BUDGETING AND CONTROLLING (PART 26): ROX-RATIOS: ROS

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The final article of the series Budgeting and Controlling deals with the ratio ROS (Return on Sales).

Whereas the ratios ROI (Return on Investment) and ROE (Return on Equity) which were described in the two previous articles, demonstrated the return or profitability of enterprises by comparing the profit of the profit and loss account to values of the balance sheet (total capital or own capital resp), for the determination of the ratio ROS merely values of the profit and loss account are considered.

In the ratio ROS the result (profit or loss resp) from the profit and loss account is set against the turnover from the profit and loss account. The main information of the ratio thus is the relation of the profit of the enterprise compared to the turnover or how much of the turnover remains as profit resp.

The ratio ROS is often presented together with further ratios which means either together with the ratios ROI or ROE or, if the ratio ROS is interpreted as price margin, together with the ratios minimum turnover and volume range.

Depending on the respective exact statement that is desired, or depending on the framework of presenting the ratio ROS (together with further ROX-ratios or alternatively, under the aspect of price margin in relation to volume range and minimum turnover), the profit is either determined before or after tax or before or after deducting interest to calculate the ratio ROS.

If the ratio ROS is presented together or in relation resp to the ratios ROI and ROE the formulas for the individual calculation of the ratios should always take the same profit items as a basis for determining the ratios (either profit before or after tax) as otherwise the direct relation between the ratios ROI, ROE and ROS is not ensured and thus a common interpretation is not warranted right from the start.

If through the ratio ROS, however, the price margin of an enterprise is to be presented, the profit before tax should be used as a basis for the calculation of the ratio, as the taxes on income when used with profit after tax become effective in the computational formula like fixed costs and thus, adulterate the meaning of the ratio.

Apart from using profit before or after tax, incorporating profit before or after deducting interest depends on the desired information of the ratio – as an individual ratio or in relation to the other ratios that are presented together.

If several ratios are presented together it must be taken into consideration that the ratio ROI is compiled based on profit before deducting interest, the ratio ROE, however, based on profit after deduction of interest. If, in this relation the ratio ROS is used for calculating, together with a further ratio – the ratio for the rate of turnover – the ratio ROI, the ratio ROS must be calculated with profit before interest to be able to compile the ratio ROI correctly in future.

Should the ratio ROS, however, be used for presenting the price margin of the enterprise, the profit after deduction of interest must be used as a basis for the calculation of the ratio, as, if only profit before deducting interest would be used, the meaning of the price margin would not be available (the potentially possible reduction of the sales price with a paralell covering of the total costs of the enterprise, meaning inclusive of interest).

The basic formula for the calculation of the ratio ROS expressed in a percentage value is the following:

$$\text{ROS} = \frac{\text{Profit (+ interest)}}{\text{Sales (Turnover)}} \times 100$$

Depending on the desired information of the ratio ROS, this basic formula, as described above, must incorporate profit before or after considering tax or interest in order to enable a correct information of the ratio.

Based on the various ways of calculating the ratio ROS that were presented, in the application the way of its calculation has to be questioned in the individual case, in order to interpret the results correctly.

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