BUDGETING AND CONTROLLING (PART 25): ROX-RATIOS: ROE

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The last article of the series Budgeting and Controlling dealt with the ratio ROI (BTV unternehmen 1-2006).

The ratio ROE (Return on Equity, profitability of own capital) apart from the ratio ROI (Return on Investment) is the best known ratio of all the ROX-ratios which are compiled from values from the balance sheet.

With the support of ROX-ratios, generally, the operating return or profitability resp of enterprises is presented. The ROX-ratios all present the result (Return = R) or the profit form the profit and loss account resp in relation to (on = O) a certain impacting factor X.

In contrast to the ratio ROI, the ratio ROE sets the profit of the enterprise, after deducting interest arisen in the enterprise, in relation to the equity capital employed in the enterprise.

Contrasting the ratio ROI, interest paid is not added to the profit from the profit and loss account, normally the profit from ordinary business activities (EBT) or the profit for the year.

In the framework of calculating the ratio ROE, the profit that results after deducting interest paid, is used in order to incorporate the effect of the capital structure of the enterprise on interest paid and thus on the profit, when regarding the profitability of the enterprise.

The amount of interest payment depends on the dimension of outside capital employed in the company for which interest expenses arise. The less equity capital is employed in the company, the more demand of outside capital arises (resulting in interest expenses), to finance the assets used in the company, the higher is the amount of interest paid and the lower is the profit remaining which presents the basis for calculating the ratios.

To consider a profit before or after tax can depend on what the compiled ratio will be used for – if it is used for a neutral review – neutral concerning the legal form of the commercial entity – or if an international review or an international comparison resp shall be enabled, or whether the profitability of own capital employed in the company to the profitability of an alternative investment might be compared.

The ratio ROE (Return on Equity) refers to the total equity employed in the company. In the simplest cases of calculating the ratio ROE, merely the opening stock of equity is used.

As an alternative, the average stock of equity is compiled in case the development of equity in the course of time is to be incorporated into calculating the ratio.

The following formula is used for calculating the ratio ROE, expressed in a percentage value:

$$\text{ROE} = \frac{\text{Profit}}{\text{(Average) Equity capital}} \times 100$$

The ratio ROE is often used for presenting the comparison of the profitability of investing own capital in the enterprise to a free of risk investment of own capital (eg in a savings account or bank account). Typically for that case, such a comparison is not carried out with the formula based on average values but – the same as with an investment in a savings account – merely based on the stock of equity that is available at the beginning of the year.

The information the ratio ROE provides, refers to the profitability and thus to the calculated interest, calculated based on the total equity capital employed in the company. This profitability increases when the profit increases with constant equity capital employed. Profitability also increases if profit remains constant but if less equity is required to attain this profit.

The information provided by the ratio ROE, must be questioned particularly when the basic values that were incorporated into the formula for calculating the ratio are very low (little profit with little equity capital), as in a purely mathematical way, the ratio ROE can lead to high values in these cases. Their information can be neglected under certain circumstances if exactly these basic values are exceptionally low. With negative basic values the information of the ratio is often also non existent or cannot be interpreted meaningfully.

The following article of the series Budgeting and Controlling will regard the background and the ways of calculating and interpreting the ratio ROS in more detail.

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