

## HIGH/LOW METHOD OF ESTIMATING COST/REVENUE /

$$\text{Total Cost} = \text{Fixed Cost} + (\text{Variable Cost} * \text{Activity level})$$

$$\frac{\text{High Cost} - \text{Low Cost}}{\text{High Activity} - \text{Low Activity}} = \text{Variable Cost}$$

Substitute Low Cost and Low Activity in cost equation as shown:

$$\text{Low Cost} = \text{FC} + (\text{VC} * \text{Low Activity})$$

This will determine FC. Now you can put a given activity level into the equation and determine total cost.

## COST-VOLUME-PROFIT ANALYSIS (CVP) /

$$\text{SP} - \text{VC} = \text{CM}$$

$$\text{FC}/\text{CM} = \text{BREAKEVEN units}$$

$$\text{CM}/\text{SP} = \text{CM ratio}$$

$$\text{FC}/\text{CM ratio} = \text{BREAKEVEN \$}$$

$$\text{FC} + \text{P}/\text{CM} = \text{units to reach target profit}$$

$$\text{FC} + [\text{ATP}/(1 - \text{tax \%})]/\text{CM} = \text{units to reach after tax target profit}$$

<b>Variable Cost Income Statement</b>	=	<b>Sales \$</b>
		<u>-VC</u>
		<b>CM</b>
		<u>- FC</u>
		<b>before tax profit - BTP</b>
		<u>- Tax</u>
		<b>After tax profit - ATP</b>

$$\text{CA}/\text{CL} = \text{Current Ratio}$$

$$\text{Assets} + \text{short term investments} + \text{receivables}/\text{CL} = \text{Quick Ratio}$$

$$\text{Sales}/\text{Average Accounts Receivable} (\text{beginning A/R} + \text{ending A/R}/2) = \text{A/R turnover}$$

$$365/\text{A/R turnover} = \text{A/R Turnover in Days}$$

Cost of Goods/ Ave Inventory (*beg. Inventory + end Inventory/ 2*) = Inventory turnover  
 365/ Inventory turnover = Inventory Turnover in Days

A/R Turnover in Days + Inventory Turnover in Days = Length of Operating Cycle

The operating cycle is the time it take to buy inventory, sell it on credit and collect the cash from the sale. It is a combination of the inventory turnover in days plus the accounts receivable turnover in days.

Cost of Goods Sold/Average Inventory = Inventory Turnover

365/Inventory Turnover = Days it takes to sell inventory

Sales/ Average Accounts Receivable = A/R turnover

365/ A/R turnover = Days it takes to collect an accounts receivable.

Therefore: Days it takes to sell inventory + Days it takes to collect cash from the sale of inventory = The length of the operating cycle.

The operating cycle is defined as the length of time it takes cash to become cash again when it is invested in inventory.

WalMart has a very small operating cycle but furniture stores have a much longer operating cycle. The shorter the cycle the better the use of cash.