

Illawarra Small Business Assistance

HELPFUL HINT – HOW IS BREAKEVEN CALCULATED?

A question I often get asked by small business proprietors is “how do I go about working out my breakeven?”

There are various methods but I like to think the approach using the Contribution Margin is simple and relatively easy to follow provided you have the financial information on which to base the calculations.

The theory is that a business is said to be at “breakeven” when its sales volume has reached the point where all costs have been absorbed and it is neither making a profit nor a loss.

To try and make it simple and easy to remember I adopt the following formulae for Breakeven:

$$\frac{CC}{C}$$

Where;

CC = Constant Costs, and

C = Contribution expressed in margin terms as a fraction of sales.

To go back a step, I need to explain what Contribution is. It's quite straightforward really - it's the surplus after variable costs are deducted from sales. When you look at a profit and loss statement it will often show Revenue (sales) less COGS (Cost of Goods Sold) equals Gross Profit. In that sense, Gross Profit and Contribution are similar. The difference is that in many instances accounting treatments do not include all the variable costs in determining Gross Profit, whereas with Contribution it is important to do so. This approach works on the basis that all business costs can be defined as either variable or fixed. Any expense that varies with the volume of sales is variable. On the other hand, those costs that apply regardless of whether or not the enterprise is “open” for business are clearly fixed costs (or to use another term, “constant costs”).

The Contribution is the amount available after variable costs have been deducted from total sales, and any surplus represents a “contribution” towards covering constant costs.

When the level of surplus represented by Contribution is sufficient to exactly cover the value of constant costs then breakeven has been reached.

So, let's take a look at an example:

Sales	\$ 300,000	Margin as % of sales
Variable Costs	<u>\$ 130,000</u>	0.43
Contribution	\$ 170,000	0.57
(\$170,000 divided by \$300,000 = 0.57)		
Constant (fixed) Costs	<u>\$ 70,000</u>	
Net Profit	\$ 100,000	

Breakeven = $\frac{\text{Constant Costs (divided by)}}{\text{Contribution (Margin)}}$	$\frac{CC}{C}$	
	$\frac{\$ 70,000}{0.57}$	
Breakeven =	\$ 122,807	
Proof:		
Sales @ BE	\$ 122,807	
Less: Variable Costs @ Breakeven (\$122,807 x 0.43)	\$ 52,807	
= Contribution	\$ 70,000	
Less Constant (fixed) Costs	\$ 70,000	
= Breakeven	\$ 0	

In this example, the breakeven is \$ 122,807 based on sales for the year of \$300,000 or \$ 10,234 per month or \$ 2,361 per week. The proof of this would be: Annual Constant Costs \$ 70,000 divided by 52 = \$ 1,346; divided by Contribution Margin of 0.57 = \$ 2,361 per week.

Because most business income is cyclical with swings from month to month it is useful to look at the month by month actual performance for the previous financial year and adopt this as a baseline for calculating monthly breakeven. A further refinement can be to adjust the breakeven for the corresponding month last year by an appropriate factor to reflect changes in current year sales performance as well as changes in your expenditure budget. For example, if rent has increased this year then clearly an appropriate adjustment needs to be made. This highlights the real need to formulate forward budgets using past trends as a guide overlaid with projections for sales as well as variable and constant costs.

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