Small Business Financial Fundamentals Guide:

Breakeven Analysis

BUSINESSLINK

The Breakeven Point

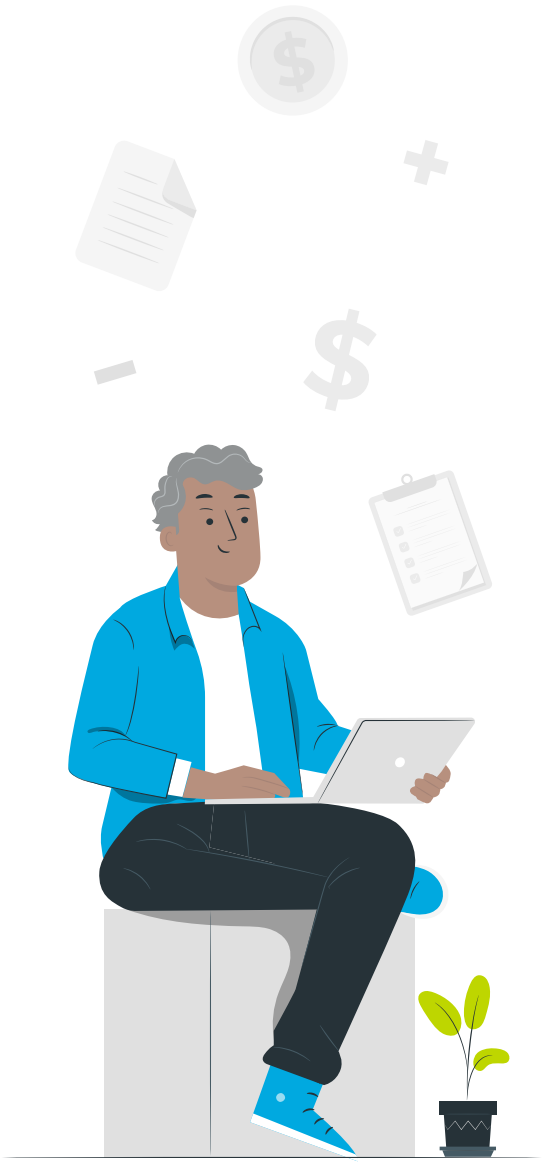
Business owners can use a breakeven calculation (also called breakeven analysis) to determine how many product or service units they need to sell at a given price point to break even. Once you know the fixed and variable costs for the product or service your business produces or a good approximation of them, you can use that information to calculate your company's Breakeven Point.

A company's Breakeven Point is the point at which its sales exactly cover its expenses. Why is determining a breakeven important? "Determining the breakeven point allows a company to determine the level of sales needed to cover all costs (fixed and variable) and start earning a profit." (CPA Canada)

To compute a company's Breakeven Point in sales volume, you need to know the values of three variables:

1. Fixed Costs

Fixed Costs are the costs that do not increase, or decrease based on the products and services sold. They are the costs your business pays whether your company is generating income from sales or not: usually rent and overhead, and sometimes salaries. Technically, Fixed Costs are those that the business would continue to pay even in the event it was to sell nothing.



2. Variable Costs

Variable Costs are costs that fluctuate in direct proportion to the volume of units produced. The best and most obvious examples are the physical Cost of Good Sold (COGS) and direct costs such as materials, products/services purchased for resale and production costs.

3. The Selling Price of the Product/Service

How to Calculate the Breakeven Point

You can use the following formula to calculate the breakeven point:

$$\frac{\text{Fixed Costs}}{\text{(Price per Unit - Variable Costs)}} = \text{Breakeven Point in Units}$$

The Breakeven Point is equal to the total Fixed Costs divided by the difference between the Unit Price and the Variable Costs. Note that in this formula, Fixed Costs are stated as a total of all overhead for the business, whereas Price per Unit and Variable Costs are stated as per unit costs—the price for each individual product or service unit sold.

An Example of Finding the Breakeven Point

Altacorp Ltd. has calculated that it has fixed costs that consist of its lease, depreciation of its assets, executive salaries, and property taxes. Those fixed costs add up to $60,000 per year. Their product is “The Widget”. Their variable costs associated with producing “The Widget” are raw material, factory labor, and sales commissions. Variable costs have been calculated to be $0.80 per unit. “The Widget” is priced at $2.00 per unit.

Given this information, we can calculate the Breakeven Point for Altacorp Ltd.’s “The Widget” product, using our formula from above:

$60,000 / ($2.00 - $0.80) = 50,000

Fixed Costs / (Price per Unit - Variable Costs) = Breakeven Point in Units

What this answer means is that Altacorp Ltd. must produce and sell 50,000 “Widgets” per year in order to cover their total expenses, both fixed and variable. At this level of sales, they will make **no profit** but will just break even.

What Happens to the Breakeven Point if Sales Change?

What if your sales change? For example, if the economy is in a recession, your sales might drop. If sales drop, then you may risk not selling enough to meet your Breakeven Point. In the example of Altacorp Ltd., you might not sell the 50,000 units necessary to break even.

In that case, you would not be able to pay all your expenses. What can you do in this situation? If you look at the Breakeven Formula, you can see that there are two solutions to this problem: you can either raise the price of your product or service or you can find ways to cut your costs, both fixed and variable.

How Cutting Costs Affects the Breakeven Point

Imagine that you find a way to cut your fixed costs by reducing your own salary by $10,000. That makes your fixed costs drop from $60,000 to $50,000. Using the same formula and holding all other variables the same, the Breakeven Point would be:

$50,000 / ($2.00 - $0.80) = 41,666

Fixed Costs / (Price per Unit - Variable Costs) = Breakeven Point in Units

Predictably, cutting your fixed costs drops your Breakeven Point. On the other hand, if you reduce your variable costs by cutting your costs of goods sold to $0.60 per unit, holding other variables the same, then your Breakeven Point becomes:

$60,000 / ($2.00 - $0.60) = 42,857

Fixed Costs / (Price per Unit - Variable Costs) = Breakeven Point in Units

From this analysis, you can see that if you can reduce the cost variables, you can lower your Breakeven Point without having to raise your price.

Relationships Between Fixed Costs, Variable Costs, Price, and Volume

As the owner of a small business, you can see that any decisions you make about pricing your product or service, the costs you incur in your business, and sales volume are interrelated. Calculating the Breakeven Point is just one component of cost-volume-profit analysis, but it's often an essential first step in establishing a sales price point that ensures profit.

Now that you know your price point, check with your competitors to see if you are aligned. Think about your capacity to produce your products/services - how many units are you capable of producing? These important numbers are a useful guide for your start-up planning.