BUDGETING AND CONTROLLING (PART 24): ROX-RATIOS: ROI

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The ratio ROI (Return on Investment) together with the ratio ROE (Return on Equity) is the best known ratio of a multitude of ROX-ratios.

As described in the previous articles of the series Budgeting and Controlling (BTV unternehmen 2-2005 und 3-2005) the return or profitability resp of enterprises shall be presented with the support of ROX-ratios. The so-called ROX-ratios each present the return (R) or the profit form the profit and loss account resp in relation to (on = O) a certain impacting factor X.

In the case of the ratio ROI, typically, the profit of the enterprise plus interest paid is presented in relation to the total capital employed in the enterprise.

In addition to the profit from the profit and loss account, the interest paid that was already deducted in the framework of the determination of profit or loss resp, is therefore usually added on again in the compilation of the ratio ROI.

The consideration behind adding interest paid on again, can be derived from the fact that with the ratio ROI the profitability of the enterprise or the profitability of the total capital employed in the enterprise shall be presented. No matter how the capital structure of the enterprise is, it bears no relation to the effects of the use of own or outside capital on interest paid and therefore on the result situation of the enterprise.

So, the profit (plus interest) used for compiling the ratio ROI represents a profit before deducting interest paid.

It depends mainly on the information that is to be gained from the ratio, whether the basis for calculating the ratio ROI is the result of the ordinary business activity (EBT) – which means profit before tax – or the profit for the year – which means profit after tax.

If the profitability of the business activity itself is to be reviewed, no matter what the fiscal situation of the enterprise is like, normally the profit from ordinary business activities (EBT) is used as the basis for calculating the ratio.

In this case, the effect of the legal form of the commercial entity or of the location of the enterprise with respect to the fiscal situation is not taken into account.

If, however, an international review or an international comparison resp is to be carried out, or should the fiscal effects of differing legal forms be incorporated into the considerations, then normally the profit for the year which means profit after tax is used for calculating the ratio ROI, instead of the profit from ordinary business activities (EBT).

The ratio ROI (Return on Investment) sets the profit of the enterprise in comparison to the total capital employed in the enterprise.

When incorporating the total capital employed it must be taken into account if the ratio is calculated based on the total capital employed from the opening balance sheet only, or if the development of the total capital in the course of the business year is to be incorporated into the calculation of the ratio.

If the development of the total capital in the course of time is taken into account, then in the simplest case, the average of the opening balance sheet and the closing balance sheet is determined to compile the average amount of total capital employed in the company. In case of greater fluctuations during the year quarterly or monthly values might be incorporated into the calculation of the average.

The following formula is used for calculating the ratio ROI, expressed in a percentage value.

$$\text{ROI} = \frac{\text{Profit + Interest}}{\text{(Average) Total capital}} \times 100$$

The crucial information the ratio ROI provides is the profitability of the total capital employed in the company which means how much profit can be achieved with the total capital employed in the company, no matter what the capital structure of the enterprise is like.

Therefore, the ratio ROI presents the return of the total capital employed in the company. Profitability of the enterprise rises if profit rises with constant capital employed. Profitability also rises if the profit situation of the enterprise remains constant and, in the course of time, less capital must be employed to attain this profit.

In the following articles of the series Budgeting and Controlling the backgrounds and the methods of calculating and interpreting further ROX-ratios will be dealt with in more detail.

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