

The Correlation between the Efficiency of Using the Assets and the Capitals and the Risks in what the Romanian Energy Industry is Concerned

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Abstract

The research paper enlarges upon the analysis of the existing connections between the assets and capitals efficiency indicators and the risks, by applying it to 11 companies from the Romanian energy industry. The period of time necessary for the analysis is the interval between 2012 and 2013, where 2012 is used only when it comes to determining the exploitation and financial risk coefficients.

The indicators expressing the efficiency of using the company's assets and capitals are rendered with the help of the economic profitability ratio in two ways, by using the permanent capital and all the assets, and the financial profitability ratio.

Key words: efficiency, economic profitability, financial profitability, exploitation risk, financial risk

J.E.L. classification: M1

1. Introduction

The energy industry, one of Romania's most significant industries, has been continuously developing both in Europe, as well as in our country, having a great significance in what the gross domestic product of the country is concerned.

The time after 2008 has been even for this industry a difficult period, which has proved to be extremely hard to overcome, this being mirrored also by the results' indicators of the companies belonging to this branch of economy.

The analysis that we have conducted in the present research paper starts with the year 2012, a year known for being one when the majority of the sectors have registered a economic-financial boom, also having as reference 11 companies belonging to the energy industry in our country: Transelectrica, Conpet Ploiești, Electrica SA, Oil Terminal SA, OMV Petrom, Petrolelexportimport SA, Rompetrol Rafinare, Rompetrol Well Services, Nuclearelectrica SA, SNGN Romgaz and SNTGN Transgaz.

In what the structure is concerned, the paper has four parts, the first part consisting of terminology and concepts, where we have defined the profitability indicators used in order to determine the efficiency of using the assets and the capitals; the second part comprises the presentation of a research methodology used for the case study; the case study and the final part, when conclusions are drawn as a result of an analysis of the correlation between the proposed indicators.

2. Concepts and terminology

Among the concepts and terminology used throughout the paper, the following can be found: economic profitability ratio, financial profitability ratio, exploitation risk, exploitation risk coefficient, financial risk and financial risk coefficient.

The economic profitability ratio is defined by the specialists as being: "an indicator expressing the global efficiency of the financial and material resources assigned to the entire activity developed by the company" (Siminica,2010, p.162).

Another definition of the economic profitability ratio refers to the concept of performance concerning the company's activity: "the economic profitability ratio quantifies all the performances of a company's activity, regardless of the financing method and of the fiscal system" (Buse et al,2011,p.185).

The authors Buglea A and Lala Popa I. come up with a series of ways with the help of which the economic profitability ratio can be calculated (Buglea,2009,p.173): the first method implies connecting the gross profit to the company's total capital, in this case the profitability ratio mirroring the way the assets are being used, the second method refers to connecting the gross profit to the company's permanent capital, but this time we are bringing into discussion the way of tracking how the permanent capital is being used. Apart from these two possibilities, the authors also come up with the possibility of calculating the two ratios by applying the gross excess from the exploitation or the company's exploitation profit, only that this time the efficiency will be tracked strictly related to the exploitation activity. In the present paper we have referred to the first two possibilities mentioned above.

The second profitability ratio used is the financial profitability ratio, which has been calculated by the specialists as being the connection between the net profit and the company's actual capital.

With the help of the two ratios we have been able to track the efficiency concerning the use of the enterprises' capitals and assets belonging to the Romanian energy industry, the financial profitability ratio mirroring at the same time also the capacity of achieving profit for these companies' stakeholders.

Other indicators that have been used are the indicators reflecting the risk level in what enterprises are concerned. We are thus provided with exploitation risk indicators and financial risk indicators.

The exploitation risk is defined as being: "any inauspicious event that might negatively influence the operational activity, regardless of the place where it has appeared, of the amount and type of damages occasioned" (Carciumaru,2013,p.26). Therefore starting from this definition, the exploitation risk is strongly connected to the financial risk.

The financial risk, the second category of risks that have been brought into discussion, which are connected to the company's mode of funding is defined as being: "the part referring to the variability of the own capitals' efficiency ratio because of the indebtedness" (Brezeanu, 2003, p.413).

3. The research methodology

In order to develop the present research paper, we have followed a series of steps, which are: gathering informations, selecting them, processing them, determining the established indicators and coming up with scenarios regarding the correlation level between the indicators.

We have chosen the energy industry due to the importance of this sector for the Romanian economy, considering the total turnover of the sector, the sector's contribution to the gross domestic product, the total number of employees etc.

In order to have a representative analysis of the sector, we have selected a number of 11 societies having the turnover over the sector's average, considering them as being the leading ones on the Romanian energy market.

The data selection has occurred with the help of the website bvb.ro, by checking each society's webpage, and the processing of the data has been made by using the program Excel, and in the end we have come up with a series of scenarios with the help of the program S.P.S.S.

Before starting the case study, we shall proceed with an analysis of the indicators mentioned above and dissected with regard to the exploitation and financial risks, their level being presented in the following table:

Table no. 1 The level of the profitability ratios and of the exploitation and financial lever coefficients

| Year | Companies | Economic profitability ratio (Gross profit/Kper) | Economic profitability ratio (Gross profit/At) | Rf | ELC | FLC |
|------|---------------------------|--|--|---------|--------|--------|
| 2013 | Transelectrica | 6,75% | 4,66% | 7,73% | -17,89 | 2,41 |
| | Conpet Ploiesti | 6,31% | 5,68% | 4,81% | 0,02 | 17,93 |
| | Electrica SA | 3,59% | 3,08% | 4,72% | -0,66 | -0,65 |
| | Oil Terminal SA | 0,39% | 0,32% | 0,00% | 468,25 | -3,61 |
| | OMV Petrom | 20,67% | 14,61% | 18,50% | -0,23 | 15,32 |
| | Petrolexportimport SA | 0,94% | 0,48% | 2,39% | -0,98 | -2,04 |
| | Romp petrol Rafinare | -9,26% | -3,04% | -9,26% | -5,12 | -1,04 |
| | Romp petrol Well Services | 20,00% | 17,92% | 17,16% | 2,14 | 0,85 |
| | Nuclearelectrica SA | 4,72% | 4,43% | 4,67% | 11,55 | 10,97 |
| | SNGN Romgaz | 14,00% | 12,42% | 10,71% | -13,17 | 1,14 |
| | SNTGN Transgaz | 13,88% | 10,93% | 10,89% | 3,97 | 0,03 |
| 2014 | Transelectrica | 12,05% | 7,94% | 12,81% | 5,39 | 1,02 |
| | Conpet Ploiesti | 8,89% | 8,01% | 7,11% | 11,07 | 0,77 |
| | Electrica SA | 7,13% | 6,96% | 6,96% | 242,84 | -25,92 |
| | Oil Terminal SA | 0,50% | 0,48% | 0,14% | -4,61 | 0,00 |
| | OMV Petrom | 9,28% | 5,91% | 6,98% | 6,21 | 1,16 |
| | Petrolexportimport SA | -3,71% | -1,77% | -10,22% | 0,65 | 7,57 |
| | Romp petrol Rafinare | -91,34% | -17,17% | -91,34% | -2,10 | -12,21 |
| | Romp petrol Well Services | 6,41% | 5,84% | 5,49% | 3,44 | 0,95 |
| | Nuclearelectrica SA | 1,68% | 1,57% | 1,78% | 8,75 | 1,11 |
| | SNGN Romgaz | 17,63% | 16,07% | 14,52% | 3,16 | 0,86 |
| | SNTGN Transgaz | 17,93% | 12,92% | 15,10% | 1,16 | 4,83 |
| 2015 | Transelectrica | 11,79% | 8,22% | 12,09% | 0,30 | 0,36 |
| | Conpet Ploiesti | 9,84% | 9,01% | 8,27% | 15,90 | 0,85 |
| | Electrica SA | 7,66% | 7,46% | 7,66% | 9,94 | 0,02 |
| | Oil Terminal SA | 2,18% | 2,02% | 1,38% | 7,80 | 4,15 |
| | OMV Petrom | -2,66% | -1,71% | -2,51% | 8,45 | 0,93 |
| | Petrolexportimport SA | 149,19% | -146,82% | 113,15% | 334,19 | -1,14 |
| | Romp petrol Rafinare | -9,20% | -2,18% | 6,67% | 13,51 | 0,29 |
| | Romp petrol Well Services | -22,80% | -21,18% | -23,49% | 10,66 | 0,94 |
| | Nuclearelectrica SA | 1,99% | 1,87% | 1,99% | 3,34 | -1,40 |
| | SNGN Romgaz | 14,60% | 13,39% | 12,32% | 1,74 | 0,89 |
| | SNTGN Transgaz | 16,66% | 12,29% | 13,69% | 0,40 | 3,01 |
| 2016 | Transelectrica | 9,33% | 6,39% | 8,92% | 2,43 | 1,13 |
| | Conpet Ploiesti | 10,54% | 9,72% | 8,99% | 201,83 | 0,85 |
| | Electrica SA | 6,98% | 6,83% | 6,79% | -10,88 | -0,20 |
| | Oil Terminal SA | 4,08% | 3,81% | 3,49% | 6,39 | 1,56 |
| | OMV Petrom | 3,91% | 2,56% | 3,49% | 21,00 | 1,37 |
| | Petrolexportimport SA | 7,86% | -8,34% | 6,02% | 3,28 | 0,95 |
| | Romp petrol Rafinare | 1,66% | 0,39% | 5,28% | 3,00 | 0,53 |
| | Romp petrol Well Services | -4,74% | -4,35% | -4,84% | 1,99 | 1,07 |
| | Nuclearelectrica SA | 1,49% | 1,40% | 1,50% | 0,08 | 51,31 |
| | SNGN Romgaz | 12,77% | 11,39% | 10,59% | 0,77 | 1,17 |
| | SNTGN Transgaz | 18,27% | 13,45% | 15,49% | 1,68 | 1,21 |

Source: table generated with the help of Excel by processing the financial-accounting data

4. Case study

Taking into consideration the values introduced in the previous table, we have been able to come up by using the Pearson correlation coefficient with an analysis of the level of correlation between the indicators reflecting the degree of efficiency when using the company's capital and assets and the risk level that has been taken by the companies belonging to the energy industry in our country.

The correlation level can be spotted in the following table:

Table no. 2 The correlation between the economic profitability ratio, the financial profitability ratio and the exploitation and financial lever coefficients

Correlations

| | | Economic profitability ratio (Gross profit/At) | Rf | Economic profitability ratio (Gross profit/Kper) | FLC | ELC |
|--|---------------------|--|---------|--|------|--------|
| Economic profitability ratio (Gross profit/Kper) | Pearson Correlation | -,591** | ,985** | 1 | ,081 | ,791** |
| | Sig. (2-tailed) | ,000 | ,000 | | ,600 | ,009 |
| | Years | 44 | 44 | 44 | 44 | 44 |
| Economic profitability ratio (Gross profit/At) | Pearson Correlation | 1 | -,497** | -,591** | ,076 | ,681** |
| | Sig. (2-tailed) | | ,001 | ,000 | ,625 | ,001 |
| | Years | 44 | 44 | 44 | 44 | 44 |
| Rf | Pearson Correlation | -,497** | 1 | ,985** | ,842 | ,353* |
| | Sig. (2-tailed) | ,001 | | ,000 | ,527 | ,019 |
| | Years | 44 | 44 | 44 | 44 | 44 |

The results from the table above certify the existence of a strong correlation between the efficiency indicators of the assets and the capitals and the risks the enterprise is exposed to in what the exploitation, as well as the financial activity are concerned.

5. Conclusions

Putting together such a research paper has allowed us to come to the following conclusions:

- taking into consideration the profitability indicators in 2016, only the trading company Rompetrol Well Services has registered a negative score, the situation being an inauspicious one;
- in what the exploitation and financial lever coefficients are concerned, there is a single company that has registered a negative score of these coefficients, but it cannot be asserted that the company Conpet has a very good situation by considering the results, on the contrary, according to the specialists of this field of activity, a high score of these two coefficients can trigger an alarm;
- regarding the analysis of the correlation, we have obtained a strong direct correlation between the economic profitability ratio and the exploitation lever coefficient, but also a strong correlation between the financial profitability ratio and the financial lever coefficient.

It can be consequently concluded that in what the energy industry is concerned there is a strong correlation between the indicators reflecting the efficiency of the use of the company's assets and capitals and the risks related to the two exploitation and financial levels.

6. References

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