

PIRAEUS BANK



Is the recovery of small and medium-sized entrepreneurship temporary or sustainable?

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Introductory note

For the 4th consecutive year, we present an analysis of the prospects of 50 essential sectors of the Greek economy based on financial statements data of over 18 thousand enterprises. For this study, as with any study based on analysis of data of financial statements, there is a lag of over a year in the publication of the necessary data, so this analysis is based on 2013 data. As a counterbalance to this time lag, we have a very detailed coverage of small and medium-sized enterprises SA and LTD from all sectors of economic activity.

The “big picture” in respect to the scoring and assessment of the sectors is that after five years of significant recession and worsening of the financial statements of Greek enterprises, 2013 marks the first year since 2007 that there has been a mild improvement in the performance of the Greek economy. Overall, the average rating of the 50 sectors has improved to “b” in 2013 from “c” in 2012, although it was “a-” in 2007.

The big question of course is whether this improvement will be maintained so that 2013 will be the turning point in efforts to recover from the recession and move towards the development and growth of Greek enterprises or, on the contrary, whether it will be a temporary high spot which will succumb to the weight of the continuing uncertainty and volatility on the economic and political scene.



Contents of study

1. Purpose of the study – key findings
2. Presentation of BIC Index results
3. BIC Rating System
4. Appendices



1. Purpose of the study – key findings



Purpose of the study

The purpose of this study is:

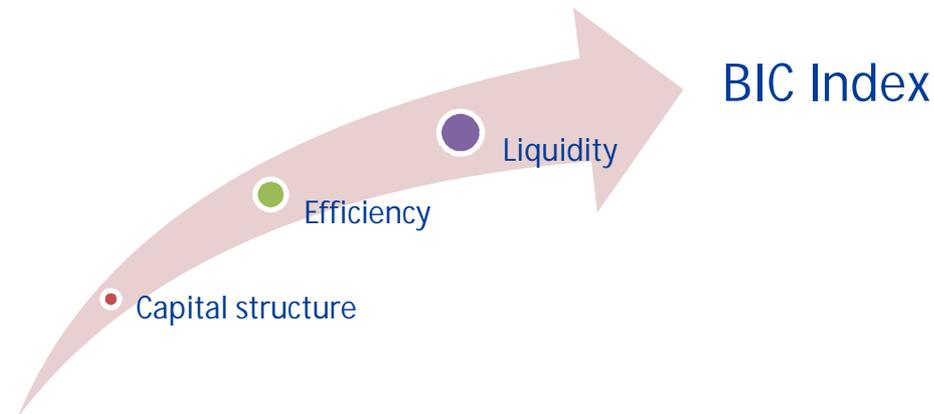
- to update the BIC Index and
- the BIC Rating System

– in order to assess the sectoral performance, *regarding Small and Medium Enterprises (SMEs)* for 2013.

Best in Class Index (BIC Index)

The BIC Index is the main analytical tool used to carry out analysis and ranking of business sectors.

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 2013.

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.

BIC Rating System

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 2013.

In order to move on to a longitudinal analysis of the development of sectoral performance throughout the period 2007-2013, 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-	



BIC Index: Sectors with the best performance, 2013

The sectors with the strongest performance, 2013

E	Water supply; sewerage, waste management and remediation activities
29	Manufacture of motor vehicles, trailers and semi-trailers
61	Telecommunications
51	Air transport
56	Food and beverage service activities
62+63	Computer programming, consultancy and related activities. Information service activities
33	Repair and installation of machinery and equipment
27	Manufacture of electrical equipment
68	Real estate activities
58	Publishing activities

The water supply and waste management sector (E) continues to be the sector with the best performance, while telecommunications (61) are highly ranked once again. The sectors of manufacturing vehicles (29) and real estate (68) seem to recoup some of the “lost territory” of the last few years, exhibiting good performance in 2013.

Resilience has been shown by sectors that have to do with technology, such as those associated with the manufacture of electrical equipment (27) and IT services (62+63).

Finally, the shift in the food and beverage services (56), which in many cases has been the “safe haven” activity during the period of crisis, seems to have created positive performance in the sector.



BIC Index: Sectors with the poorest performance, 2013

The sectors with the weakest performance, 2013

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
R	Arts, entertainment and recreation
12	Manufacture of tobacco products
45	Wholesale and retail trade and repair of motor vehicles and motorcycles
50	Water transport
31	Manufacture of furniture
55	Accommodation
A	Agriculture, forestry and fishing

Sectors based on private consumption expenditure continue to record poor performance. These include the media (59+60), entertainment (R), the trade of vehicles (45), furniture manufacturing (31) and the tobacco industry (12).

It is worth noting that accommodation (55) and the primary sector (A), two of the most important sectors of the Greek economy, are included in the sectors with the poorest performance, even though their performance has improved considerably compared to the previous year - especially in terms of efficiency. This is simply due to the fact that other sectors reinforced their position more strongly.



BIC Index 2013: Signs of reversal in the negative climate?

After the stabilization of the economic situation, it seems that domestic entrepreneurship is managing, in a difficult economic environment, to “stand on its own feet”, without however having reached pre-crisis (2007) levels.





BIC Rating System 2007-2013: Increase in the average rating in 2013, after several years of poor performance

The average rating of the 50 sectors fell from "a-" in 2007 to "c" in 2012, recovering to reach "b" in 2013.

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

* Ranking of sectors based on 2013

Source: ICAP DATA, Piraeus Bank Research



BIC Rating System 2007-2013: Key findings

- In 2013, the average rating of the Greek economy has improved to “b” from “c” in the previous year, but it falls short of the performance in 2007, which had an “a-” rating.
- More than 2/5 of the sectors over-performed, achieving an “a-” rating in 2013.
- The upgrades in 2013 that are of particular interest are:
 - the sectors of air transport (51) and land transport (49) from “d+” and “c+” to “a-” respectively;
 - the sectors of publishing activities (58) and printing (18) from “d+” and “c-” to “a-” and “b+” respectively and
 - travel agency (79) from “d+” to “b”.
- On the other hand, while the majority of sectors exhibited better performance in 2013 than in the previous year, the BIC Index score of the water transport sector (50) fell towards levels of past years, recording a significant deterioration from 2012 from “a-” to “d+”.



2. Presentation of BIC Index results



BIC Index: ranking and scores, 2013



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

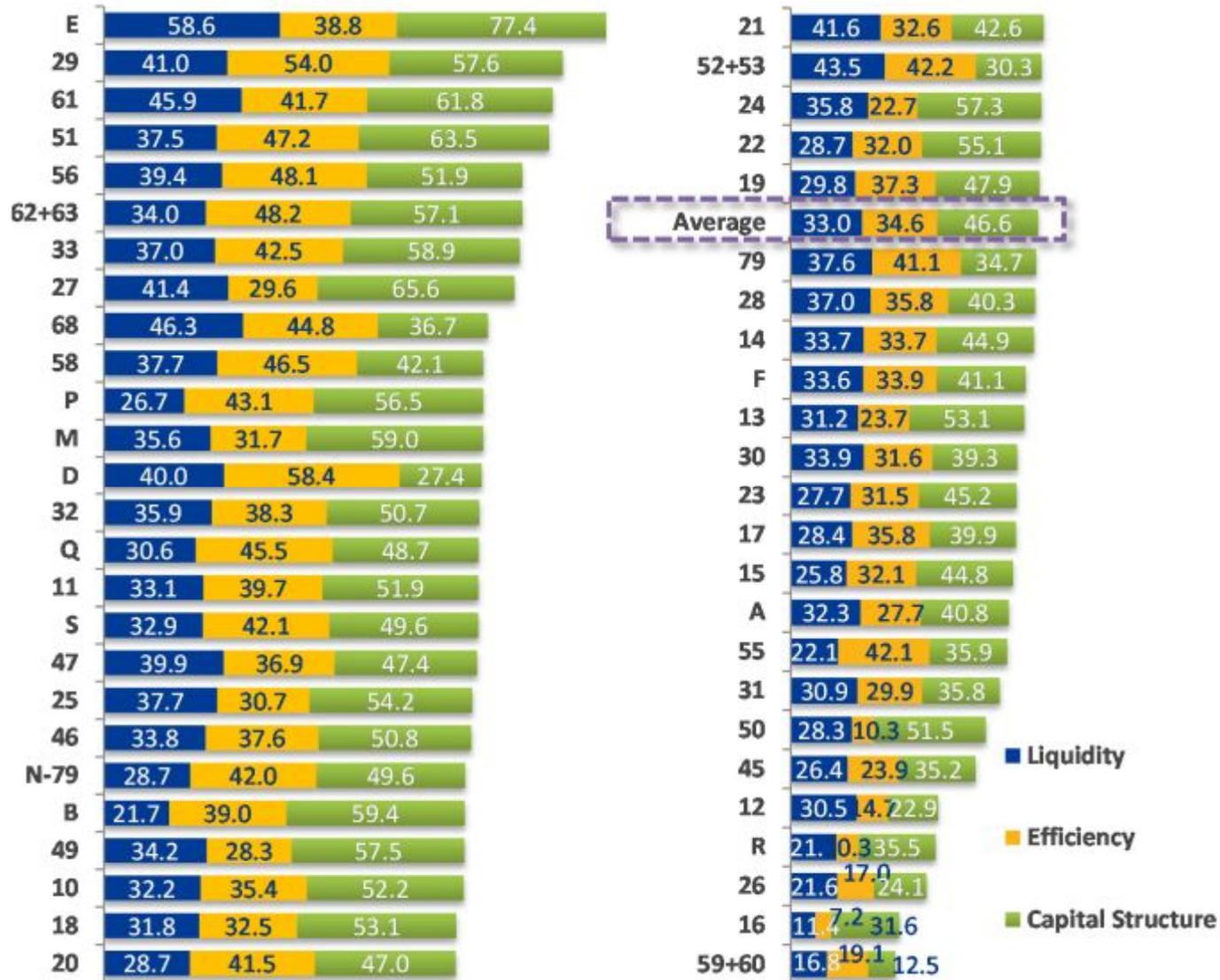
BIC Index: examination of the scores and rankings of the individual dimensions, 2013

Sectors 2013	BIC Index		Liquidity		Efficiency		Capital Structure		Sectors 2013	BIC Index		Liquidity		Efficiency		Capital Structure	
	Score	Rank	Score	Rank	Score	Rank	Score	Rank		Score	Rank	Score	Rank	Score	Rank	Score	Rank
E	58.3	1	↑ 58.6	1	↗ 38.8	20	↑ 77.4	1	20	39.0	26	↓ 28.7	38	↗ 41.5	16	↓ 47.0	28
29	50.9	2	↑ 41.0	7	↑ 54.0	2	↑ 57.6	8	21	39.0	27	↑ 41.6	5	↓ 32.6	30	↓ 42.6	32
61	49.8	3	↑ 45.9	3	↗ 41.7	15	↑ 61.8	4	52+53	38.7	28	↑ 43.5	4	↑ 42.2	11	↓ 30.3	46
51	49.4	4	↗ 37.5	14	↑ 47.2	5	↑ 63.5	3	24	38.6	29	↗ 35.8	18	↓ 22.7	44	↑ 57.3	10
56	46.4	5	↑ 39.4	10	↑ 48.1	4	↗ 51.9	19	22	38.6	30	↗ 28.7	37	↓ 32.0	33	↑ 55.1	13
62+63	46.4	6	↗ 34.0	21	↑ 48.2	3	↑ 57.1	11	19	38.3	31	↗ 29.8	35	↗ 37.3	23	↓ 47.9	26
33	46.2	7	↗ 37.0	16	↑ 42.5	10	↑ 58.9	7	79	37.8	32	↑ 37.6	13	↗ 41.1	17	↓ 34.7	44
27	45.6	8	↑ 41.4	6	↓ 29.6	39	↑ 65.6	2	28	37.7	33	↗ 37.0	15	↓ 35.8	26	↓ 40.3	36
68	42.6	9	↑ 46.3	2	↑ 44.8	8	↓ 36.7	39	14	37.5	34	↗ 33.7	24	↓ 33.7	29	↓ 44.9	30
58	42.1	10	↑ 37.7	12	↑ 46.5	6	↗ 42.1	33	F	36.2	35	↗ 33.6	25	↓ 33.9	28	↓ 41.1	34
P	42.1	11	↓ 26.7	42	↑ 43.1	9	↑ 56.5	12	13	36.0	36	↗ 31.2	31	↓ 23.7	43	↗ 53.1	15
M	42.1	12	↗ 35.6	19	↗ 31.7	34	↑ 59.0	6	30	34.9	37	↗ 33.9	22	↓ 31.6	35	↓ 39.3	38
D	41.9	13	↑ 40.0	8	↑ 58.4	1	↓ 27.4	47	23	34.8	38	↓ 27.7	41	↗ 31.5	36	↓ 45.2	29
32	41.6	14	↗ 35.9	17	↑ 38.3	21	↗ 50.7	22	17	34.7	39	↓ 28.4	39	↗ 35.8	25	↗ 39.9	37
Q	41.6	15	↗ 30.6	33	↑ 45.5	7	↗ 48.7	25	15	34.3	40	↓ 25.8	44	↗ 32.1	32	↗ 44.8	31
11	41.6	16	↗ 33.1	26	↗ 39.7	18	↗ 51.9	18	A	33.6	41	↗ 32.3	28	↓ 27.7	41	↗ 40.8	35
S	41.5	17	↗ 32.9	27	↑ 42.1	12	↗ 49.6	24	55	33.4	42	↓ 22.1	45	↑ 42.1	13	↓ 35.9	40
47	41.4	18	↑ 39.9	9	↗ 36.9	24	↗ 47.4	27	31	32.2	43	↗ 30.9	32	↓ 29.9	38	↓ 35.8	41
25	40.9	19	↑ 37.7	11	↗ 30.7	37	↗ 54.2	14	50	30.0	44	↓ 28.3	40	↓ 10.3	48	↗ 51.5	20
46	40.8	20	↗ 33.8	23	↗ 37.6	22	↗ 50.8	21	45	28.5	45	↓ 26.4	43	↓ 23.9	42	↓ 35.2	43
N-79	40.1	21	↗ 28.7	36	↗ 42.0	14	↗ 49.6	23	12	22.7	46	↗ 30.5	34	↓ 14.7	47	↓ 22.9	49
B	40.0	22	↓ 21.7	46	↗ 39.0	19	↑ 59.4	5	R	22.3	47	↓ 21.1	48	↓ 10.3	49	↓ 35.5	42
49	40.0	23	↗ 34.2	20	↓ 28.3	40	↑ 57.5	9	26	20.9	48	↓ 21.6	47	↓ 17.0	46	↓ 24.1	48
10	39.9	24	↗ 32.2	29	↗ 35.4	27	↗ 52.2	17	16	16.7	49	↓ 11.4	50	↓ 7.2	50	↓ 31.6	45
18	39.1	25	↗ 31.8	30	↗ 32.5	31	↗ 53.1	16	59+60	16.2	50	↓ 16.8	49	↓ 19.1	45	↓ 12.5	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, 2013



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

BIC Index: Sectors with the best performance, 2013

The sectors with the strongest performance, 2013

E	Water supply; sewerage, waste management and remediation activities
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12	Manufacture of tobacco products
45	Wholesale and retail trade and repair of motor vehicles and motorcycles
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55	Accommodation
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Sectors based on private consumption expenditure continue to record poor performance. These include the media (59+60), entertainment (R), the trade of vehicles (45), furniture manufacturing (31) and the tobacco industry (12).

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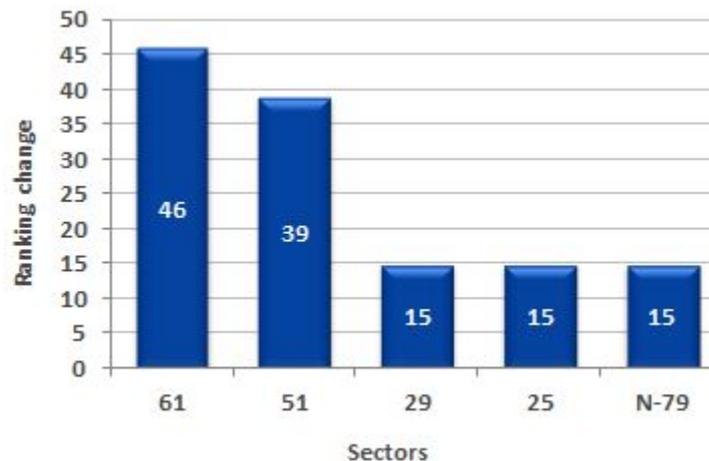
BIC Index: sectors with the highest dynamic evolution 2007-2013

Rising sectors

Telecommunications (61) further strengthened their dynamic development, while the performance of the air transport sector (51) showed a remarkable improvement, especially in terms of efficiency.

The sector of manufacturing metal products (25) continues its upward trend, and the strong performance of the administrative activities sector (N-79) has been reinforced.

Sectors with the 5 highest cumulative changes in the ranking of BIC Index, 2007-2013



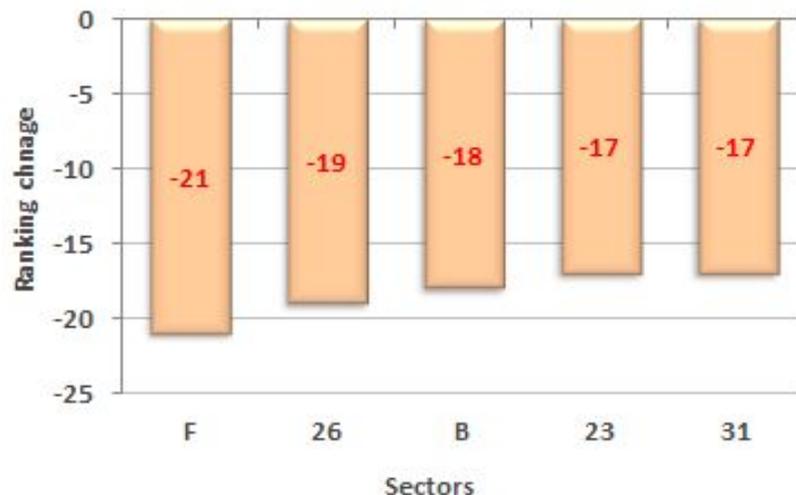
61	Telecommunications
51	Air transport
29	Manufacture of motor vehicles, etc
25	Manufacture of fabricated metal products, except machinery and equipment
N-79	Administrative and support service activities expect of travel agency, etc

BIC Index: sectors with the steepest decline 2007-2013

Declining sectors

Construction (F), the sectors related to construction activity (such as non-metallic mineral products (23) – ie cement, tiles, construction materials), and mining and quarrying (B) have suffered the largest losses, while the furniture manufacturing sector has declined considerably.

Sectors with the 5 lowest cumulative changes in the ranking of BIC Index, 2007-2013



F	Construction
26	Manufacture of computer, electronic and optical products
B	Mining and quarrying
23	Manufacture of other non-metallic mineral products
31	Manufacture of furniture



BIC Index 2013: Signs of reversal in the negative climate?

After the stabilization of the economic situation, it seems that domestic entrepreneurship is managing, in a difficult economic environment, to “stand on its own feet”, without however having reached pre-crisis (2007) levels.





3. BIC Rating System



Classification of sectors per year based on the BIC Rating System

Rating	2007			2008			2009			2010			2011			2012			2013			Rating
a+	E	68																				a+
a	M			E			E	68		E			E			E			E			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	a-
	56	58	P	Q	B	27	32	P	33	D	33	32	32			Q	11	50	56	62+63	33	
	D	32	27	P	58	32	27	S	56	Q	P	52+53				P	61	B	27	68	58	
	11	F	47	52+53	D	33	58	52+53	26										P	M	D	
	52+53	29	33																32	Q	11	
	24	14	23																S	47	25	
	49	28	S																46	N-79	B	
22	31																	49				
b+	20	18	26	14	26	47	22	F	14				61	62+63	51	32	25		10	18	20	b+
	13			F	11	56							P	Q					21			
b	46	21	55	21	25	49	25	47	49	49	56	25	M	D	28	56	21	D	52+53	24	22	b
	25	R		30	31	N-79	11	20	12	29	20	58				47			19	79	28	
				20	28	29	28	21	18										14			
				22	23	18	N-79															
b-	N-79	30		24	46	10	D	29	31	62+63	N-79	22	56	47	11	M	14	46	F	13		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				c+
										30	F					N-79	49					
c	79	15	50	55	13		R	30	16	14	21	46	46	N-79	50	22	19	S	30	23	17	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-
													B	30								
d+	A	45	59+60	15	79	45	55	17	24	18	B	17	15	31	F	30	79	51	50	45		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						
										45	50	R	29	58	13							
d	61	12		50	A	51							16	R		31	45	24	12	R	26	d
				61												29	26	R	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							07-13	BIC Rating						
	2007	2008	2009	2010	2011	2012	2013		2007	2008	2009	2010	2011	2012	2013
E	73.7	54.1	53.1	56.9	54.1	55.7	58.3		a+	a	a	a	a	a	a
29	42.1	38.1	36.8	38.1	27.4	21.8	50.9		a-	b	b-	b	d+	d	a-
61	20.8	18.9	25.4	24.7	39.9	40.7	49.8		d	d	d+	d+	b+	a-	a-
51	33.0	20.5	30.2	29.7	39.1	30.9	49.4		c	d	d+	d+	b+	d+	a-
56	47.6	39.0	41.9	38.3	36.9	38.7	46.4		a-	b+	a-	b	b-	b	a-
62+63	49.1	48.6	44.6	36.9	39.7	48.4	46.4		a-	a-	a-	b-	b+	a-	a-
33	41.9	40.8	43.1	42.6	42.2	49.9	46.2		a-	a-	a-	a-	a-	a-	a-
27	44.0	45.1	43.0	44.3	42.2	44.6	45.6		a-	a-	a-	a-	a-	a-	a-
68	63.9	46.1	51.8	50.2	49.5	35.5	42.6		a+	a-	a	a-	a-	c+	a-
58	47.3	44.0	41.9	37.2	24.8	29.0	42.1		a-	a-	a-	b	d+	d+	a-
P	46.2	44.2	43.3	41.0	39.1	40.8	42.1		a-	a-	a-	a-	b+	a-	a-
M	51.7	48.8	43.9	44.9	38.8	36.6	42.1		a	a-	a-	a-	b	b-	a-
D	44.9	41.2	37.0	44.2	38.7	38.6	41.9		a-	a-	b	a-	b	b	a-
32	44.3	42.9	43.5	42.4	40.5	39.6	41.6		a-	a-	a-	a-	a-	b+	a-
Q	49.4	46.0	47.5	42.0	39.1	43.1	41.6		a-	a-	a-	a-	b+	a-	a-
11	43.6	39.5	38.5	36.4	36.2	41.7	41.6		a-	b+	b	b-	b-	a-	a-
S	41.0	35.4	42.6	29.5	33.1	33.2	41.5		a-	c+	a-	d+	c	c	a-
47	42.6	39.8	38.7	35.6	36.9	37.7	41.4		a-	b+	b	c+	b-	b	a-
25	37.8	38.9	38.8	38.2	35.4	39.1	40.9		b	b	b	b	c+	b+	a-
46	38.9	36.5	36.1	33.9	34.4	36.6	40.8		b	b-	b-	c	c	b-	a-
N-79	36.4	38.4	37.0	36.9	33.6	35.2	40.1		b-	b	b	b-	c	c+	a-
B	49.9	45.2	35.3	30.0	32.5	40.1	40.0		a-	a-	c+	d+	c-	a-	a-
49	41.5	38.8	38.5	38.7	36.1	35.0	40.0		a-	b	b	b	b-	c+	a-
10	36.0	36.2	36.2	36.4	35.7	36.3	39.9		b-	b-	b-	b-	c+	b-	b+
18	39.2	37.7	37.1	31.5	31.5	32.4	39.1		b+	b	b	d+	d+	c-	b+
20	39.7	38.3	38.5	37.3	33.4	36.5	39.0		b+	b	b	b	c	b-	b+
21	38.4	38.9	37.7	34.6	31.3	38.6	39.0		b	b	b	c	d+	b	b+
52+53	42.1	42.3	40.4	40.8	31.0	32.1	38.7		a-	a-	a-	a-	d+	c-	b
24	41.9	37.0	31.4	35.5	32.6	22.1	38.6		a-	b	d+	c+	c-	d	b
22	40.7	38.1	39.5	36.5	33.3	35.0	38.6		a-	b	b+	b-	c	c+	b
19	32.2	27.8	35.0	33.9	30.4	34.7	38.3		c-	d+	c+	c	d+	c	b
79	34.4	31.5	30.2	29.4	30.4	31.1	37.8		c	d+	d+	d+	d+	d+	b
28	41.3	38.1	37.8	33.7	37.1	35.6	37.7		a-	b	b	c	b	c+	b
14	41.5	39.9	39.2	34.9	32.9	36.6	37.5		a-	b+	b+	c	c-	b-	b
F	42.9	39.7	39.3	35.1	31.6	32.6	36.2		a-	b+	b+	c+	d+	c-	b-
13	39.0	33.4	32.6	28.8	24.4	25.8	36.0		b+	c	c-	d+	d+	d+	b-
30	36.1	38.8	33.9	35.2	32.0	31.9	34.9		b-	b	c	c+	c-	d+	c
23	41.5	37.9	36.2	35.7	29.8	24.5	34.8		a-	b	b-	c+	d+	d+	c
17	30.1	29.0	31.9	30.0	28.6	27.6	34.7		d+	d+	d+	d+	d+	d+	c
15	34.3	31.8	28.2	28.2	31.7	27.0	34.3		c	d+	d+	d+	d+	d+	c
A	32.0	23.4	30.2	33.1	32.9	30.3	33.6		c-	d	d+	c	c-	d+	c
55	38.0	33.9	32.0	28.0	30.5	29.2	33.4		b	c	c-	d+	d+	d+	c
31	40.7	38.8	36.6	28.5	31.6	23.3	32.2		a-	b	b-	d+	d+	d	c-
50	33.9	23.6	35.1	25.3	33.5	41.6	30.0		c	d	c+	d+	c	a-	d+
45	31.8	29.6	28.9	25.8	24.1	23.1	28.5		d+	d+	d+	d+	d+	d	d+
12	17.3	26.9	38.2	32.4	30.9	35.9	22.7		d	d+	b	c-	d+	c+	d
R	37.1	35.4	34.5	25.0	17.1	19.0	22.3		b	c+	c	d+	d	d	d
26	39.0	39.8	40.1	26.0	13.7	19.7	20.9		b+	b+	a-	d+	d	d	d
16	35.6	32.9	33.0	29.4	20.6	8.3	16.7		c+	c-	c	d+	d	d-	d
59+60	30.3	27.8	24.9	15.6	14.2	11.2	16.2		d+	d+	d+	d-	d-	d-	d
Average	40.4	37.2	37.4	34.8	33.1	33.5	38.1		a-	b	b	c	c	c	b

*Ranking of sectors based on 2013



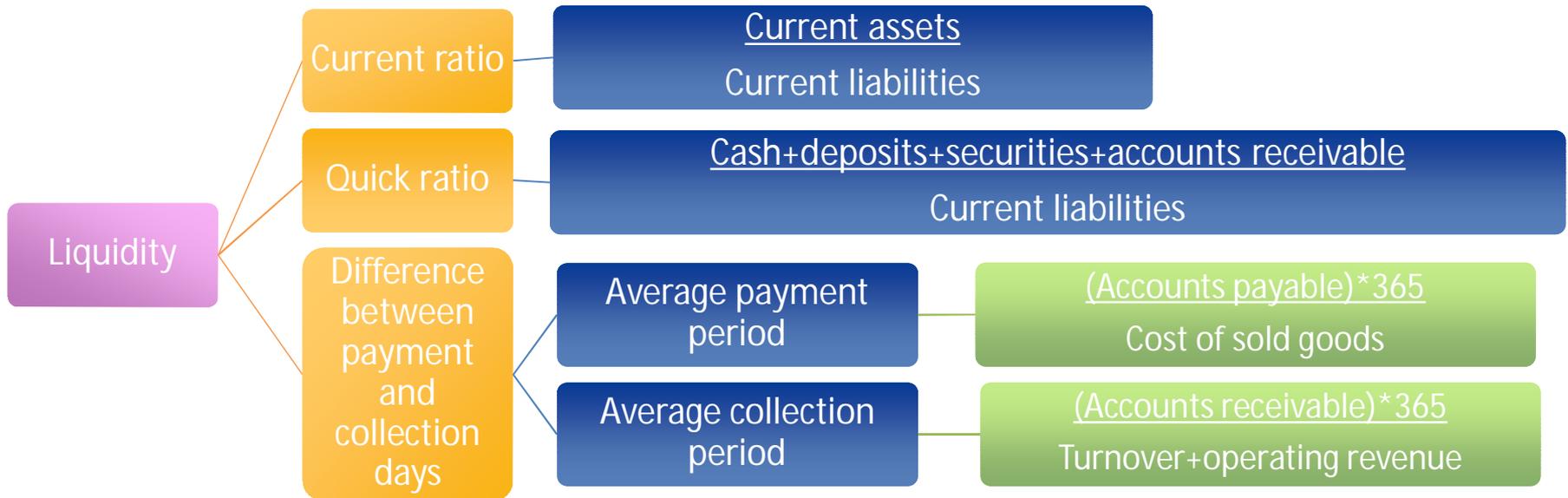
4. Appendices



4a. Methodology of calculating BIC Index

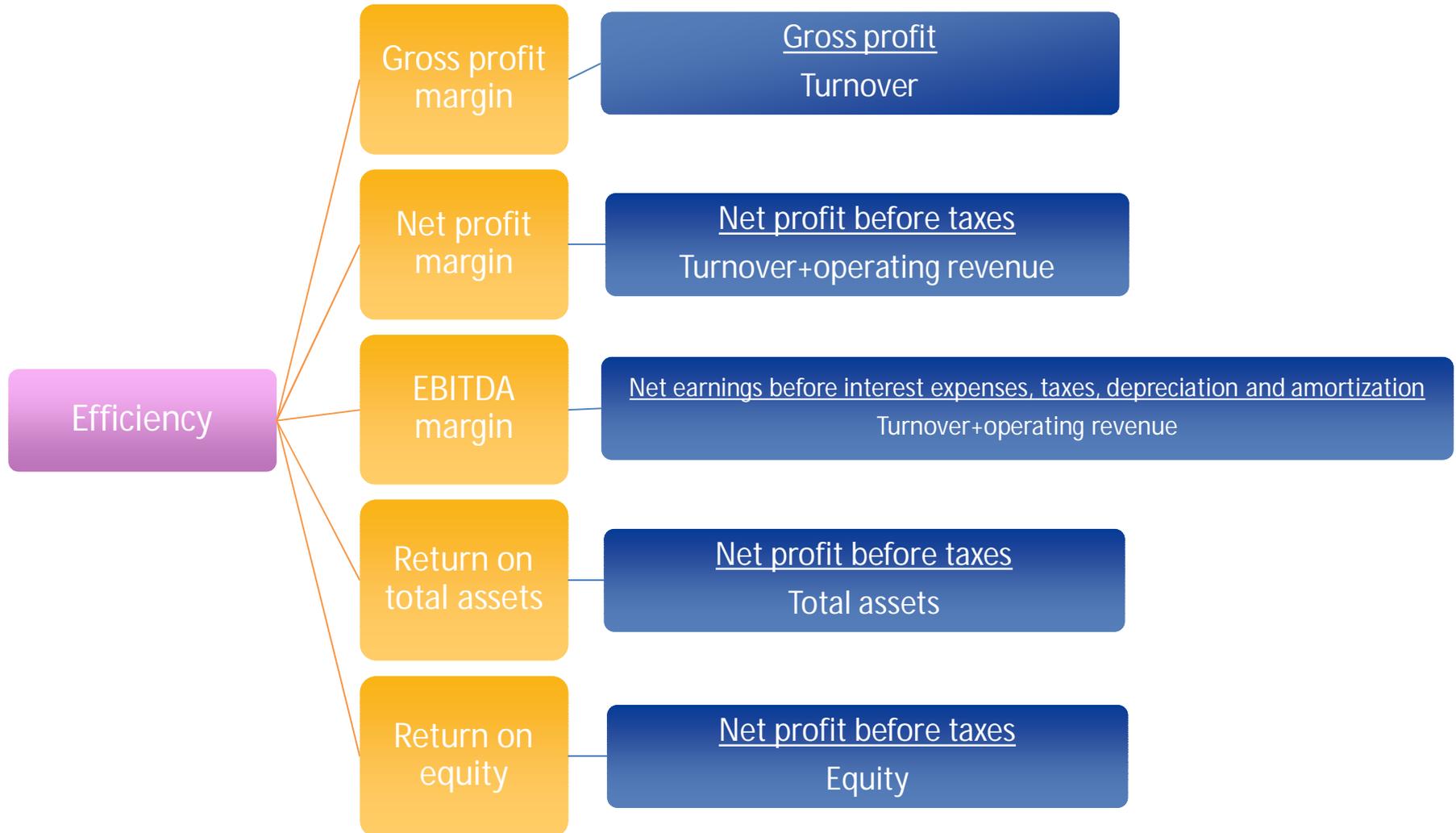
Dimension of Liquidity

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



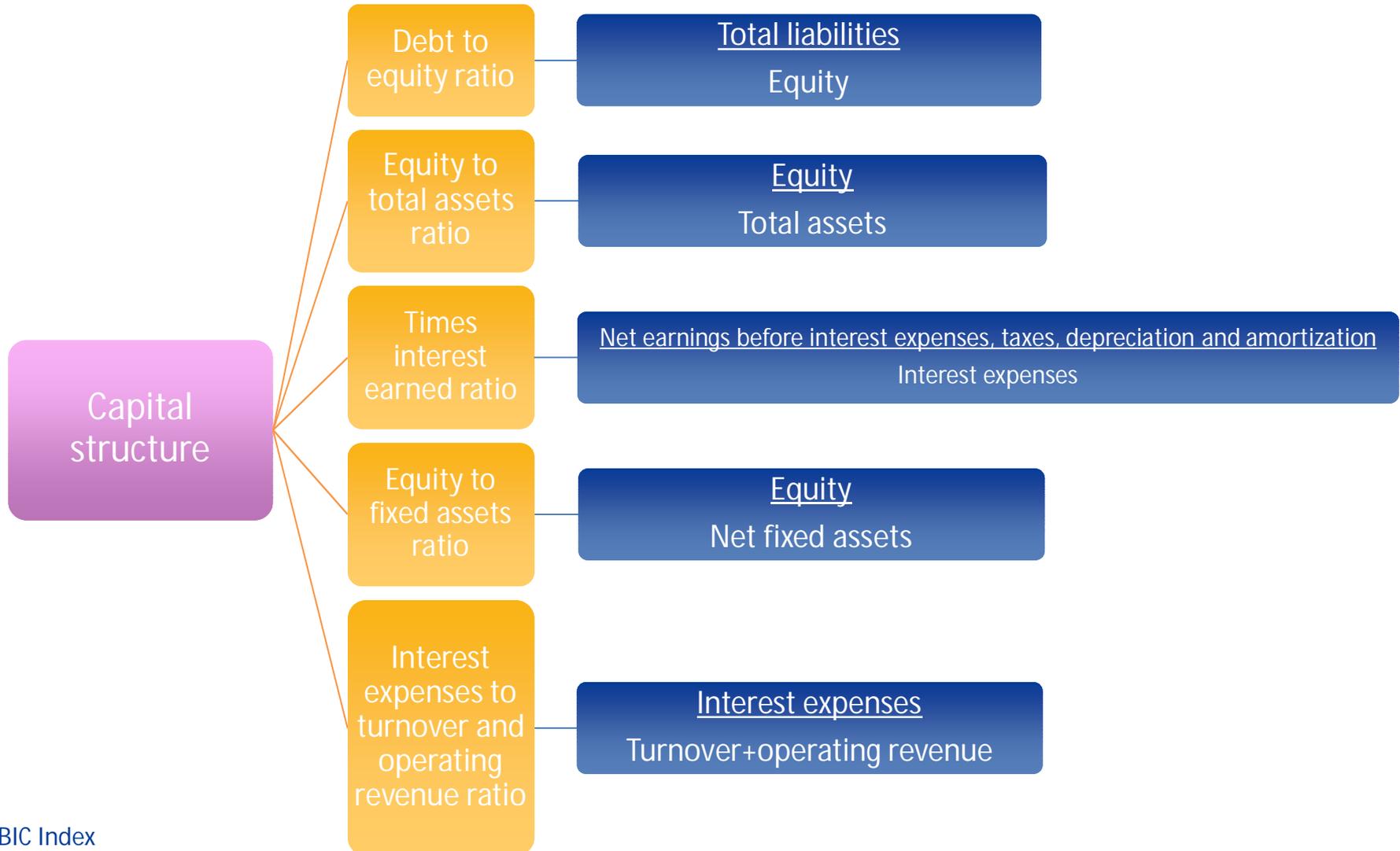
Dimension of Efficiency

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



Dimension of Capital Structure

The basic Capital Structure ratios we use are the following:





Transformation of variable values of the BIC Index

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.



Calculation of the BIC Index scores

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.



Calculation of the BIC Index scores

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 2007-2013.

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

The final BIC Index is calculated as follows:

<p>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>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>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.



Description of the BIC Index methodology: Financial criteria

- 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, 2007-2013 (a)

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

Data extraction period: May of each year



The examined sectors of the domestic economy and presentation of the samples of SMEs, 2007-2013 (b)

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

* excluding sector 94 (Activities of membership organizations) – no available data from ICAP DATA.



4b. Methodology of calculating BIC Rating System



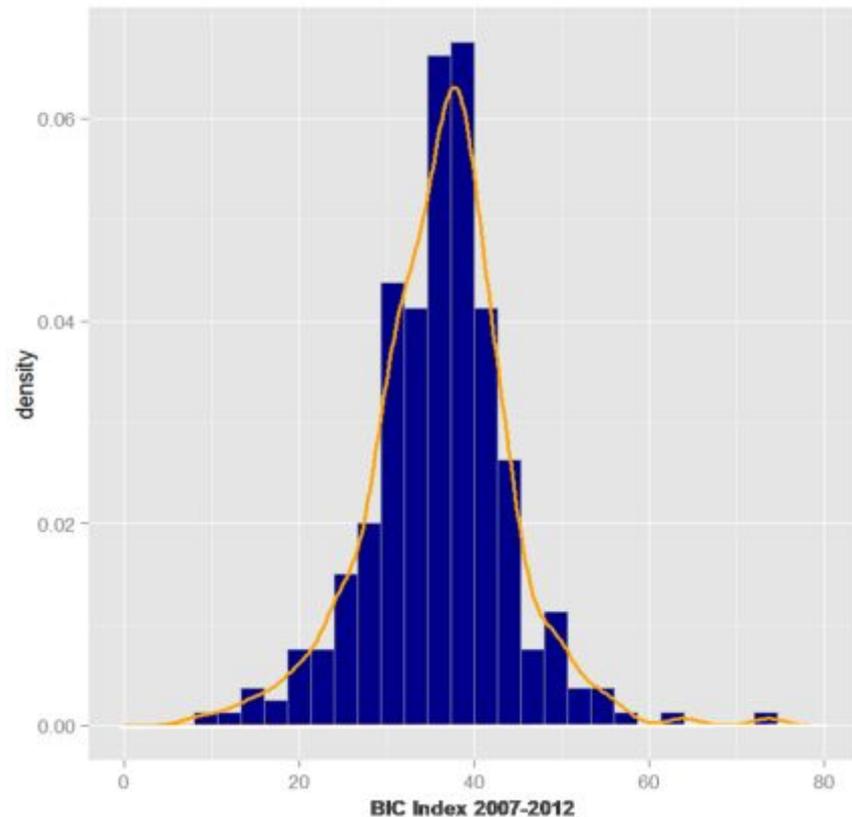
BIC Rating System*: distribution characteristics of the BIC Index scores 2007-2012

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	36.069
median	36.522
maximum	73.664
minimum	8.342
Std. deviation	8.035
Skewness	0.074
Kurtosis	2.364

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 Khramov 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.



BIC Rating System: threshold setting

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		



Structure of the BIC Rating System

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

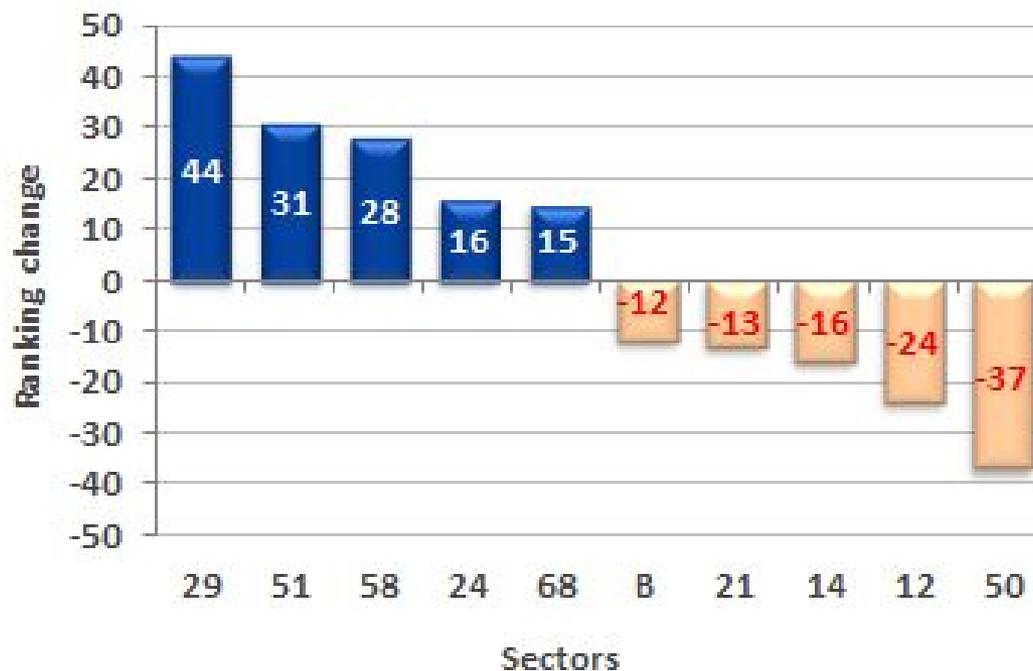
Score range	Score	Rating	BIC Index Performance
≥40	≥63	a+	outperformers
	[51-63)	a	
	[40-51)	a-	
36-40	[39-40)	b+	good performers
	[37-39)	b	
	[36-37)	b-	
32-36	[35-36)	c+	medium performers
	[33-35)	c	
	[32-33)	c-	
<32	[24-32)	d+	underperformers
	[16-24)	d	
	<16	d-	



4c. Additional presentation of results, 2013

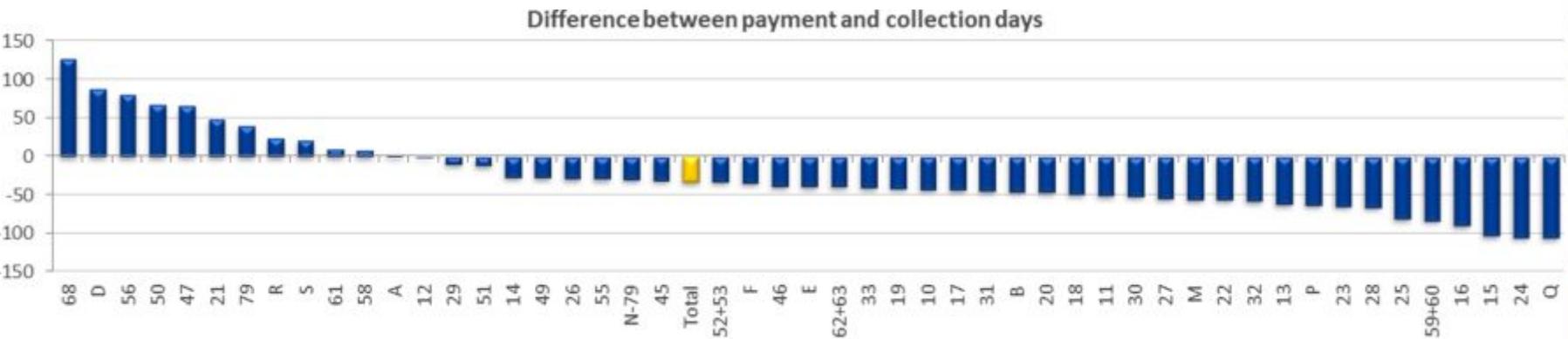
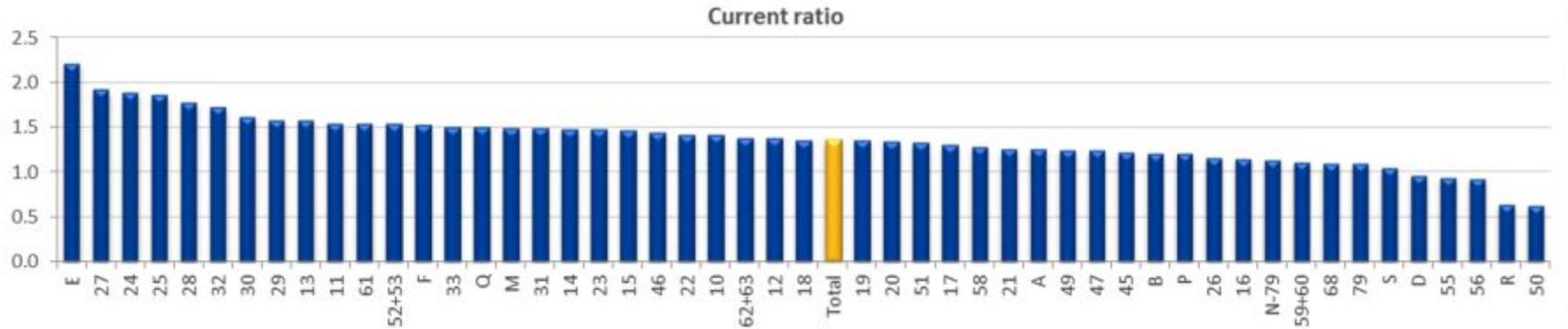
BIC Index: further examination of performance of sectors, 2013

The sectors with the 5 largest positive and negative changes in the ranking of the BIC Index, 2013



Liquidity, 2013

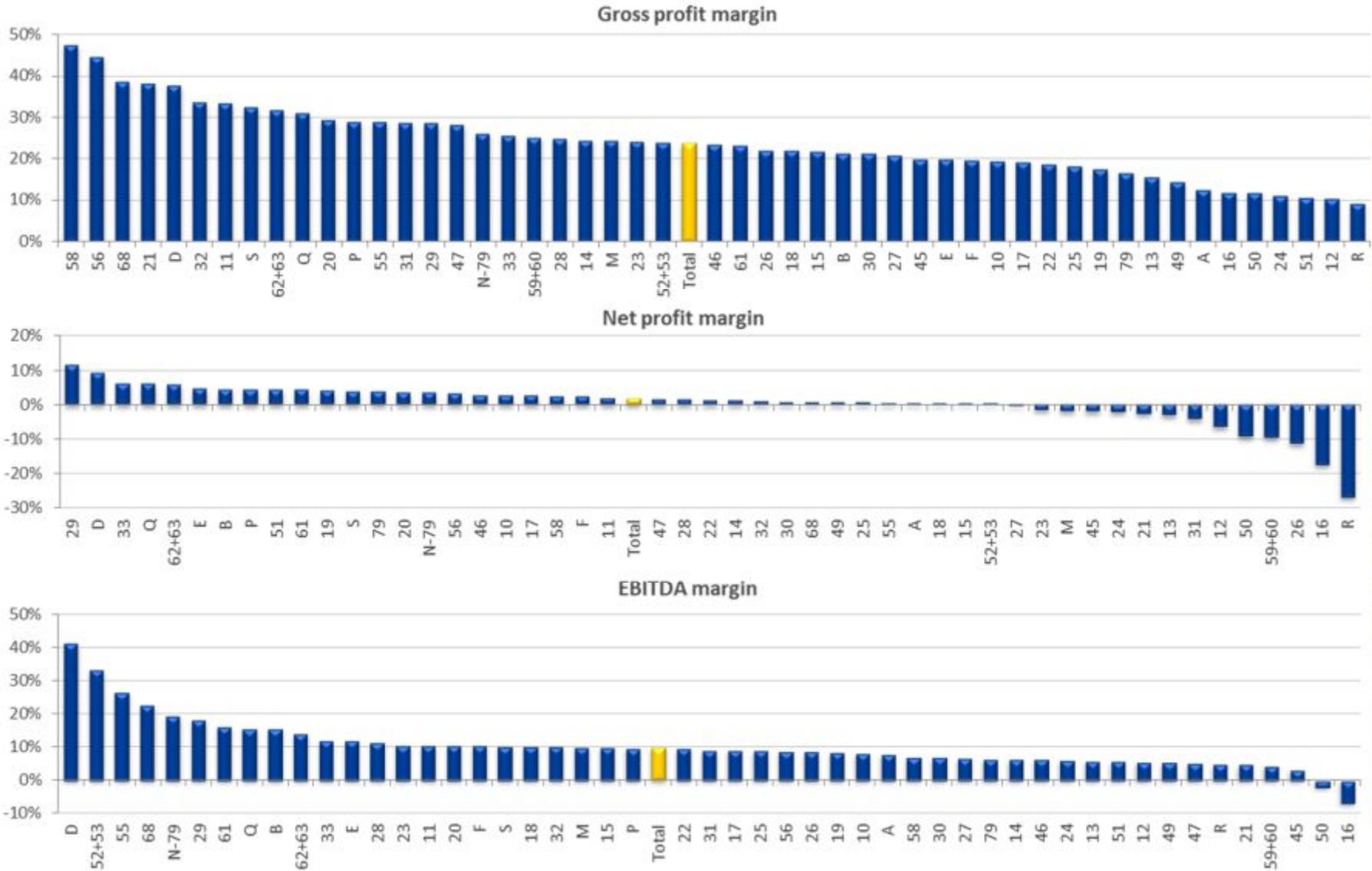
Performance of examined ratios per sector





Efficiency, 2013

Performance of examined ratios per sector (a)

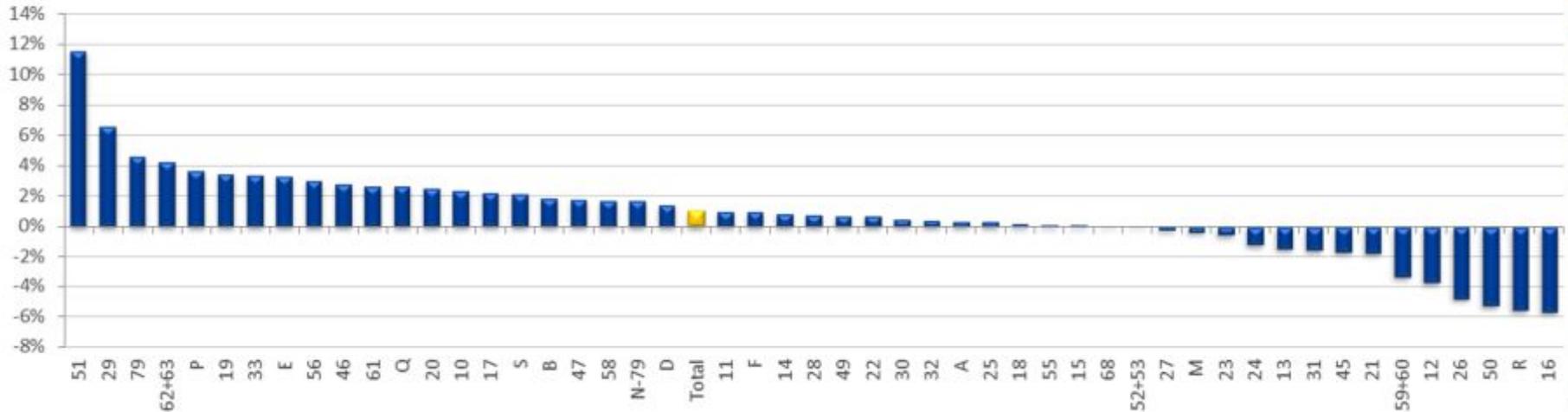




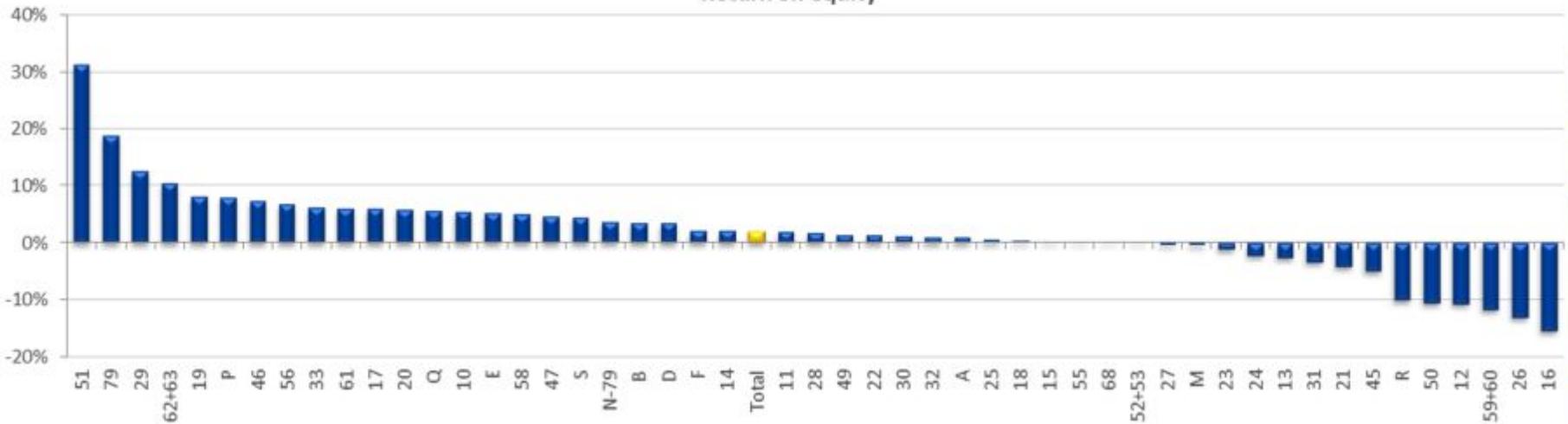
Efficiency, 2013

Performance of examined ratios per sector (b)

Return on total assets



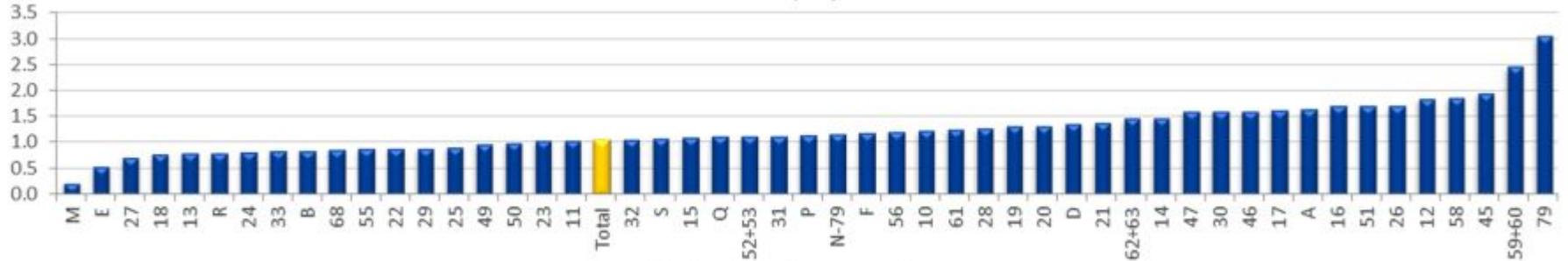
Return on equity



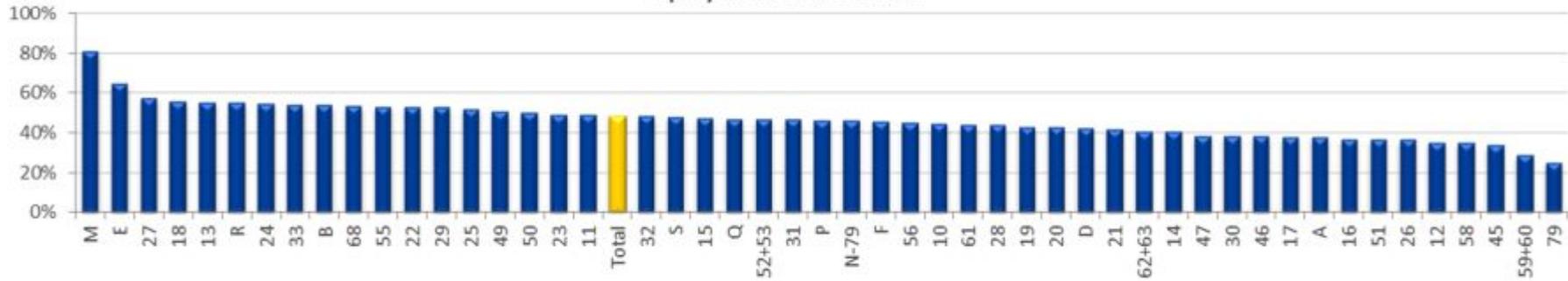
Capital structure, 2013

Performance of examined ratios per sector (a)

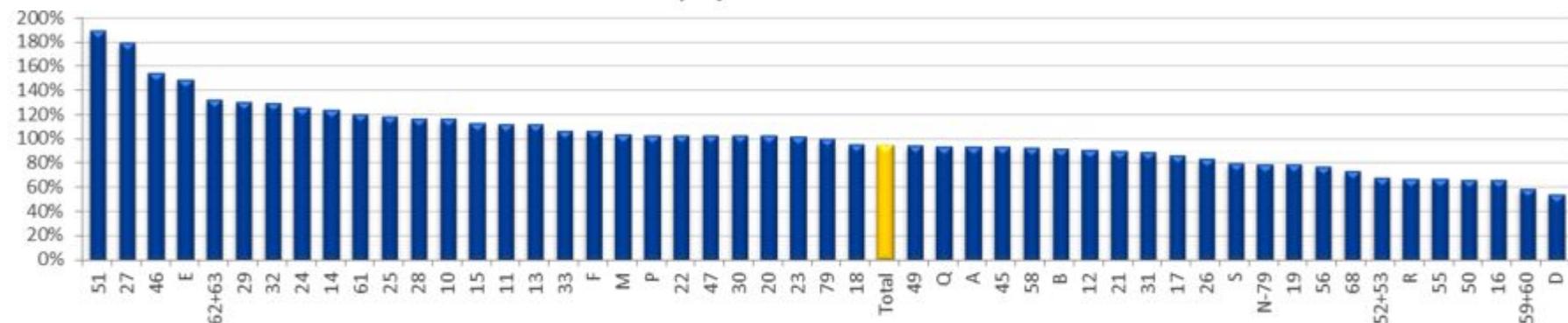
Debt to equity ratio



Equity to total assets ratio

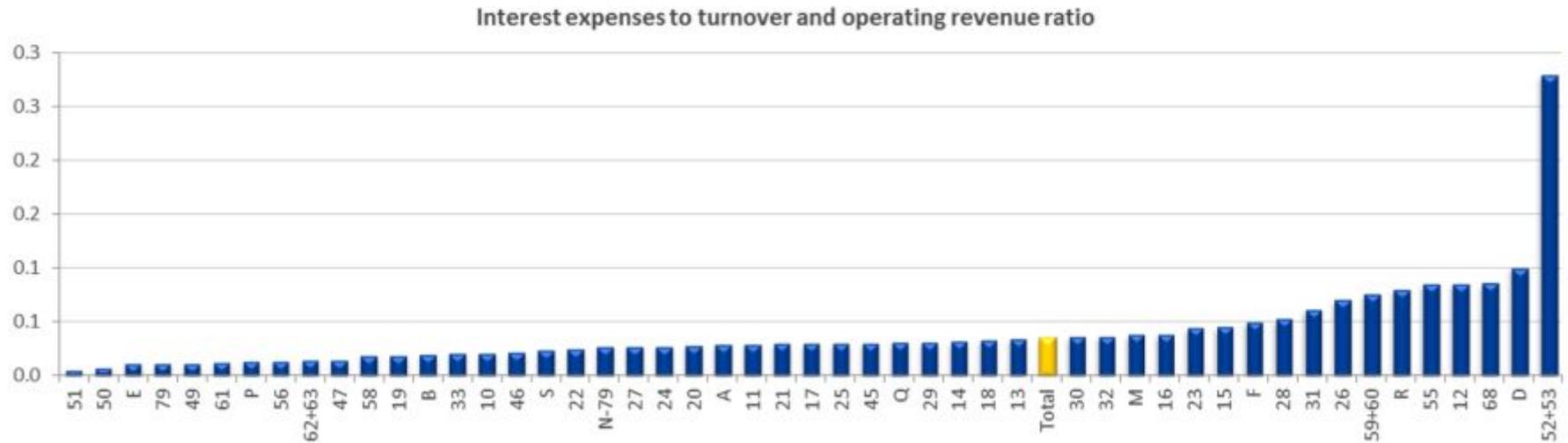
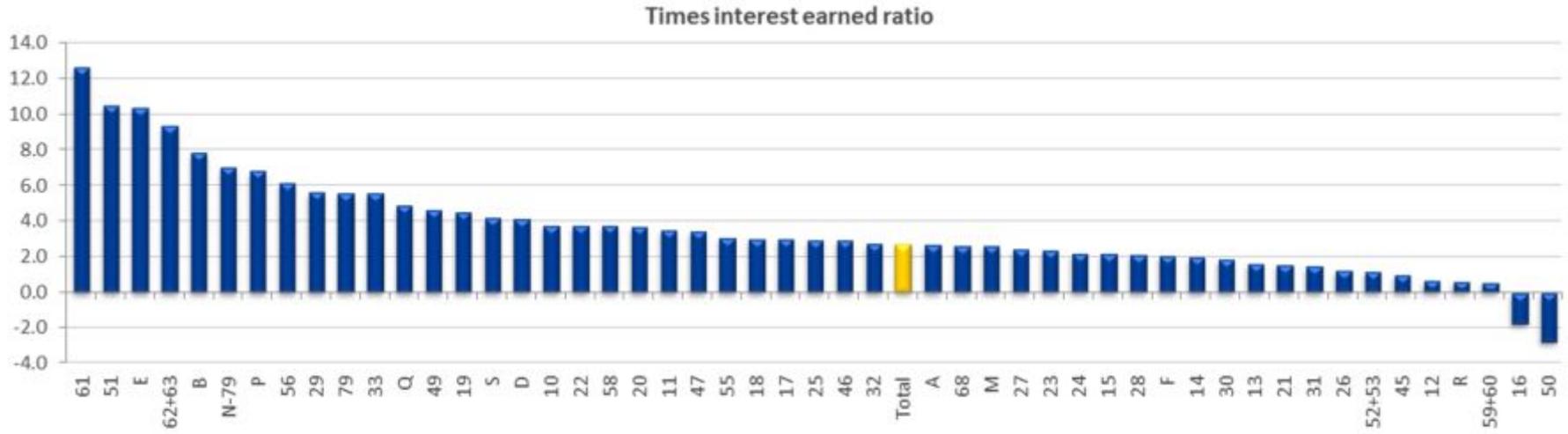


Equity to fixed assets ratio



Capital structure, 2013

Performance of examined ratios per sector (b)





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