

# How to Calculate Your Break-Even Point and How to Use It

By Bob Normand

**SUMMARY: Break-Even is the point where variable and fixed costs have all been recovered and profit begins. The company Income Statement provides all the information needed to calculate Break-Even. Break-Even can be calculated for any time period and for any group of revenue streams where fixed expenses can be associated with reasonable accuracy. The Break-Even formula can be used as a model to estimate the financial effect of major business decisions.**

## **Definition of Break-Even**

The Break-Even point in sales volume is defined as:

*“That point in sales volume, or revenue, where direct costs have been recovered, fixed overhead expenses have been absorbed and where profit begins”*

We can relate Break-Even Point to the information in our financial statements, particularly the Income Statement. The Income Statement should be organized into the following sections:

### 1. Revenue

The sum of all sales and other income net of returns and sales commissions.

### 2. Cost of Sales (Cost of Goods Sold)

The cost of purchases that are resold (merchandise) and/or raw materials plus the costs of labor to manufacture the product or convert it or install it or deliver it or construct it on site. These costs are also called *direct* or *variable* costs.

### 3. General & Administrative Costs (Overhead)

These are all the costs not directly, or easily, related to sales volume such as Advertising, Bank Charges, Computer Expenses, Insurance, Office Wages & Salaries, Officer's Compensation, Telephone, Utilities, Depreciation, Interest, Taxes etc. These costs are also called *indirect* or *fixed* costs.

### 4. 1 minus 2 minus 3 = PROFIT.

Note: If your Income Statement is *not* organized in this fashion (called managerial accounting format), you need to have a session with your accountant and demand it be put into this format so you can manage the business better.

Once you have your financial statements and data in the right format, you can easily calculate Break-Even using the following formula as:

$$\text{Break-Even Point} = \text{FC}/(1-\text{VC}/\text{S})$$

Where:

FC = Fixed Costs  
VC = Variable Costs  
S = Sales

For illustrative purposes, let's look at an example company, Acme Specialties, that has the following data from its Income Statement:

Sales = \$1,000,000

Cost of Goods Sold = \$710,000

General & Admin = \$215,000

Acme's Break-Even Point (*during the period indicated by the income statement*) is:

Break-Even Point =  $FC / (1 - VC/S)$  and

$VC/S = 710,000 / 1,000,000 = .71$

$1 - VC/S = 1 - .71 = .29$

$FC / (1 - VC/S) = 215,000 / .29 = \boxed{\$741,379} = \text{BEP}$

And the company operated at  $\$1,000,000 / 741,379 = 135\%$  of Break-Even during the period.

**Break-Even can be calculated for:**

A Company  
A Division  
A Location  
A Department  
A Store  
A Product  
A Product Line  
A Service  
A Day  
A Week  
A Month  
A Year (or any other time period)

This is assuming, of course, that fixed costs can be accurately or, at least, reasonably associated with the organizers above.

**Using Break-Even in Modeling**

The Break-Even formula can be used as a model to estimate the effect of major decisions on the financial status of the business such as adding a new location, making a capital investment, dropping

or adding a product line. Simply estimate the changes in fixed and variable costs (and sales) that result from the decision and plug them into the Break-Even formula for your company. This can also help you set goals for the new operation.

In fact, *ANY* significant contemplated change in your cost structure resulting from a proposed decision can be modeled to determine the effect on the company's financial results *before the decision is made*. You will know what you face and are required to overcome *ahead of time*. You will be able to set goals based on financial facts rather than intuition only.

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