Analysis and Diagnosis of Financial Performances in Romanian Construction Industry

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Abstract

In this paper we propose a diagnostic analysis of the financial performance of construction companies traded on the Bucharest Stock Exchange during 2002 and 2012. The study's results highlight the significant impact of the financial crisis on the selected financial indicators from the analysis. The conclusions that we drew in our study conduct us to the prediction of a high bankruptcy risk for two of the Romanian construction companies (COFI and ENP), a risk that actually materialized during 2012 and 2013. To sum up, we consider that the methodology of diagnostic analysis, including the selection of the most representative financial indicators, confirms the economic reality, fact which proves its effectiveness and its successful implementation in other domains too.

Keywords: Financial Performance, Analysis, Diagnosis, Construction Industry

Jel classification: M21, L74

1. Introduction

Launched in 2008, the financial crisis has seriously affected both the construction sector in Romania as well as that in the European Union. The tendencies to return to a situation of economic development were hindered by the sovereign debt crisis in the euro area countries and by the imposition of austerity programs in several Member States of the European Union. The implementation of austerity measures across Europe and hence in Romania has had a great impact by significantly reducing the portfolio of projects financed by the state and those privately funded, so consequently thousands of companies have declared a state of insolvency or bankruptcy.

Analyzing the evolution of the main indicators that define the declining evolution of the construction sector, we found the following:

o The production value in the construction sector decreased in 2012 compared to 2008, from 15.3 to 3,73 Euros;
o The reduction of personnel from 414.000 in 2008 to 313.000 in 2011, in comparison with 2011, in 2012 it was registered an increase of 30.000 people employed in the construction sector;
o The average productivity of the construction sector has registered a constant negative evolution, in contrast with an increase of the average gross wage (+14% in 2012 compared to 2008) (Source: Eurostat).

The leader in the construction sector in Romania is SC CONDMAG S.A. (COMI) which holds approx. 39% of the construction market which consists in the companies listed on BSE for the analyzed 2002-2012 period. The second place is occupied by S.C. IMPACT DEVELOPER & CONTRACTOR. (IMP) with a market share of 24%, closely followed by CONCEFA SA Sibiu (COFI) with 21%. The last places are held by TRANSILVANIA CONSTRUCTII SA (COTR) with 10% and the COMPANIA ENERGOPETROL S.A. (ENP) with only 6% of the construction market in Romania, for the company listed on BSE.

Graph 1
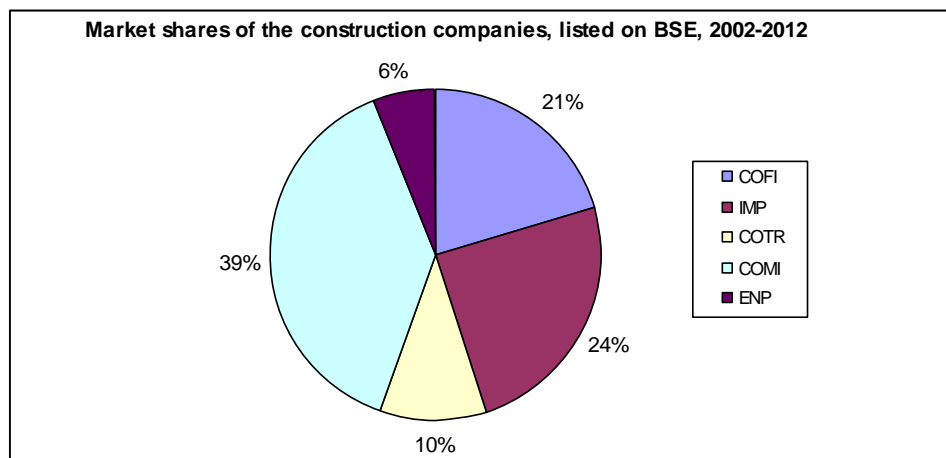
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In this paper we want to carry out a diagnostic analysis of the financial performances of the main companies in the construction sector in Romania, highlighting the impact of the financial crisis through the main economic and financial indicators.

2. Methodology, sample and data

In order to asses a diagnosis of the financial perfomances in the Romanian construction industry, we select 10 main financial indicators very relevant for the financial state of a company, such as: Net results, Net profit margin rate, Return on assets (ROA), Return on equity

(ROE), Leverage ratio, Net cash-flow, Net cash-flow in total assets, Assets turnover, Price to book ratio (PBR), Tobins' Q.

The sample of companies is represented by the five companies in the construction sector, listed on BSE in late December 2013. These companies are: CONCEFA SA SIBIU (COFI), IMPACT DEVELOPER & CONTRACTOR (IMP), TRANSILVANIA CONSTRUCTII (COTR), CONDMAG S.A. (COMI), ENERGOPETROL COMPANY (ENP).

The data source consists in the annual financial statements reported by the sample companies for the 2002-20012 period. They are obtained from the Bucharest Stock Exchange website (www.bvb.ro).

The indicators' values for the 5 companies in the construction sector will be analyzed over the 2002-2012 period by comparing the following periods: the 2002-2007 pre–crisis period and the 2008-2012 post- crisis period. For further analysis and relevant comparisons, we will also highlight the sector's averages for each analyzed indicator and we will reposition each company according to these averages for the 2 periods.

To substantiate a financial diagnosis, the financial analysis will be completed by highlighting some value judgments both qualitative and quantitative. Thus, we will do a top of the companies by calculating an overall financial score of each company F, as a simple arithmetic mean, according to the score obtained for each analyzed indicator Fi, as follow:

$$F = \frac{\sum_{i=1}^{10} Fi}{10}$$
where,

- F represents the global financial score ;
- Fi represents the score obtained for each financial indicators Fi = {1; 2; 3; 4; 5}, as follow:

Score Fi	1	2	3	4	5
Status of indicator "I"	Critical	Weak	Mean	Good	Strong

Considering the analyzed companies, we rate with 5 points the company that scores the optimal value of the indicator "i". If the best indicator value for all the analyzed companies is a negative value, based on the comparative values for the other companies from the sample, the score will be 1 or 2 points, corresponding to the Critical or Weak states. Then, according to the degree of achievement of the indicators, for each of the five companies we will give a decreasing score. Clearly, the company that obtains the lowest indicator value will be rated with 1 point.

The financial score will we interpreted by a SWOT analysis as in the table below:

State of indicators	Global score-F	SWOT Classified
Forte	5	STRONG
Very good	4.5	
Good	4	GOOD
Satisfying	3.5	
Medium-accepted	3	UNCERTAIN
Unsatisfying	2.5	WEAK
Weak	2	
Very weak	1.5	CRITICAL
Critical	1	

Depending on the F values the rating of a company classifies the financial diagnosis of the companies as follows:

a) **Rating Class A**- Strong diagnosis, if $4.5 \leq R \leq 5$ reflecting strong performances and a very high level of trust by stakeholders.

b) **Rating Class B** – Good Diagnosis, if $3.5 \leq R < 4.5$, reflecting good performances and a high level of trust by stakeholders.

c) **Rating Class C**- Uncertain Diagnosis, if $2.5 \leq R < 3.5$. In this case, the business facing some problems, the opportunities for growth are uncertain, the possibilities of recovery are reduced.

d) **Rating Class D** - Weak diagnosis, if $1.5 \leq R < 2.5$. In this case, the business faces major problems, the risks are high, the degree of confidence of the stakeholders is reduced.

e) **Rating Class E**- Critical diagnosis, if $1 \leq R < 1.5$. In this case, the problems of the company are very serious, it is facing financial bottlenecks and there is a risk of imminent bankruptcy.

3. Results and discussion

Net results

The financial crisis' effects which broke out in Romania in 2007 are acutely felt by the BSE listed companies which operate in the construction field in Romania.

From the chart below it may be noted that from 2009 when the total net profits began to systematically decline, the crisis' effects influence the financial results in the construction market in Romania on a global basis. However, companies as COMI and COFI still recorded considerable increases of the net profit in 2009. Thus, compared to the previous year, COMI registered even a doubled net profit in 2009, reaching a historic maximum of 18.384.271 RON

over the 2002-2012 period. COFI recorded as well a 50% rise in net profits in 2009, reaching a historic peak of 4.452.535 RON over the analyzed period.

Dramatic decreases of the net profits were recorded by the following companies: IMP, COTR and ENP. Thus the IMP Company recorded declines of 98% of net profit in 2009 in comparison to 2008, the profits of COTR fell by 95% and those of COMI were half of those from a year earlier. The first substantial losses recorded among the companies from the construction sector occur in 2010, namely for IMP whose losses reached 17.546.665 RON. In the following years, that are 2011 and 2012, the losses generalize and accumulate to COFI and COMI, too. The only companies that manage to keep their business profitable despite the financial crisis are: ENP and COTR, but that is too little for the construction market in Romania.

Graph 2
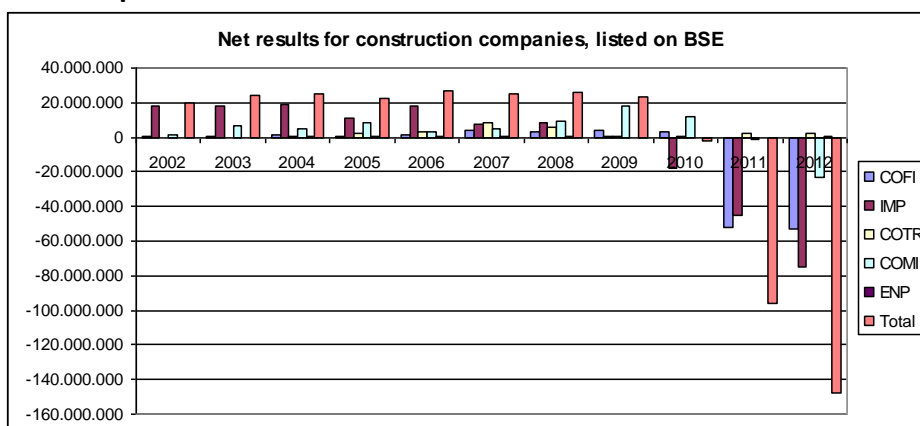
Source: own processing

Net profit margins rate

Net profit margins rate determined as the proportion of results in total sales, reflects an average about *6 %,* for 2002-2007 period. Since 2007, the net profit's rate has recorded considerable declines for all the companies from the sample, so net profit margin ratio has reached an average of 36%, which represents average net loss from 36 RON to 100 RON sales. The most dramatic decreases of the net profit margin are registered by the companies COFI and IMP, over the 2007-2012 period.

Graph 3

Net profit margin rate for construction companies, listed on BSE
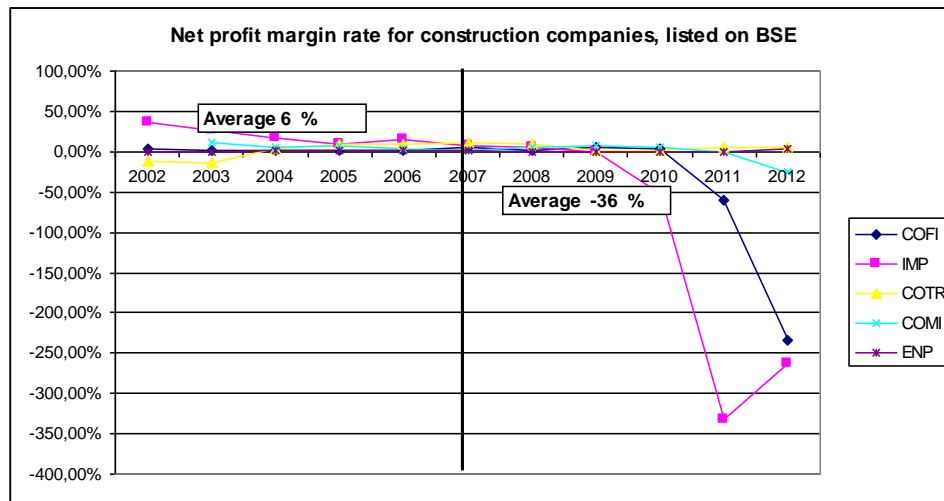
Source: own processing

Return on assets

Return on Assets (ROA) shows how much profit the companies' assets generate. Regarding the capacity of the actives to generate profit in the construction industry, during the period of 2001-2007, the first two places are occupied by IMP and COMI. The maximum value of nearly 25% of ROA is registered by the company IMP in 2003. An overall mean value of ROA in the construction sector, for 2002-2007 is of 5%.

Since 2008, the ROA rates of the construction companies have begun to considerably decline, the minimum of -41% being reached by COFI in 2012. The value of ROA registered by the construction companies during 2008-2012 decreased in average to -2.6%.

Graph 4

Return on assets (ROA) or construction companies, listed on BSE
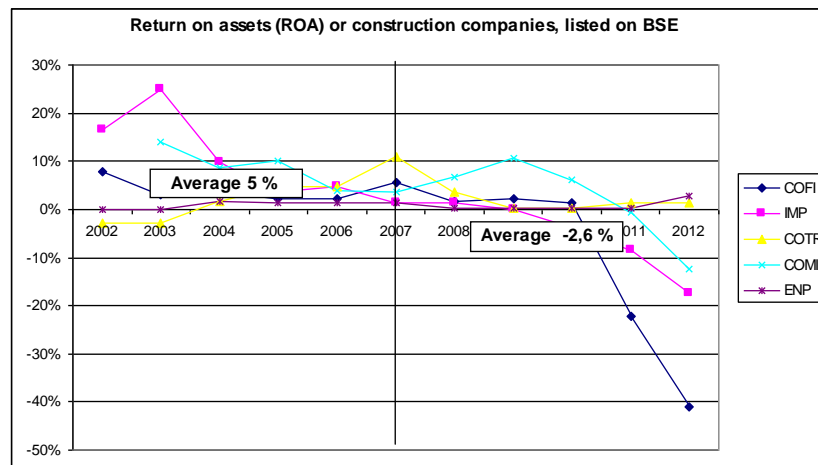
Source: own processing

Return on equity

Return on Equity (ROE) measures the rate of return on the ownership interest (<u>shareholders' equity</u>) of the common stock owners.

As well as in the case of the ROA analysis, the maximum of the ROE value was also registered by IMP in 2003, with a percentage of 56 %. A general average of the ROE value registered in the construction field during 2002-2007 is of 11 %.

Since 2008, the construction companies' ROE rates have begun to considerably decline, the minimum of -141% was reached as in the case of ROA, by the COFI in 2012. The net losses recorded by COFI in 2012 are extremely high so that they lead to negative equity, of 37 549 560 RON.

The average value of ROE recorded by the construction companies in 2008-2012 is 9 %, thus compared to the period before the crisis, a considerable decrease of 20% was recorded.

Graph 5
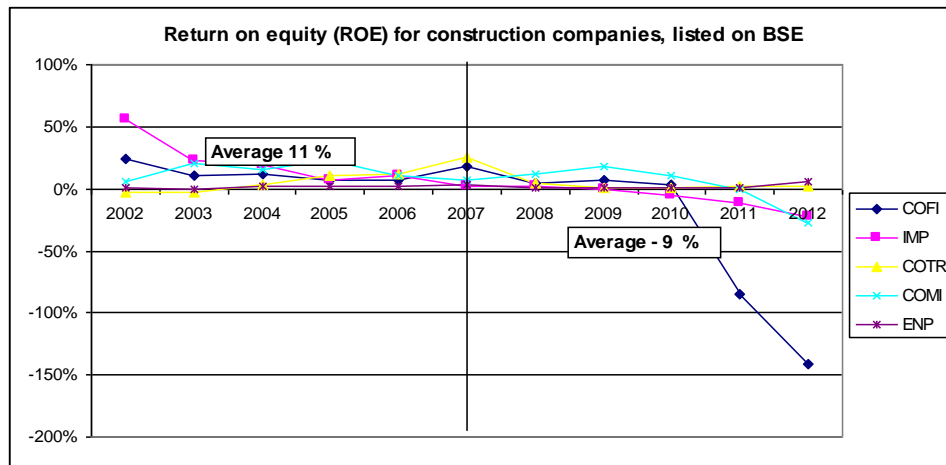
Source: own processing

Leverage

Leverage ratio or Debt to Equity Ratio shows how society's economic resources are purchased from foreign capital.

The most indebted company in the construction sector throughout 2002-2012 is COFI, with a debt ratio of 200%. Over 2011 and 2012, the high degree of leverage generated the highest financial risks that ran out of the control of the company generating substantial financial losses, especially in 2012 when equity reached negative levels.

Overall, the average level of the financial leverage of companies from the sample was reduced when the financial crisis started from an average of 118% (in 2002-2007) to 109% (2008-2012). The decrease of the financial leverage is caused both by the risk aversion manifested by the erupted crisis, as well as by the increased credit-grant restrictions imposed by the banking sector.

Graph 6

Financial leverage for construction companies, listed on BSE
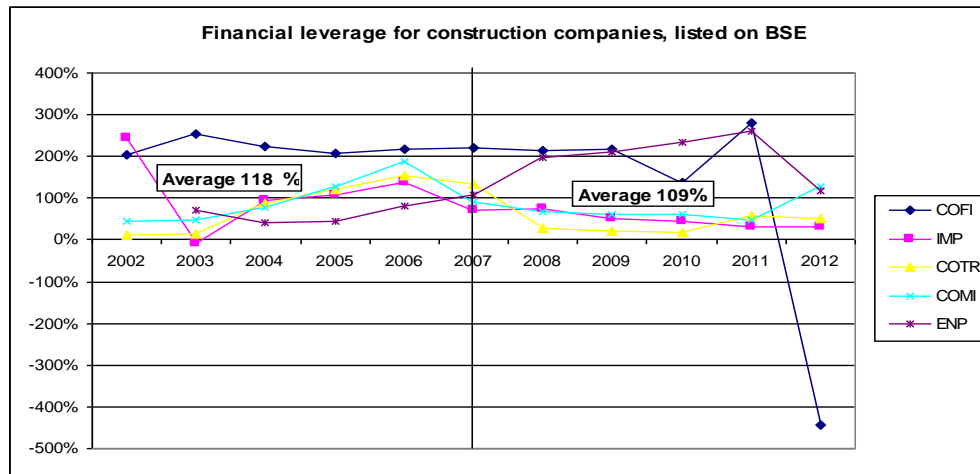
Source: own processing

Cash-flow

Regarding the release of liquidities by the companies from the sample, it can be seen in the chart that in 2008 were registered the most substantial total cash deficits achieved by the companies in the construction sector. These considerable deficits were obtained due to major shortfalls recorded by the IMP, especially in 2008 and 2009. Subsequently, total cash deficit recorded by construction companies diminished year after year. Still, compared to 2011, there are companies that record an accelerating cash deficit in 2012, for example IMP and COMI.

The only construction company to obtain the cash surplus in both 2011 and 2012 is COTR, the remaining companies recording a cash deficit in both 2011 and 2012.

Graph 7

Cash-flow for construction companies, listed on BSE
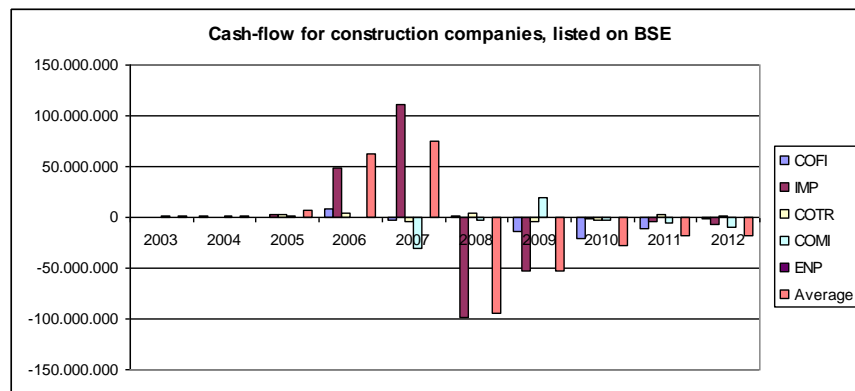
Source: own processing

Cash flow from assets

The Cash Flow from Assets measures the cash flows generated by the firm's assets and it is a useful indicator to highlight the company's liquidity.

In terms of cash-flow share from total assets it may be noted that in 2006 was recorded the highest level of cash generation relative to the volume of assets owned by construction companies, averaging approx. 7%, the highest contributions being made by COFI (15%) and IMP (13%). Since 2007, the construction companies' assets have begun to emit a decreasing

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percentage of liquid assets, the values even represented treasury deficits, averaging around -2%, representing an average deficit of 2 RON to 100 RON generated assets owned by the construction companies in 2007-2012.
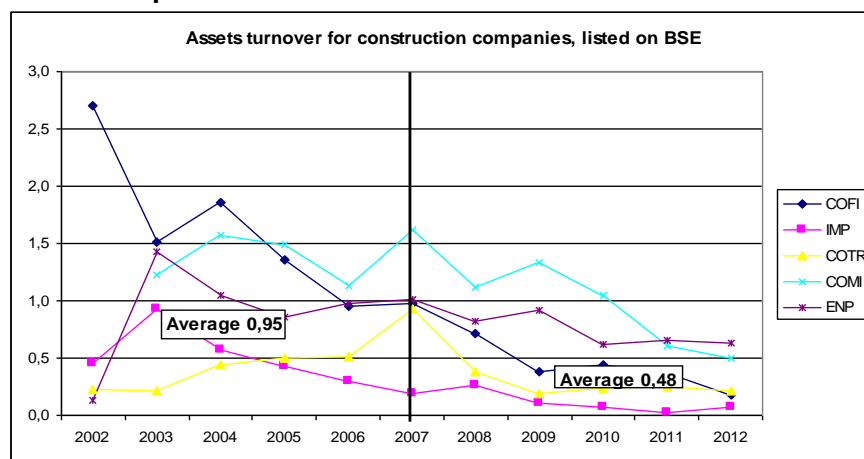
Graph 8
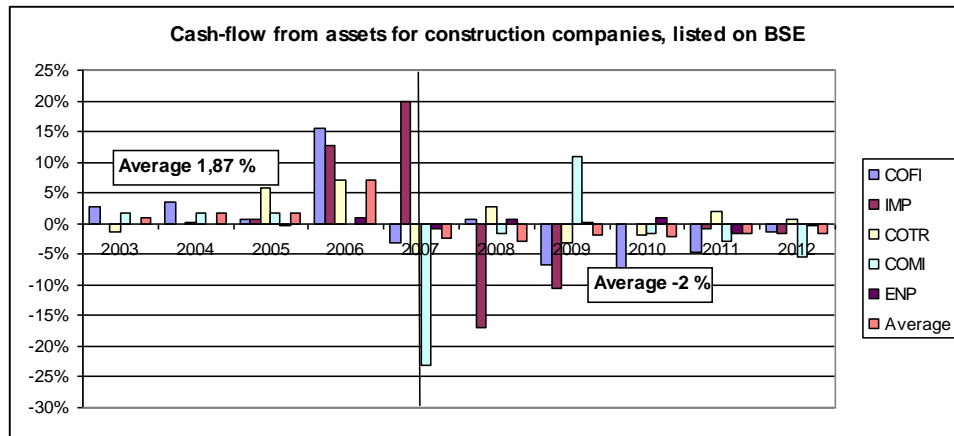
Source: own processing

Assets turnover

Asset turnover is an efficiency ratio which tells how successfully the company is using its assets to generate profit. Ratio - the ratio of a company's sales to its assets. The higher the turnover rate, the more efficient the management of the company's assets is and their replacement rate by turnover is higher.

Graph 9

Source: own processing

For 2002-2007, the turnover rate of the companies' assets from the construction sector is on average close to 1 turnover per year meaning that on average they are replaced by the turnover once a year. The financial crisis brought a slowdown to half of the rate of replacement of assets by turnover; assets' turnover rate is approx. 0.48 turnovers. We note that the

company with the lowest assets' turnover rate during 2005-2012 is IMP with values oscillating between 0.02 to 0.42 turnovers. On the opposite side is situated the company that managed to obtain the highest assets' turnover rate for 5 consecutive years over 2005-2010. A dramatic evolution, with significant decreases is recorded by COFI with a decreasing turnover rate from 2.7 in 2002 to 0.17 turnovers in 2012.

Price to book ratio

Price to book ratio is a <u>financial ratio</u> used to compare a company's current market price to its <u>book value</u> and indicates the financial market's value which is given to the company's management. During 2002-2007 the construction companies achieved on average market values that exceeded their economic values, fact that reflects an increased market confidence given to these companies. The 2008-2012 period brought a dramatic drop in the stock market of the construction companies, being undervalued by the capital market on average with one third of the economic value of the companies. The highest values of PBR, for most companies, were recorded between 2006 and 2007 and then 2008 recorded dramatic declines for most companies.
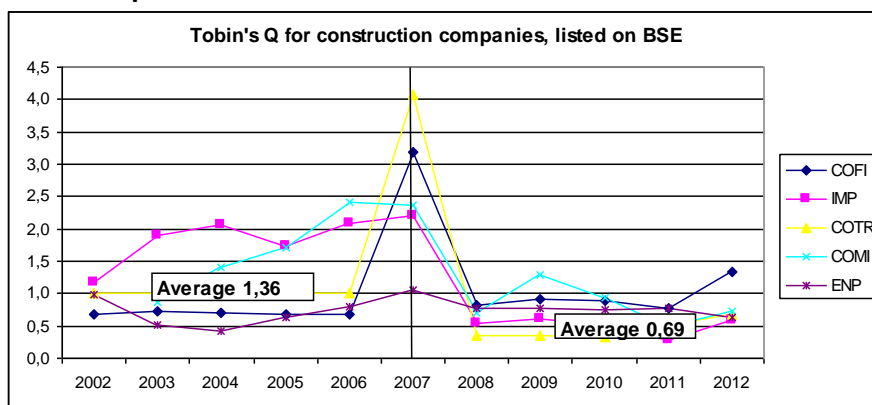
Graph 10
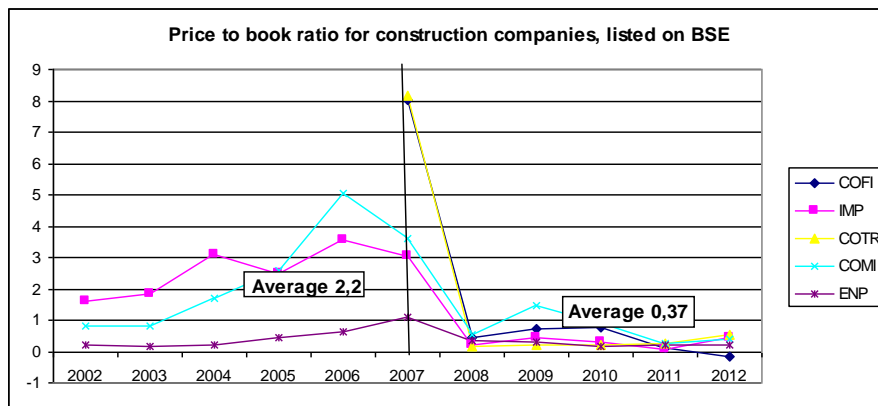
Source: own processing

Tobins'Q ratio

Tobins'Q ratio is the total price of the market divided by the replacement cost of all its companies. Tobin's Q, is calculated as the ratio of the market value of a firm's assets (as measured by the market value of its outstanding stock and debt) to the replacement cost of the firm's assets.

Graph 11

Source: own processing

As well as in the PBR case, the Tobin's Q recorded maximum values from 2006 to 2007 for all construction companies, after that the values showed pronounced decreases. Compared to the pre-crisis period the average value of the Tobin rate is cut to half in the post-crisis period from 1.36 times to 0.69 times.

The annual average values achieved by each company in the construction sector, determined between 2002 and 2012 are presented as follows:

Table 1 Average value of financial indicators, over the period 2002-2012

	COFI	IMP	COTR	COMI	ENP
1. Net results	-7.768.589 RON	-3.421.741 RON	2.162.546 RON	4.008.913 RON	178.865 RON
2. Net profit margin ratio	-24,35%	-48,17%	2,79%	2,41%	1,04%
3. ROA	-3,09%	2,95%	2,08%	5,13%	0,84%
4. ROE	-12,21%	7,47%	4,88%	8,54%	1,72%
5. Leverage	158,03%	80,21%	63,54%	94,28%	124,59%
6. Cash-flow	-3.546.899 RON	-146.572 RON	465.251 RON	-2.992.525 RON	-12.626 RON
7. Cash-flow from assets	-0,09%	0,36%	0,62%	-1,71%	-0,05%
8.Assets turnover	1,04	0,30	0,37	1,16	0,82

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9. PBR	2,84	0,86	3,02	0,37	1,37
10. Tobin's Q	1,03	1,25	1,03	1,18	0,74

Source: own processing

The calculus of the overall financial score per company and the highlighting of the top companies based on the following table results:

Table 2: The value for assesing the financial score

	COFI	IMP	COTR	COMI	ENP
1. Net results	1 points	2 points	4 points	5 points	3 points
2. Net profit margin ratio	2 points	1 points	5 points	4 points	3 points
3. ROA	1 points	4 points	3 points	5 points	2 points
4. ROE	1 points	4 points	3 points	5 points	2 points
5. Leverage	1 points	4 points	5 points	3 points	2 points
6. Cash-flow	1 points	2 points	4 points	1 points	2 points
7. Cash-flow from assets	2 points	3 points	3 points	1 points	2 points
8.Assets turnover	4 points	1 points	2 points	5 points	3 points
9. PBR	4 points	2 points	5 points	1 points	3 points
10. Tobin's Q	3 points	5 points	3 points	4 points	1 points
Average score (1+2..+10)/10	1,90	2,60	3,30	2,90	2,00
SWOT Classified	WEAK	WEAK/ UNCERTAIN	UNCERTAIN/ GOOD	UNCERTAIN	WEAK
Rating	D	C	C	C	D
Place in top	V	III	I	II	IV

Source: own processing

Graph 12

Financial score of construction companies, listed on BSE
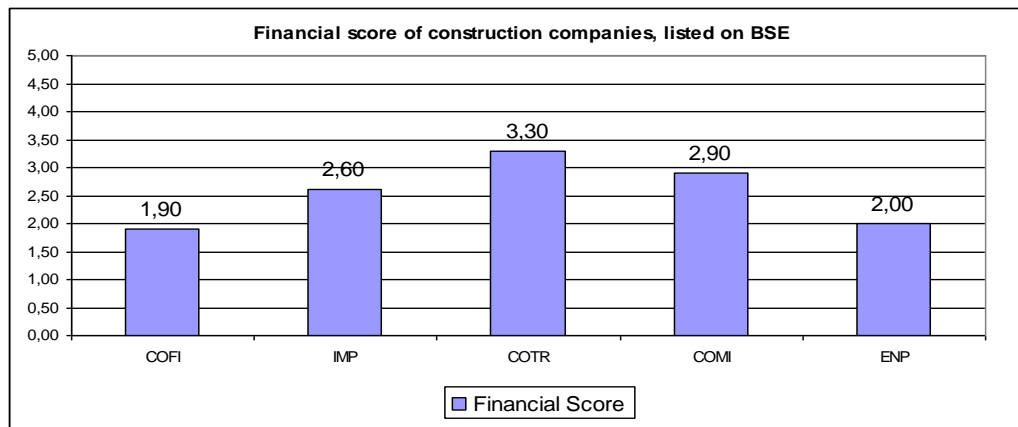
Source: own processing

Based on the information contained in Table 2 and Figure 12 it is found that for the companies from the sample, the best financial performance, over the analysis period 2002-2012 is realized by COTR, with a score of 3.30 points. However, the score obtained placed the company in between financial uncertainty and a good situation, so there are financial risks even for   this   company. COTR obtained the best average values for three out of 10 of the analyzed indicators, namely Net profit margin ratio, Leverage and PBR. However, it also has weaknesses mainly consisting in Assets Turnover.

The second place is occupied by COMI, which accumulates a score of 2.90 points, placing it in an UNCERTAIN area. Compared to other construction companies, COMI achieved best financial performances in profitability, return on assets and assets' turnover. On the other hand, cash flow generation and also the PBR stock performance realized by COMI are among the weakest compared to the companies from the sample.

The third place among construction companies, is owned by IMP, with 2.60 points, reflecting thus weak general performances to average general performances during the entire period from 2002 to 2012 (**WEAK / UNCERTAIN State**). Although the market share is high (of 24% as we can see in Figure 1) which ensures the company the second place on the market after COMI), IMP does not achieve high financial performances. Its weakest points are expressed in terms of Net profit margin ratio, Cash flow and PBR.

The fourth place is occupied by ENP which registered low performances (WEAK STATE) but very little fluctuating, which in time ensures a very good financial stability.

At a very short distance we find COFI, occupying the last place in the top 5 companies from the sample. It cumulates an average score of 1.90 points, reflecting thus overall poor performances. In terms of the values of 5 out of the 10 analyzed indicators COFI is the last in the top of the companies: Net results, ROA, ROE, Leverage and Cash-flow. Moreover, the financial diagnosis conducted for COMI over the period 2002-2012 reflects an increased risk of bankruptcy, a risk that even took place in 2012, COMI became bankrupt, a situation that led to the insolvency of the company.

4. Conclusions

The construction sector in Romania, represented by the companies listed on the BSE, is strongly affected by the financial crisis; all the indicators of financial performance selected for the diagnostic analysis decreased significantly in the post-crisis period compared to the pre-crisis period. The determination of average values for each indicator, for the companies from the sample, differentiated for the two periods, the pre-crisis and post-crisis period is very useful in establishing reference levels for the diagnostic analysis of any company in the construction sector. The study also highlights a top of the companies in the construction sector for those listed on the BSE. Although located in the top 5 companies, COTR has recorded a state of uncertainty facing many financial problems, but it's improving towards a good state. IMP and COMI are situated on the second and third places with average financial performances fact that reflects average risks for these companies.

The fourth and the fifth ranks are occupied by COFI and ENP which recorded poor performances, fact that reflects high financial risks and an increased risk of bankruptcy. The high financial risks that the companies ENP and COFI are facing reflects the prediction of an imminent bankruptcy risk which has materialized with the insolvency of these companies, in April 2012 (COFI) and July 2013 (ENP).

The biggest financial problems which the construction companies are facing are related to ensuring profitability but also ensuring appropriate solvency that would allow them to continue the economic activity without major risks.

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