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Profit and loss ratios

The important ratios that arise from the Trading Account and Profit and Loss Statement include gross profit margin, net profit margin, materials to sales, labour to sales, overhead expenses to sales and stock turnover rate.

Gross profit margin

This ratio is the percentage of sales dollars left after subtracting the cost of goods sold (cost of sales) from the net sales figure. It measures the percentage of sales dollars remaining (after meeting the cost of goods sold) to pay the overhead expenses of the business. Comparison of your business ratios to those of similar businesses will reveal the relative strength or weakness in your business.

The gross profit rate for a manufacturing business is the difference between the value of goods sold to customers (sales) and the cost of direct materials, direct labour and factory overheads incurred in making these goods (cost of goods) sold. For example:

$$\begin{aligned}
 \text{Gross profit margin} &= \frac{\text{Gross profit} \times 100}{\text{Sales}} \\
 &= \frac{\$175,000 \times 100}{\$600,000} \\
 &= 29.2\%
 \end{aligned}$$

This means, in this case, that for every \$1.00 of sales, the business is making 29.2 cents gross profit to cover overhead expenses and provide for a profit.

Net profit ratio

The net operating profit rate indicates how much money is left after deducting all direct and overhead expenses. This ratio is the percentage of sales dollars left after subtracting the cost of sales and all other expenses except tax. It provides a good opportunity to compare your business's return on its sales with the performance of other businesses in your industry. For example:

$$\begin{aligned}
 \text{Net profit rate} &= \frac{\text{Net profit before tax} \times 100}{\text{Sales}} \\
 &= \frac{\$50,000 \times 100}{\$600,000} \\
 &= 8.33\%
 \end{aligned}$$

Net profit rate = Net profit, which in this case means that for every \$1.00 of sales, the business is making a net profit of 8.33 cents



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Material - sales

This ratio indicates how much of the sales dollar is consumed by the cost of direct materials. For example:

$$\begin{aligned}
 \text{Material sales} &= \frac{\text{Direct materials} \times 100}{\text{Sales}} \\
 &= \frac{\$269,000 \times 100}{\$600,000} \\
 &= 44.8\%
 \end{aligned}$$

In this case 44.8 cents of every \$1.00 sale will be consumed by the cost of direct materials.

Labour – sales

This ratio indicates how much of the sales dollar will be spent in direct labour. For example:

$$\begin{aligned}
 \text{Labour sales} &= \frac{\text{Direct labour} \times 100}{\text{Sales}} \\
 &= \frac{\$130,000 \times 100}{\$600,000} \\
 &= 21.6\%
 \end{aligned}$$

In this case 21.6 cents of every \$1.00 sale will be spent on direct labour.

Overhead expense – sales

This ratio indicates how much of the sales dollar will be used for non-factory overhead expenses. For example:

$$\begin{aligned}
 \text{Overhead expense sales} &= \frac{\text{Overhead expense} \times 100}{\text{Sales}} \\
 &= \frac{\$125,000 \times 100}{\$600,000} \\
 &= 20.8\%
 \end{aligned}$$

In this case 20.8 cents of every \$1.00 sale will be used for non-factory overhead expenses.



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Stock turnover rate

This ratio indicates the number of times the stock in your business has turned over. The lower the rate the longer the stock is taking to turnover so funds are invested in inventory for longer periods which has an adverse effect on liquidity. For example:

$$\begin{aligned}\text{Stock turnover} &= \frac{\text{Cost of goods sold}}{0.5 \times (\text{Opening} + \text{closing stock})} \\ &= \frac{\$425,000}{0.5 \times (\$40,000 + \$26,000)} \\ &= 12.9 \text{ times}\end{aligned}$$

In this case stock is turning over almost thirteen times per year or approximately every four weeks.

Further information

The following fact sheets provide further information on these issues:

- Balance sheet ratios
- Break-even point
- Cash flows
- Financial analysis overview
- Financial ratios