

## USING RATIO METHOD IN THE TOURISM INDUSTRY PERFORMANCE ANALYSIS

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**Abstract.** *Ratios represent useful analysis instruments that synthetize a large volume of data in an easier to understand, interpret and compare form. At the same time, they show certain limits that have to be analyzed for each case. When comparing ratios from different periods, one has to take into account the circumstances in which the company performs its activity, as well as the effect of certain changes in the financial reporting, such as : change in the economic circumstances, the productive process, the different production lines or the geographical target markets.*

**Key words:** *Assets, Equity, Funds, Earnings, Sales*

**Jel:** G32

### 1. Literature review

Ratio method is often used in economic research in general especially in research performance.

Thus some authors believe that financial ratio analysis is of extreme importance. They are widely accepted in business practice of large companies, primarily because of the simplicity of its calculation and use. Bearing that in mind, the subject matter and objective is to indicate the trends and dynamics of some of the most important financial ratios of financial position and business performance of SMEs in the Republic of Croatia. Based on the obtained results, the quality of business performance will be evaluated for this important economic discipline. ( [Žager, Katarina](#), [Sačer, Ivana Mamić](#), [Dečman, Nikolina](#), 2012)

To rate corporate bonds, rating agencies usually use statistical models based on a set of financial ratios. Some academic studies have also highlighted the use of artificial intelligence techniques of neural networks for corporate bond ratings. In recent years, operational research techniques such as data envelopment analysis (DEA) and its applications to financial decision making have attracted the interest of researchers and practitioners. ( [Malhotra, Rashmi](#), [Malhotra, D. K.](#), [Russel, Philip S.](#), 2010).

Marketing academicians and practitioners have been observing for more than three decades that business performance is affected by market orientation, yet to date there has been no valid measure of a market orientation and hence no systematic analysis of its effect on a business's performance. The authors report the development of a valid measure of market orientation and analyze its effect on a business's profitability. Using a sample of 140 business units consisting of commodity products businesses and noncommodity businesses, they find a substantial positive effect of a market orientation on the profitability of both types of businesses. (Narver, J.C. and Slater, S.F., 1990)

Rates are useful tools of analysis that summarizes a large amount of data into a form more easily understood, interpreted and compared. They highlight the same time, certain limitations that must be considered for each case. When comparing rates from different periods, to consider the conditions under which businesses operate and the impact on the

financial statements of certain changes such as changing economic conditions, the production process of the various production lines or geographic markets served.

Rates is not the end point of the analysis is not positive elements themselves (strengths) or negative (weaknesses, weaknesses) of a business activity or its management. Rates indicate, in our opinion, only areas that require further investigation.

Analysis based on rates constructed by the analyst in the financial statements, the investigation must be combined with other factors, prior to formulate relevant conclusions and make recommendations for measures to be taken by the management company. The appreciation of the fact that a certain index is too high, too low or appropriate depends on the interpretation of the results by the analyst who is considering on the one hand, both the type of activity of the company and the company's position in the sector and on the other hand, the strategy adopted by the company on a particular market. The objective is to determine the rate fluctuation analysis of causes and effects that rates have on the company's ability to repay debt. Analysis of a single-sided or more installments rates may rise, in our opinion, erroneous conclusions on the financial stability of the company. Therefore, a combined analysis of rates with other enterprise information management and information about economic conditions in which the company operates, will certainly highlight the true image of the undertaking. In this respect, the analysis of changes in those rates recorded over a period of time in order to determine changes that may interfere with the company and the possible impact that these rates can have on the company's creditworthiness.

Where an indicator of enterprise value differs significantly from industry averages to be studied the causes that situation to assess, in this way, the effects they produce on the creditworthiness of the analyzed company.

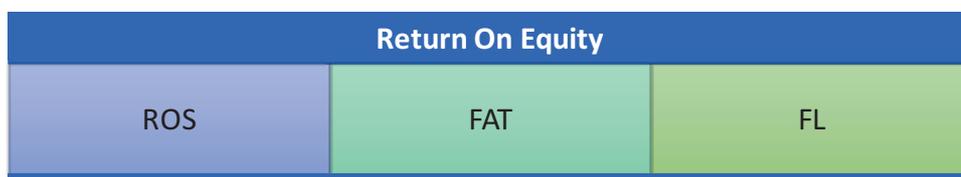
## 2. Method and results

A first aspect followed on the analysis of the company's performance refers to the profitability of own capital that may be shown with the help of the indicator "Return on Equity" that is determined as a report between net profit and own capital:

$$ROE = \frac{NP}{EQ} \times 100$$

In the technical literature the indicator is also called Return on Common Equity ROCE and measures the profitability degree of the investments made by the shareholders both in the operating activity and in the financial one.

**Return On Equity-ROE** is calculated as relation between the net result of the fiscal period and the value of the company's own capital, and has connections with Return On Sales, Fixed Assets Turnover and Financial Leverage.



**Figure 1.**Factors of ROE

Source: Own Model

In order to highlight the contribution of capital invested in fixed assets, to obtain financial profit, the model presented above can be decomposed as follows:

$$ROE = \frac{NP}{S} \times \frac{S}{FA} \times \frac{FA}{EQ} \times 100 = ROS \times FAT \times FL$$

in care:

- ROS represents Return On Sales (ROS) or Profit on Margin Sales (PMS);
- FL represents Leverage or Equity Invested;
- FAT represents Fixed-Assets Turnover.

From the analysis the following conclusions:

- where investment in fixed assets financed by capital increases, also increasing the ROE of the company;
- where the fixed assets turnover higher than the previous financial year, this will increase in the ROE;
- if ROS increased compared to the previous period, then there will be an increase in the ROE.

**Table 1:** The evolution of ROE

Indicators	Symbol	2009	2010	2011	2012	2013
Return On Equity	ROE	0.10%	0%	-5.97%	1.90%	6.51%
Return On Sales	ROS	16.08%	0%	-833.35%	59.40%	245.76%
Fixed Assets Turnover	FAT	0.01	0.01%	0.01	0.03	0.03
Financoal Leverage	FL	103.37%	95,71%	100.30%	100.08%	100.15%

Source: Own calculus

At NORD Hotel SA ROE has maximum value in 2013 .

Following the competition, return on equity is at the level of firms. Achieving a high level of return on equity by an undertaking acts as a magnet, attracting competitors and they eager to reach such performance. Over time, this will redirect to medium stiff competition return on equity obtained thriving enterprise.

Return on equity and its influencing factors of the starting point in the analysis of previous systemic financial statements of the company through indicators of profitability, asset utilization and return on equity leverage.

The first aspect to be analyzed endorse return on sales. In general, rates of profitability are used by analyst to assess a company's ability to make profits. Profitability ratios summarizes while business performance reflected in the profit and loss account of the company. A specific financial performance indicator is the profit margin which is a function of both operating leverage and value added throughout the production cycle, synthesizing monetary gains resulting from each unit of sales.

A second coordinate analysis of the financial performance of equity, is the Fixed Assets turnover. Asset performance rates reveal company revenues and expenses or to analyze the cost structure or to correlate sales performance with the volume of assets used in making sales. In general, Fixed Assets turnover focuses on the following targets:

- Firstly, the indicator highlights the effectiveness of the utilization of assets;
- Secondly, the indicator reflects sales of each monetary unit used assets;
- Thirdly, the indicator summarizes the assets of the firm.

A third dimension of analysis is the financial leverage equity. The literature indicator is called "Equity multiplier". An enterprise uses both attracted and borrowed funds and funds

of various types of shareholders. Using these two categories of resources will depend on the company's attitude towards risk and to return. In this leverage highlights the following:

- Firstly, the indicator reflects the size of the enterprise funds used to finance assets;
- Secondly, the indicator summarizes the company's debt;
- Third, leverage is a function of the structure of assets;
- Fourth leverage is a measure of trust creditors the company's ability to generate sufficient cash and cash equivalents necessary for repayment of loans.

**Gross Return On Assets (GROA)** is determined as relation between the gross result of the fiscal period (GP) and total assets (TA) of the company:

$$GROA = \frac{GP}{TA} \times 100$$

The indicator shows the contribution of patrimonial elements in obtaining the results .

**Return on Total Assets - ROA** is determined as relation between net profit (NP) and the value of the company's assets (TA). This ratio measures the return of the entire capital invested in the company:

$$ROA = \frac{NP}{TA} \times 100$$

In the economic English-american literature, the indicator is called Return on Total Assets-ROA or Return on Investment-ROI). According to some American analysts the indicator is determined as relation between the operating profit and total assets. In this case, the indicator measures the efficiency in using the assets of the company in the operating activity.

**Basic Earning Power - BEP** is calculated as relation between the operating result (Earning Before Interest and Taxes- EBIT) and total assets (TA):

$$BEP = \frac{EBIT}{TA} \times 100$$

The indicator shows the earning power of the company after using in business its total resources.

**Return On Costs (ROC)** is determined as a percentage ratio between the net result for the year (NP) and its total costs (TC).

$$ROC = \frac{NP}{TC} \times 100$$

Indicator recorded positive growth in the last year of analysis.

**Return On Assets Operation** indicates the contribution of assets to obtain the results of activity operation and is determined as a percentage ratio between operating profit (OP) and total assets (TA):

$$ROAO = \frac{OP}{TA} \times 100$$

Indicator values are positive except for the last two years, when there were unfavorable financial results.

Comparing operating profit to sales, operating profit margin indicates how efficient is the company's management in generating income from core business operations.

A high level of profit from operations (operational) may indicate that the entity has effective control over costs and that sales are growing faster than operating costs. Operating profit also offers investors the opportunity to make comparisons between different companies profit margin. Operating profit measured in fact business ability to generate cash income and many experts consider this to be a more reliable measure of performance. Since the operating profit margin takes into account not only the cost of materials and with the labor but also administrative and distribution expenses, margins will have a value lower than the gross profit margin.

**Table 2.** The evolution of return ratios at NORD HOTEL SA

Indicators	Symbol	2009	2010	2011	2012	2013
Gross Return On Assets	GROA	0.10%	4.57%	5.92%	1.90%	6.50%
Evolution of GRON	dGROA	100%	4570.99%	129,56%	32.09%	342.21%
Return On Assets	ROA	0.10%	0%	-5.95%	1.90%	6.50%
Evolution of ROA	dROA	100%	0%	0%	-31.94%	342.21%
Basic Earning Power	BEP	2.27%	1.46%	1.51%	0.95%	0.66%
Evolution of BEP	dBEP	100%	64.36%	103.25%	63.02%	68.96%
Return On Costs	ROC	3.30%	0%	-45.46%	81.25%	182.84%
Evolution of ROC	dROC	100%	0%	0%	-178.72%	225.03%
Return On Assets Operation	ROAO	2.27%	1.46%	1.51%	0.95%	0.66%
Evolution of ROAO	dROAO	100%	64.36%	103.25%	63.02%	68.96%
Return On Equity	ROE	0.79%	0%	-21.76%	4.62%	16.92%
Evolution of ROE	dROE	100%	0%	0%	-21.25%	366.30%

Source: Own calculus

**Return On Sales** contribution means to strengthen the capacity of self-financing entities.

$$ROS = \frac{NP}{S} \times 100$$

where:

ROS - represents Return On Sales;

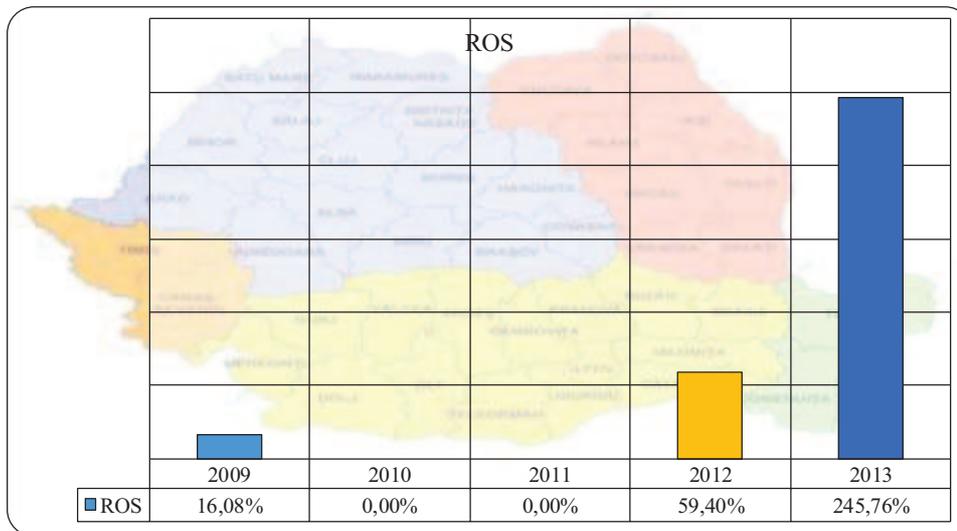
NP - represents net profit.

S - represents turnover.

This rate is also called net profit margin indicating the relative effectiveness of the economic entity after deducting all expenses and income taxes.

Comparing the company gross margin and net margin we get an indication of uninvolved in production costs and indirect costs such as administrative, financial and marketing.

Return On Sales evolution in the period under review can be represented graphically as follows:



**Figure 2:** The evolution of Return On Sales

Source: Own calculus

It is noted that the rate of return shows a fluctuating trend, followed in 2013, to have an efficient activity. We believe that sales marginally jeopardize the continuation of the operation.

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