Q	11	50	56	62+63	33	32	M	27	
	D	32	27	P	58	32	27	S	56	Q	P	52+53				P	61	B	27	68	58	20	33	46	
	11	F	47	52+53	D	33	58	52+53	26										P	M	D	25	22	P	
	52+53	29	33																32	Q	11	47	28	11	
	24	14	23																S	47	25	58	19	F	
	49	28	S																46	N-79	B	10	N-79	49	
22	31																	49			B		21		
b+	20	18	26	14	26	47	22	F	14				61	62+63	51	32	25		10	18	20	52+53	14		b+
	13			F	11	56							P	Q											
b	46	21	55	21	25	49	25	47	49	49	56	25	M	D	28	56	21	D	52+53	24	22	S	55	23	b
	25	R		30	31	N-79	11	20	12	29	20	58				47			19	79	28	61	13	79	
				20	28	29	28	21	18										14	21		30			
b-	N-79	30		24	46	10	D	29	31	62+63	N-79	22	56	47	11	M	14	46	F			51	12	15	b-
							10	23	46	10	11		49			20	10								
c+	10	16		S	R		B	50	19	23	47	24	10	25		12	28	68	13			17	45	Q	c+
c	79	15	50	55	13		R	30	16	14	21	46	46	N-79	50	22	19	S	30	23	17	31			c
	51									19	28	A	20	22	S				15	A	55				
c-	19			16			13			12			14	A	24	F	18	52+53	31						c-
d+	A	45	59+60	15	79	45	55	17	24	18	B	17	15	31	F	30	79	51	50	45		A	D	18	d+
	17			17	59+60	19	A	79	51	51	S	16	18	21	52+53	A	55	58							
				12			45	15	61	79	13	31	12	55	19	17	15	13							
							59+60			15	55	26	79	23	17	23									
d	61	12		50	A	51							16	R		31	45	24	12	R	26	R	24	26	d
				61												29	26	R	16	59+60		16	59+60		
d-										59+60			59+60	26		59+60	16								d-

Mapping of the performance of sectors per year based on the BIC Rating System



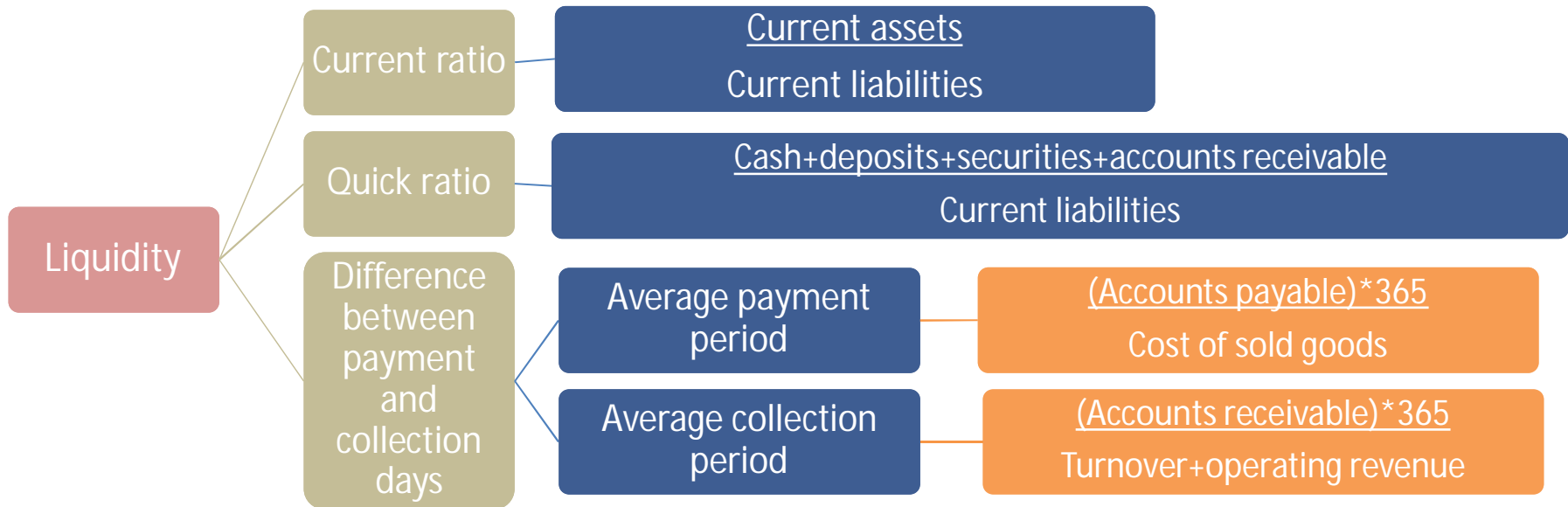
Sectors	BIC Index Score								07-14	BIC Rating							
	2007	2008	2009	2010	2011	2012	2013	2014		2007	2008	2009	2010	2011	2012	2013	2014
50	33.9	23.6	35.1	25.3	33.5	41.6	30.0	58.7	🌊	c	d	c+	d+	c	a-	d+	a
E	73.7	54.1	53.1	56.9	54.1	55.7	58.3	54.1	🌊	a+	a	a	a	a	a	a	a
68	63.9	46.1	51.8	50.2	49.5	35.5	42.6	52.7	🌊	a+	a-	a	a-	a-	c+	a-	a
56	47.6	39.0	41.9	38.3	36.9	38.7	46.4	50.5	🌊	a-	b+	a-	b	b-	b	a-	a-
29	42.1	38.1	36.8	38.1	27.4	21.8	50.9	50.0	🌊	a-	b	b-	b	d+	d	a-	a-
62+63	49.1	48.6	44.6	36.9	39.7	48.4	46.4	47.9	🌊	a-	a-	a-	b-	b+	a-	a-	a-
32	44.3	42.9	43.5	42.4	40.5	39.6	41.6	46.6	🌊	a-	a-	a-	a-	a-	b+	a-	a-
M	51.7	48.8	43.9	44.9	38.8	36.6	42.1	45.9	🌊	a	a-	a-	a-	b	b-	a-	a-
27	44.0	45.1	43.0	44.3	42.2	44.6	45.6	45.7	🌊	a-	a-	a-	a-	a-	a-	a-	a-
20	39.7	38.3	38.5	37.3	33.4	36.5	39.0	44.5	🌊	b+	b	b	b	c	b-	b+	a-
33	41.9	40.8	43.1	42.6	42.2	49.9	46.2	43.8	🌊	a-	a-	a-	a-	a-	a-	a-	a-
46	38.9	36.5	36.1	33.9	34.4	36.6	40.8	42.9	🌊	b	b-	b-	c	c	b-	a-	a-
25	37.8	38.9	38.8	38.2	35.4	39.1	40.9	42.7	🌊	b	b	b	b	c+	b+	a-	a-
22	40.7	38.1	39.5	36.5	33.3	35.0	38.6	42.5	🌊	a-	b	b+	b-	c	c	b	a-
P	46.2	44.2	43.3	41.0	39.1	40.8	42.1	42.3	🌊	a-	a-	a-	a-	b+	a-	a-	a-
47	42.6	39.8	38.7	35.6	36.9	37.7	41.4	42.0	🌊	a-	b+	b	c+	b-	b	a-	a-
28	41.3	38.1	37.8	33.7	37.1	35.6	37.7	42.0	🌊	a-	b	b	c	b	c+	b	a-
11	43.6	39.5	38.5	36.4	36.2	41.7	41.6	41.9	🌊	a-	b+	b	b-	b-	a-	a-	a-
58	47.3	44.0	41.9	37.2	24.8	29.0	42.1	41.6	🌊	a-	a-	a-	b	d+	d+	a-	a-
19	32.2	27.8	35.0	33.9	30.4	34.7	38.3	41.4	🌊	c-	d+	c+	c	d+	c	b	a-
F	42.9	39.7	39.3	35.1	31.6	32.6	36.2	41.2	🌊	a-	b+	b+	c+	d+	c-	b-	a-
10	36.0	36.2	36.2	36.4	35.7	36.3	39.9	40.9	🌊	c+	b-	b-	b-	c+	b-	b+	a-
N-79	36.4	38.4	37.0	36.9	33.6	35.2	40.1	40.9	🌊	b-	b	b	b-	c	c+	a-	a-
49	41.5	38.8	38.5	38.7	36.1	35.0	40.0	40.5	🌊	a-	b	b	b	b-	c+	a-	a-
B	49.9	45.2	35.3	30.0	32.5	40.1	40.0	40.5	🌊	a-	a-	c+	d+	c-	a-	a-	a-
21	38.4	38.9	37.7	34.6	31.3	38.6	39.0	40.3	🌊	b	b	b	c	d+	b	b	a-
52+53	42.1	42.3	40.4	40.8	31.0	32.1	38.7	39.7	🌊	a-	a-	a-	a-	d+	c-	b	b+
14	41.5	39.9	39.2	34.9	32.9	36.6	37.5	39.6	🌊	a-	b+	b+	c	c-	b-	b	b+
S	41.0	35.4	42.6	29.5	33.1	33.2	41.5	39.0	🌊	a-	c+	a-	d+	c	c	a-	b
55	38.0	33.9	32.0	28.0	30.5	29.2	33.4	38.5	🌊	b	c	d+	d+	d+	d+	c	b
23	41.5	37.9	36.2	35.7	29.8	24.5	34.8	37.9	🌊	a-	b	b-	c+	d+	d+	c	b
61	20.8	18.9	25.4	24.7	39.9	40.7	49.8	37.8	🌊	d	d	d+	d+	b+	a-	a-	b
13	39.0	33.4	32.6	28.8	24.4	25.8	36.0	37.6	🌊	b+	c	c-	d+	d+	d+	c+	b
79	34.4	31.5	30.2	29.4	30.4	31.1	37.8	37.5	🌊	c	d+	d+	d+	d+	d+	b	b
30	36.1	38.8	33.9	35.2	32.0	31.9	34.9	37.3	🌊	b-	b	c	c+	c-	d+	c	b
51	33.0	20.5	30.2	29.6	39.1	30.9	49.4	36.7	🌊	c	d	d+	d+	b+	d+	a-	b-
12	17.3	26.9	38.2	32.4	30.9	35.9	22.7	36.3	🌊	d	d+	b	c-	d+	c+	d	b-
15	34.3	31.8	28.2	28.2	31.7	27.0	34.3	36.3	🌊	c	d+	d+	d+	d+	d+	c	b-
17	30.1	29.0	31.9	30.0	28.6	27.6	34.7	35.6	🌊	d+	d+	d+	d+	d+	d+	c	c+
45	31.8	29.6	28.9	25.8	24.1	23.1	28.5	35.5	🌊	d+	d+	d+	d+	d+	d	d+	c+
Q	49.4	46.0	47.5	42.0	39.1	43.1	41.6	35.2	🌊	a-	a-	a-	a-	b+	a-	a-	c+
31	40.7	38.8	36.6	28.5	31.6	23.3	32.2	34.8	🌊	a-	b	b-	d+	d+	d	c-	c
A	32.0	23.4	30.2	33.1	32.9	30.3	33.6	31.6	🌊	d+	d	d+	c	c-	d+	c	d+
D	44.9	41.2	37.0	44.2	38.7	38.6	41.9	27.7	🌊	a-	a-	b-	a-	b	b	a-	d+
18	39.2	37.7	37.1	31.5	31.5	32.4	39.1	25.0	🌊	b+	b	b	d+	d+	c-	b+	d+
R	37.1	35.4	34.5	25.0	17.1	19.0	22.3	21.5	🌊	b	c+	c	d+	d	d	d	d
24	41.9	37.0	31.4	35.5	32.6	22.1	38.6	21.2	🌊	a-	b-	d+	c+	c-	d	b	d
26	39.0	39.8	40.1	26.0	13.7	19.7	20.9	19.1	🌊	b+	b+	a-	d+	d-	d	d	d
16	35.6	32.9	33.0	29.4	20.6	8.3	16.7	16.8	🌊	c+	c-	c	d+	d	d-	d	d
59+60	30.3	27.8	24.9	15.6	14.2	11.2	16.2	16.2	🌊	d+	d+	d+	d-	d-	d-	d	d
Average	40.4	37.2	37.4	34.8	33.1	33.5	38.1	38.8	🌊	a-	b	b	c	c	c	b	b

*Ranking of sectors based on 2014 data

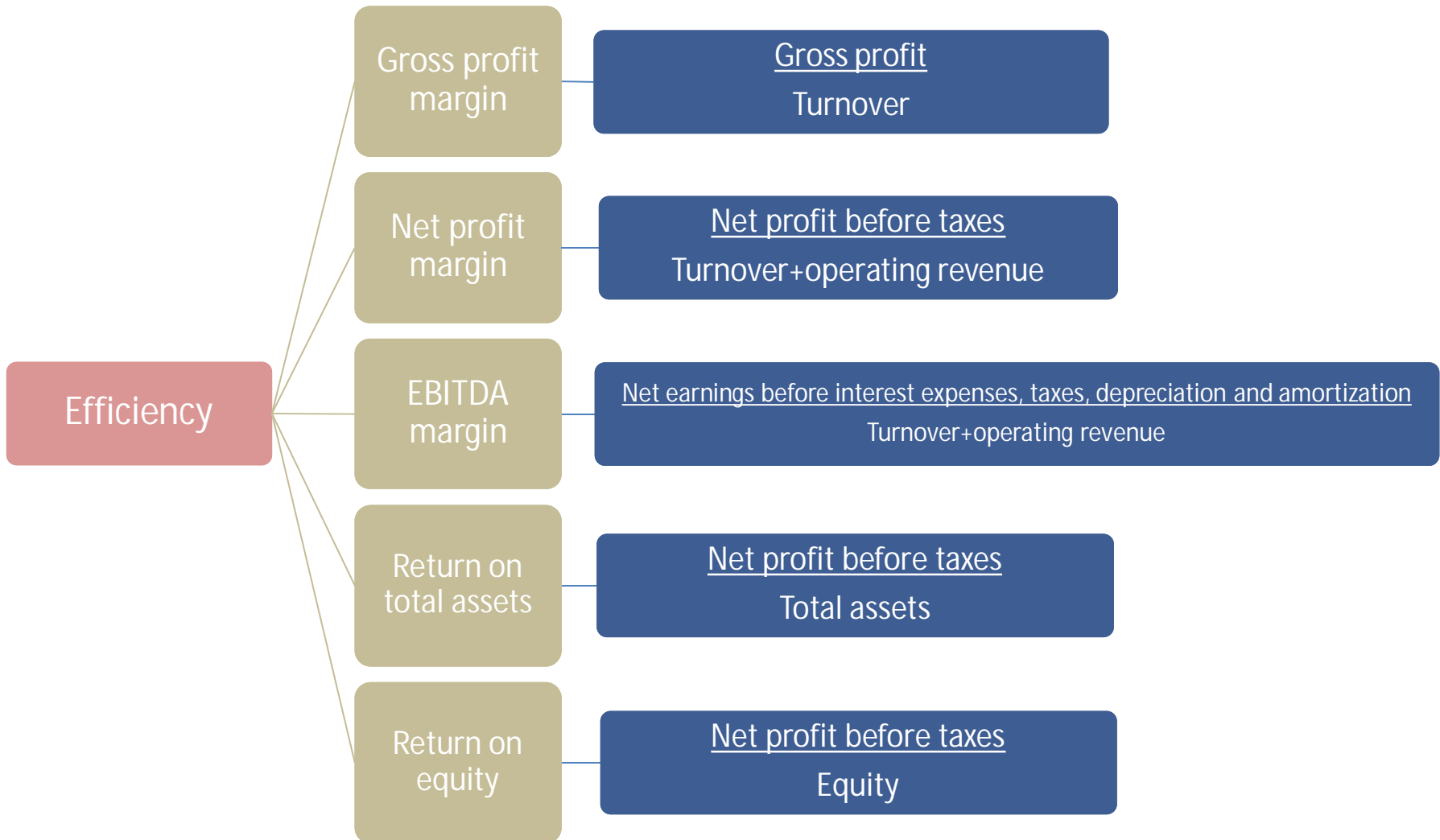
4. Appendices

4a. Methodology of calculating BIC Index

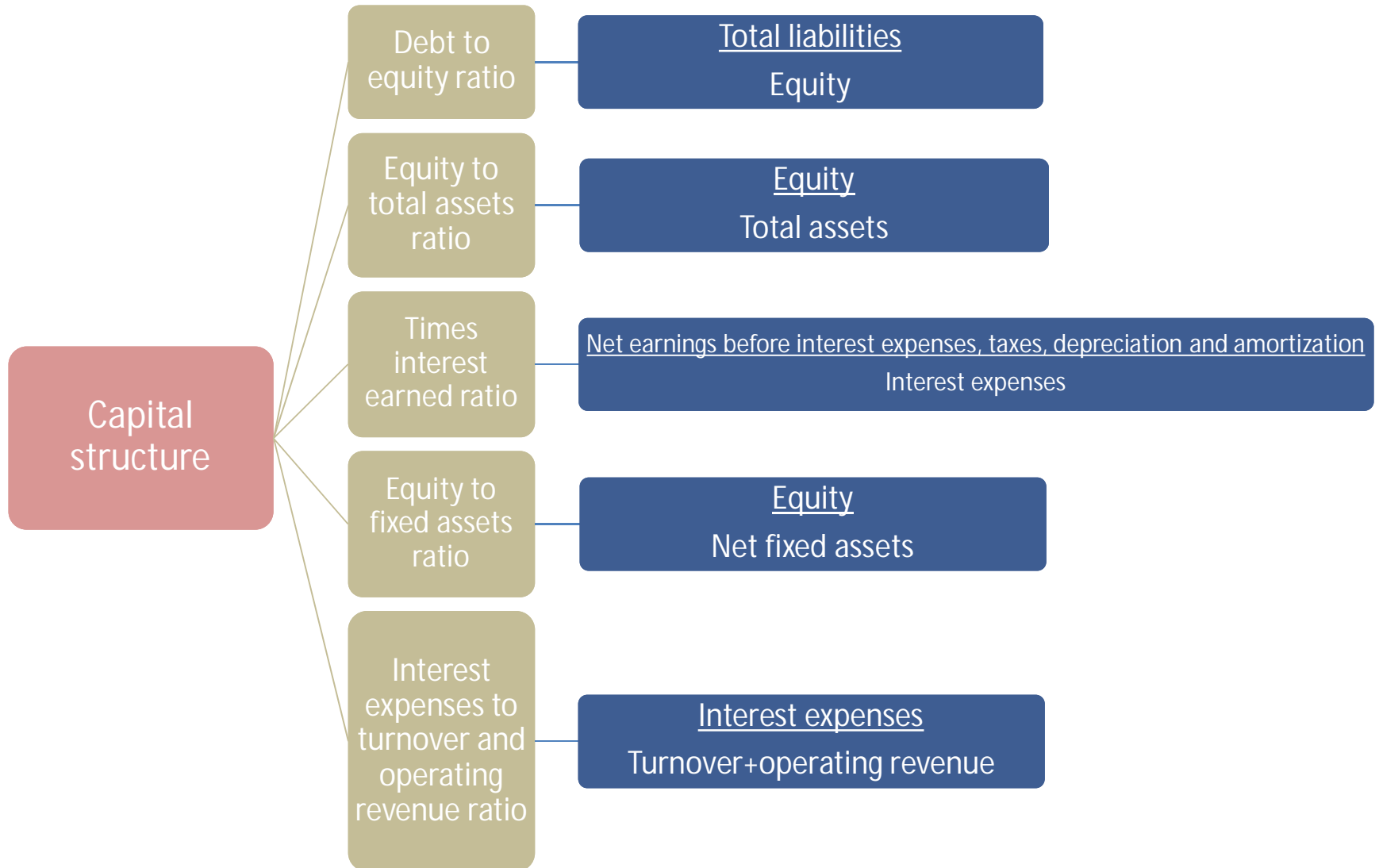
Total Liquidity of SMEs of each sector is given by the following ratios:



The overall measure of the Efficiency of each sector is given by:



The basic Capital Structure ratios we use are the following:



Each of these variables has a different range, as well as different units of measurement; e.g. some variables count the number of days, some are expressed as percentages and so on.

In order to be able to initially compare and synthesize these variables, for the three key dimensions of liquidity, efficiency and capital structure and then the BIC Index, all variables should be converted to a common base.

Standardization of variables examined:

When the rise of a variable value is a positive development, the standardization formula is:

$$p_i = \frac{I_i - I_{min}}{I_{max} - I_{min}} \times 100$$

Where, p_i : the variable value of sector i after the standardization;

I_i : the variable value of sector i before the standardization;

I_{min} : the variable value of the sector with the weakest performance of all examined sectors;

I_{max} : the variable value of the sector with the strongest performance of all examined sectors.

When the decline of a variable value is a positive development, the standardization formula is:

$$p_i = \frac{I_{max} - I_i}{I_{max} - I_{min}} \times 100 \quad \rightarrow$$

The common range of variables is: 0-100.

Crucial to the construction of the index is the choice of the base period, namely the period used to calculate the maximum (I_{max}) and minimum (I_{min}) value.

- Financial ratios: min-max standardisation: 2006
- Source of financial data: ICAP DATA.

Overall, we examine 50 sectors and the number of the sample of SAs and LTDs ranges from 18.4 thousand to 23.5 thousand during 2007-2014.

Weights of examined ratios and variables per dimension for the calculation of the BIC Index



The final BIC Index is calculated as follows:

<p style="text-align: center;">Liquidity (33.3%)</p>	<ul style="list-style-type: none"> • Current ratio.....33.3% • Quick ratio.....33.3% • Difference between payment and collection days.....33.3%
<p style="text-align: center;">Efficiency (33.3%)</p>	<ul style="list-style-type: none"> • Gross profit margin.....20% • Net profit margin.....20% • EBITDA margin.....20% • Return on total assets.....20% • Return on equity.....20%
<p style="text-align: center;">Capital structure (33.3%)</p>	<ul style="list-style-type: none"> • Debt to equity ratio.....20% • Equity to total assets ratio.....20% • Equity to fixed assets.....20% • Times interest earned ratio.....20% • Interest expenses to turnover and operating revenue ratio.....20%



Description of BIC Index methodology: Selection of enterprise sample



- Source of data: ICAP DATA.
- *Processing of enterprise sample*: we excluded enterprises that:
 - had no available financial data;
 - reported negative equity;
 - had no data available on the number of personnel;
 - showed no turnover;
 - had no available data for the cost of goods sold.
- Given the emphasis on SMEs*, we selected the enterprises that met the following criteria:
 - the number of employees does not exceed 250 persons; while
 - their turnover does not exceed €50 million.

* In line with the definition of SMEs given by the European Commission (Commission Recommendation 2003/361/EC).

- We examine all sectors of economic activity, according to the STAKOD'08 (=NACE rev. 2) classification, except for the following:
 - **K**: Financial and insurance activities
 - **O**: Public administration and defense; compulsory social security
 - **T**: Activities of households as employers; undifferentiated goods – and services – producing activities of households for own use
 - **U**: Activities of extraterritorial organizations and bodies

The examined sectors of the domestic economy and presentation of the samples of SMEs, 2007-2014 (a)



Codes	STAKOD'08 (=NACE rev. 2)	2007	2008	2009	2010	2011	2012	2013	2014
A	Agriculture, forestry and fishing	249	289	280	254	261	223	233	246
B	Mining and quarrying	89	111	108	94	85	73	83	83
10	Manufacture of food products	1,014	1,044	1,035	984	991	931	951	994
11	Manufacture of beverages	177	180	180	168	165	160	154	159
12	Manufacture of tobacco products	12	9	10	9	10	9	9	9
13	Manufacture of textiles	166	166	165	157	138	120	114	116
14	Manufacture of wearing apparel	301	297	284	261	248	213	206	204
15	Manufacture of leather and related products	49	49	43	42	43	37	38	39
16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	121	123	121	103	92	80	78	83
17	Manufacture of paper and paper products	140	144	144	141	142	138	124	128
18	Printing and reproduction of recorded media	218	226	214	196	182	156	151	163
19	Manufacture of coke and refined petroleum products	28	26	26	28	26	27	24	24
20	Manufacture of chemicals and chemical products	221	223	231	224	224	213	203	206
21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	51	52	51	49	56	48	44	47
22	Manufacture of rubber and plastic products	276	275	279	264	243	226	235	232
23	Manufacture of other non-metallic mineral products	478	473	464	415	387	334	332	325
24	Manufacture of basic metals	69	71	69	67	65	58	56	55
25	Manufacture of fabricated metal products, except machinery and equipment	535	537	521	481	463	417	411	415
26	Manufacture of computer, electronic and optical products	63	63	62	61	59	53	58	61
27	Manufacture of electrical equipment	141	142	147	137	130	122	114	121
28	Manufacture of machinery and equipment n.e.c.	220	222	218	208	193	196	184	183
29	Manufacture of motor vehicles, trailers and semi-trailers	35	35	37	35	30	25	20	27
30	Manufacture of other transport equipment	31	30	30	27	29	23	22	18
31	Manufacture of furniture	225	213	213	189	159	131	121	123
32	Other manufacturing	148	147	150	138	135	122	118	115
33	Repair and installation of machinery and equipment	58	58	52	42	57	50	52	57

Data extraction period: May of each year

The examined sectors of the domestic economy and presentation of the samples of SMEs, 2007-2014 (b)



Codes	STAKOD'08 (=NACE rev. 2)	2007	2008	2009	2010	2011	2012	2013	2014
D	Electricity, gas, steam and air conditioning supply	110	121	150	168	208	205	285	359
E	Water supply; sewerage, waste management and remediation activities	68	83	89	84	87	94	104	122
F	Construction	1,664	1,706	1,693	1,496	1,398	1,091	1,112	1,185
45	Wholesale and retail trade and repair of motor vehicles and motorcycles	835	825	801	705	683	583	552	553
46	Wholesale trade, except of motor vehicles and motorcycles	5,281	5,380	5,344	4,908	5,135	4,605	4,517	4,664
47	Retail trade, except of motor vehicles and motorcycles	1,350	1,348	1,328	1,158	1,194	1,044	984	1,062
49	Land transport and transport via pipelines	198	198	192	182	194	207	228	267
50	Water transport	24	25	21	17	20	18	17	14
51	Air transport	13	13	17	17	13	13	13	13
52+53	Warehousing and postal and courier activities	464	464	456	435	465	410	405	471
55	Accommodation	2,985	2,989	3,012	2,763	2,579	2,187	2,122	2,220
56	Food and beverage service activities	542	551	534	480	461	324	316	358
58	Publishing activities	226	244	237	197	202	166	167	174
59+60	Motion picture, video and television programme production, sound recording and music publishing activities. Programming and broadcasting activities	226	221	218	188	184	135	136	145
61	Telecommunications	39	43	46	39	37	37	38	46
62+63	Computer programming, consultancy and related activities. Information service activities	470	490	488	451	476	426	426	464
68	Real estate activities	596	612	609	574	574	394	413	516
M	Professional, scientific and technical activities	1,275	1,323	1,334	1,219	1,308	1,098	1,060	1,223
N-79	Administrative and support service activities except of travel agency, tour operator and other reservation service and related activities	467	482	453	402	420	385	399	412
79	Travel agency, tour operator and other reservation service and related activities	366	365	339	295	313	280	293	310
P	Education	199	202	206	185	193	186	166	179
Q	Human health and social work activities	349	385	399	386	433	353	380	415
R	Arts, entertainment and recreation	103	114	116	106	93	57	74	82
S	Other service activities	79	79	73	62	84	72	68	62
Total		23,044	23,468	23,289	21,291	21,367	18,555	18,410	19,549

* 09 (mining support service activities) is excluded from B, and 94 (activities of membership organisations) from S – no available data from ICAP DATA

4b. Methodology of calculating BIC Rating System

BIC Rating System*: distribution characteristics of the BIC Index scores 2007-2012

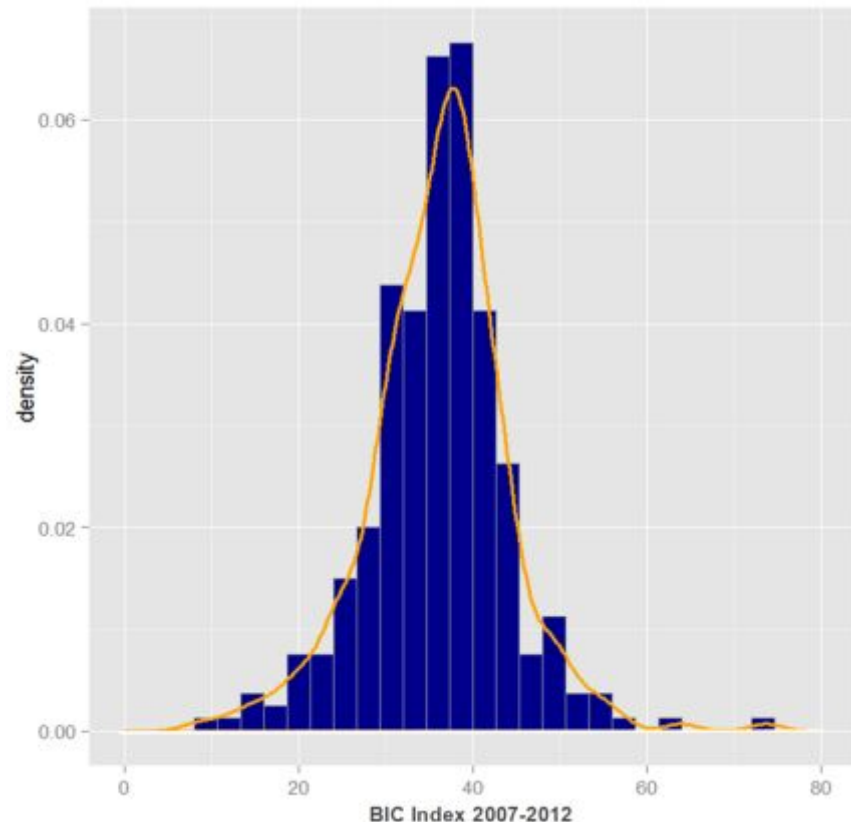


As shown in the histogram, the distribution of all scores of the BIC Index (50 sectors, 2007-2012) is almost symmetrical. It has an average of 36.07, a median of 36.52, a standard deviation of 8.04. The maximum value is 73.66 and the minimum is 8.34 units.

Descriptive statistics of the BIC Index scores of 50 sectors for 2007-2012

Descriptive Statistics	
N	300
mean	36.07
median	36.52
maximum	73.66
minimum	8.34
std. deviation	8.04
skewness	0.07
kurtosis	2.36

Histogram and kernel distribution of the scores of BIC Index of 50 sectors for 2007-2012



* The methodology adopted is based on a similar methodology presented by Khranov V. and Lee J.R. (2013), The Economic Performance Index (EPI): an Intuitive Indicator for Assessing a Country's Economic Performance Dynamics in an Historical Perspective, IMF Working Paper WP/13/214, October 2013.

In our approach, we divide the distribution into four (4) groups (quartiles) and create a rating system, where the implemented score thresholds are close to the distribution of the BIC Index scores 2007-2012.

	Percentile		BIC Index Score	Implemented score threshold
Top 25%	>75	Above	40.401	40
Next 25%	50	Above	36.499	36
Next 25%	25	Above	31.643	32
Bottom 25%	<25	all below		

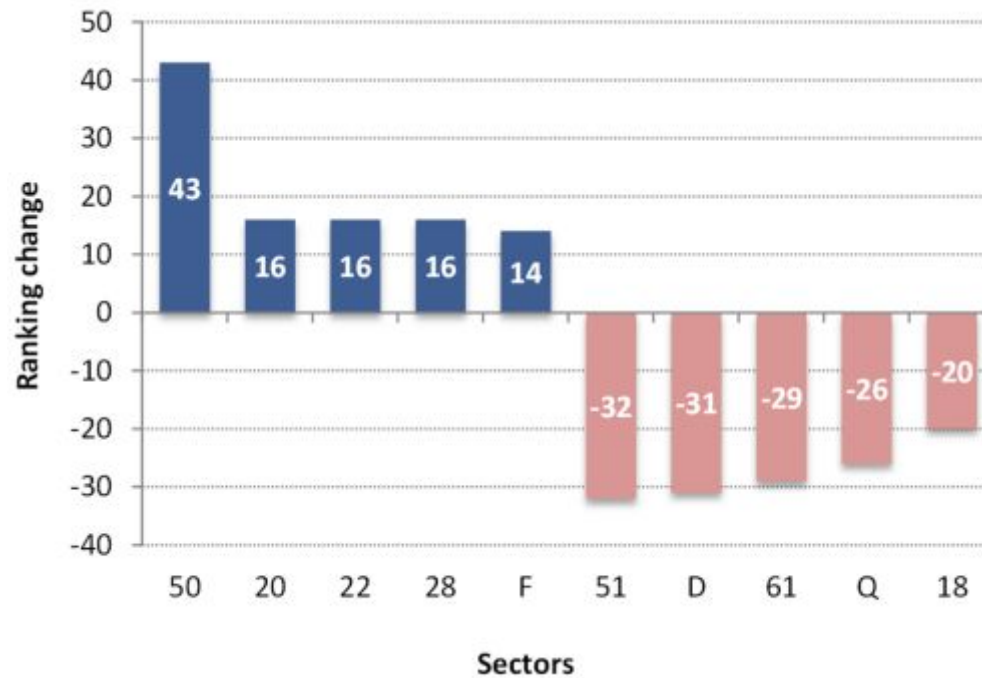
In accordance with the implemented thresholds for the BIC Index scores, we have created three (3) individual categories for each quartile, the intervals of which are symmetrical around the median. Therefore, based on this approach, we present the following rating system, which is based on the BIC Index scores 2007-2012.

BIC Rating System

Score range	Score	Rating	BIC Index Performance
≥40	≥63	a+	outperformers
	[51-63)	a	
	[40-51)	a-	
36-40	[39-40)	b+	good performers
	[37-39)	b	
	[36-37)	b-	
32-36	[35-36)	c+	medium performers
	[33-35)	c	
	[32-33)	c-	
<32	[24-32)	d+	underperformers
	[16-24)	d	
	<16	d-	

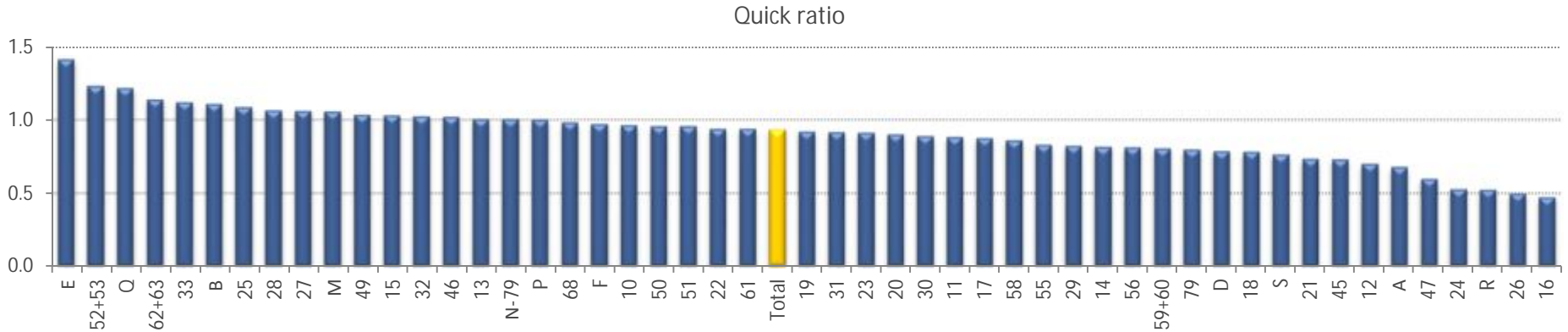
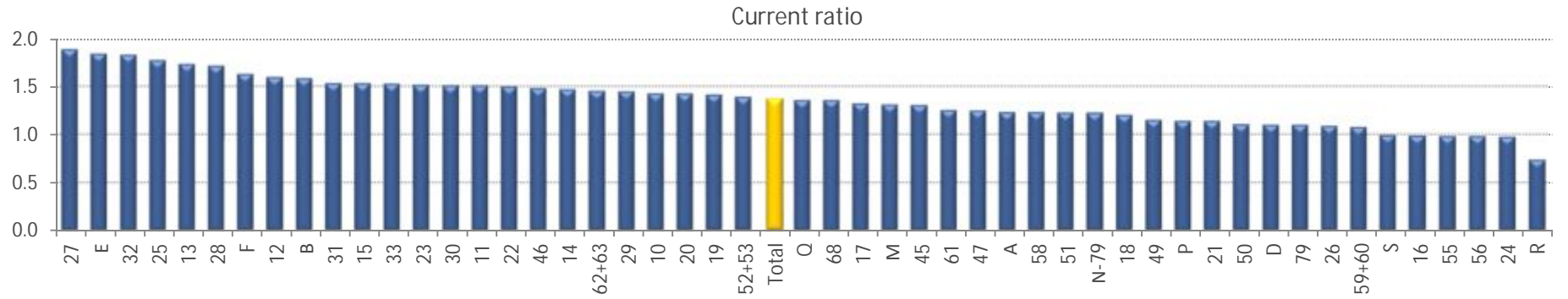
4c. Additional presentation of results, 2014

The sectors with the 5 largest positive and negative changes in the ranking of the BIC Index, 2014

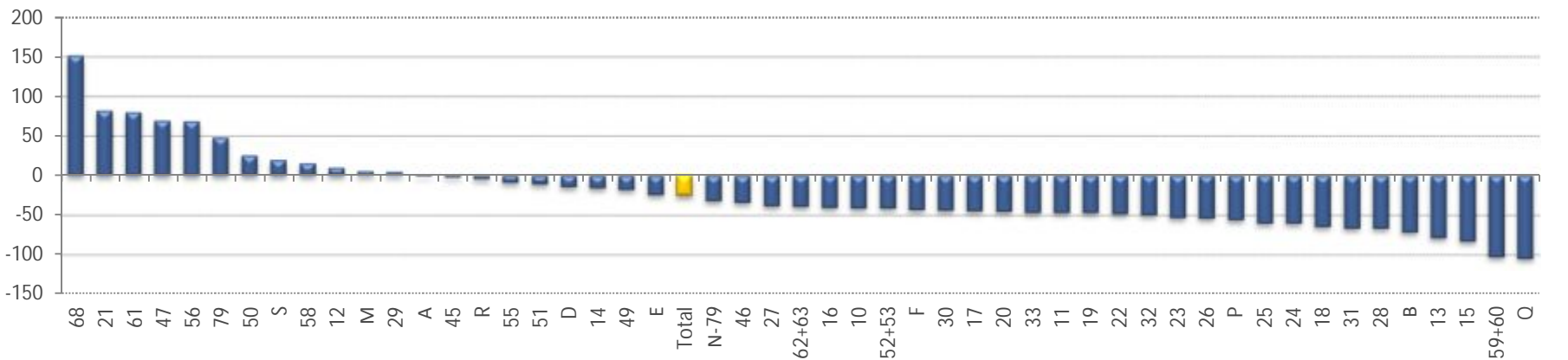


Liquidity, 2014

Performance of examined ratios per sector

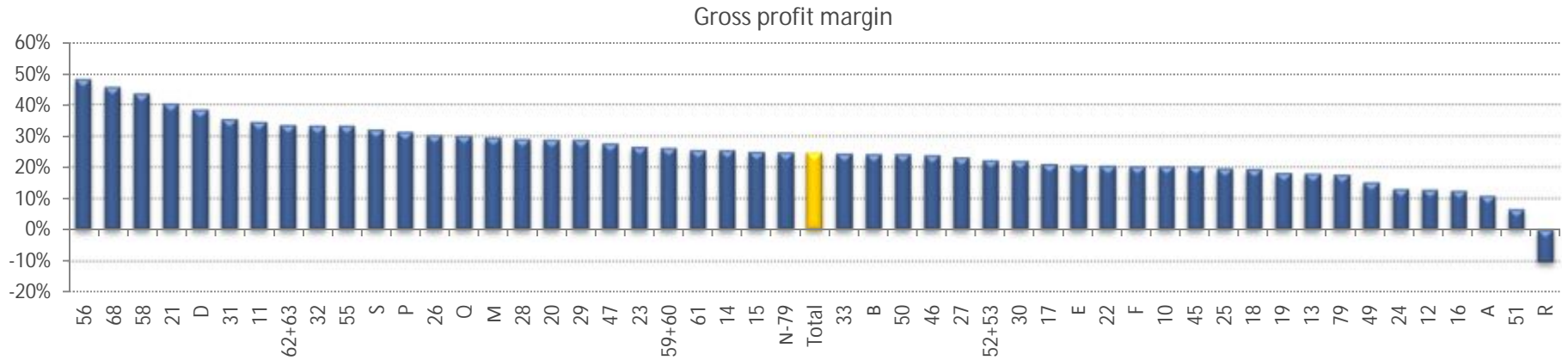


Difference between payment and collection days



Efficiency, 2014

Performance of examined ratios per sector (a)

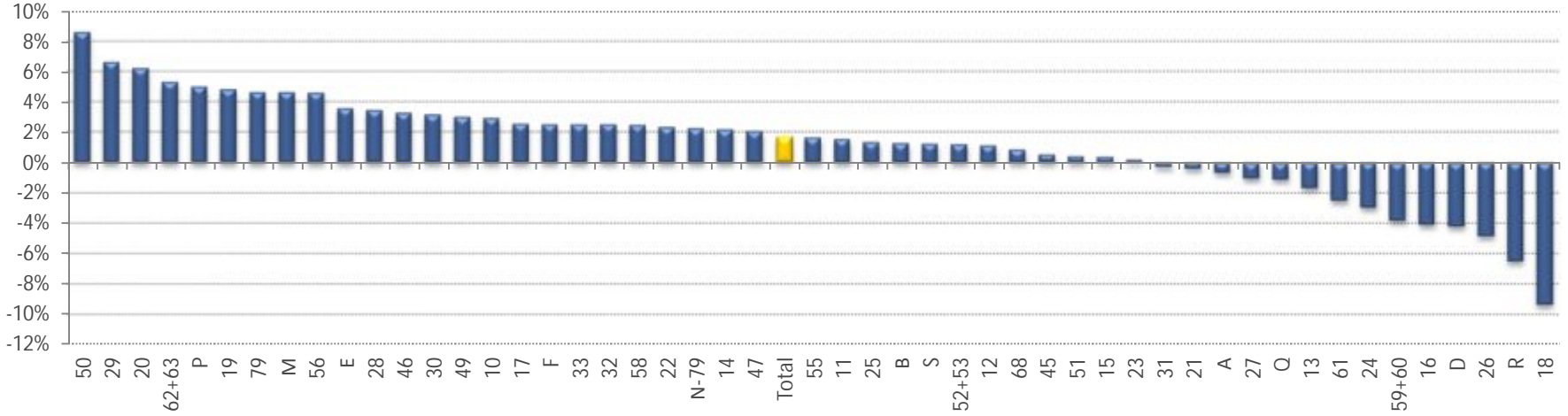


Efficiency, 2014

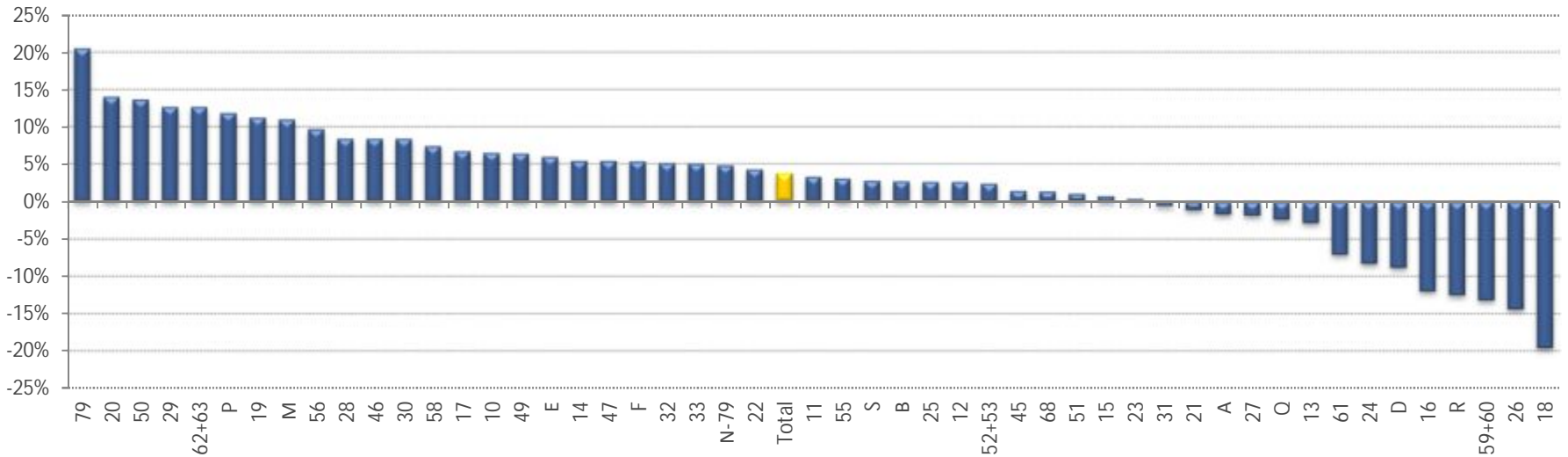
Performance of examined ratios per sector (b)



Return on total assets



Return on equity



Capital structure, 2014

Performance of examined ratios per sector (a)



Debt to equity ratio



Equity to total assets ratio



Equity to fixed assets ratio

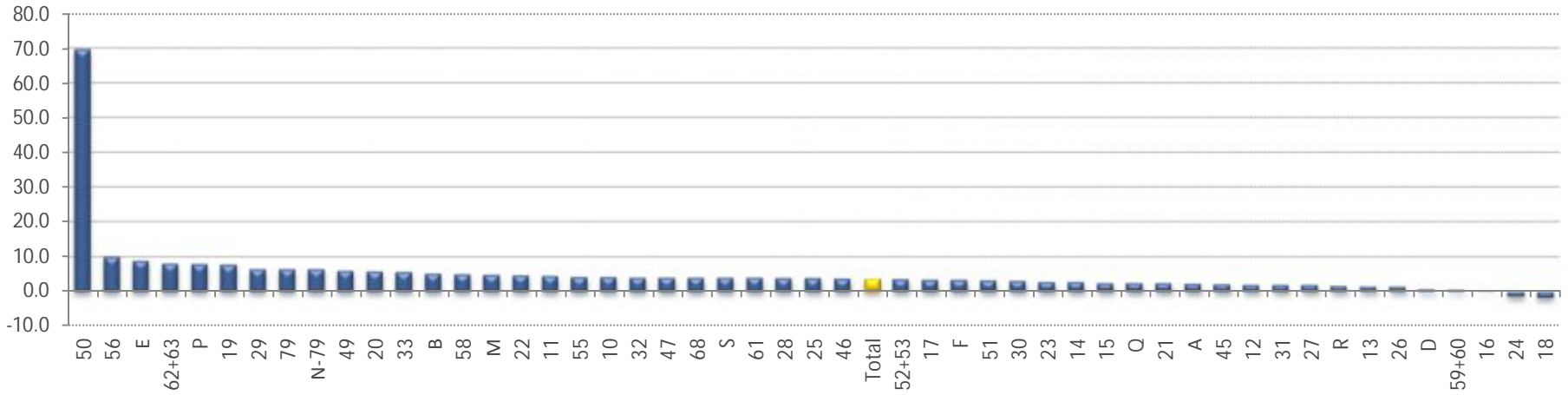


Capital structure, 2014

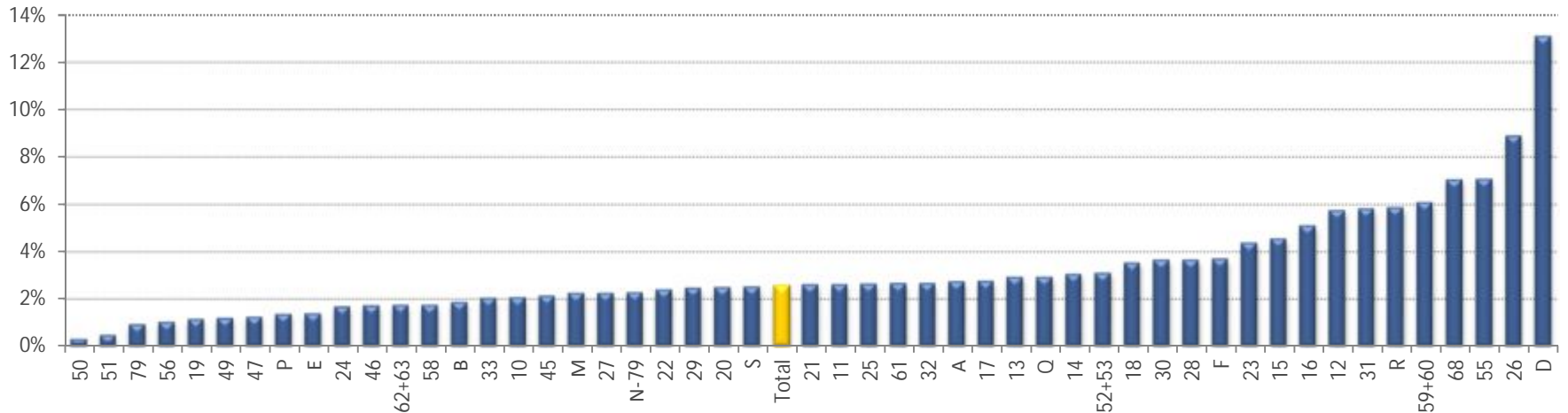
Performance of examined ratios per sector (b)



Times interest earned ratio



Interest expenses to turnover and operating revenue ratio



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