Management Accounting

PRACTICAL CLASS 13

Illustration by Ana Seixas

P&L in CM Format

NOTHING TO SEE HERE... JUST A REORGANIZED P&L

You might face a slightly different P&L, useful for the purpose of the CVP analysis.

Do not Forget: Contribution Margin "includes" both manufacturing and non-manufacturing costs as long as they are **Variable!** (meaning you subtract them from sales).

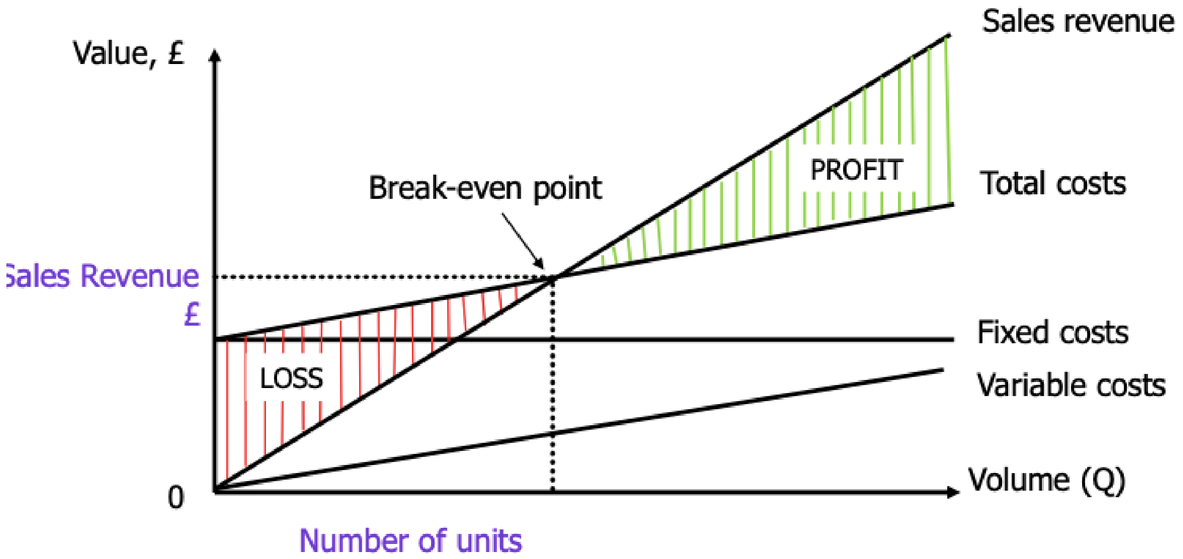
All fixed costs are recognized afterwards.

Tip: If you need to find the CM% you can simply go the P&L and divide the CM by the Sales!

P&L in CM Format	
(+)	1. Sales
(-)	2. Cost of Goods Sold (COGS) under Variable Costing
(=)	**3. Gross Profit**
(-)	4. Non-Manufacturing Variable Costs
(=)	**5. Contribution Margin**
(-)	6. Manufacturing Fixed Costs
(-)	7. Non-Manufacturing Fixed Costs
(=)	**8. Operating Profit**

CVP Analysis

HOW PROFITABILITY IS AFFECTED BY VOLUME



$$\boldsymbol{Unit\ Contribution\ Margin\ (CM_{Unit}) = P\ - VC}$$

How much does each unit contributes to profit

$$\boldsymbol{CM_{\%} = \frac{CM_{unit}}{P} * \frac{Q}{Q} = \frac{CM}{Sales\ Revenue}}$$

% of sales available to cover FC and profit

$$\boldsymbol{BEP_{Units} = \frac{FC}{P - VC}},\ \boldsymbol{BEP_{€} = BEP_{Units}\ * P}$$

Level of Sales such that Profit = 0

$$\boldsymbol{Safety\ Margin\ 1 = \frac{Sales\ - BEP}{BEP}}$$

Sales are x% above the BEP

$$\boldsymbol{Safety\ Margin\ 2 = \frac{Sales\ - BEP}{Sales}}$$

Sales may decline x% before the firm incurs into a loss

Note: You can use both units (#) or value (€) if you are consistent!

CVP Analysis

PROFIT LEVEL

Under the CVP Analysis, the Profit of a Company only depends on the volume of the sales against the BEP.

Each unit sold contributes P – VC (CM Unit) to the profit of the firm. The first X ($BEP_{\#}$) units are used to pay the FC, whereas the remaining constitute profit.

Alternatively, from the total value of sales, we know that (CM%) * Sales is divided among profit and payment of FC.

More useful formulas:

$$\pi = (\boldsymbol{Sales\ in\ units} - \boldsymbol{BEP_{Units}}) * \boldsymbol{CM_{Unit}}$$

$$\pi = \boldsymbol{X}€ * \boldsymbol{CM_{\%}} - \boldsymbol{FC}$$

$$\pi = (\boldsymbol{Sales\ revenues}\ (€) - \boldsymbol{BEP_{€}}) * \boldsymbol{CM_{\%}}$$

Exercise

31 –ALCÓOLICA COMPANY