**Budgets and What-If Analysis**

# Introduction

A **budget** is an estimate of income, expenses, and profit for a given period, most often a year. Businesses use budgets to support almost every major business decision. To build an accurate budget that includes assumption values to support management decision making is one of the added values to the company.

**What-If Analysis**, also called **sensitive analysis**, is a process in which you use various assumption values to predict and analyze the impact of these assumptions on income, expenses, and profit.

# Objectives

* Describe a budget and how it is used.
* Identify assumption data on a budget.
* Define What-If Analysis and how it is used.
* Build formulas to create an accurate and flexible budget in Excel.
* Use relative versus absolute cell addresses to support What-If Analysis in Excel.
* Format a range of cells in Excel using the Format Painter.
* Format a budget in Excel to protect calculated information.

# Key Points

* The major goal of a budget is to project future revenues, expenses, and profit.
* Projecting an accurate budget for a brand-new business can be challenging because no historical data exists as a starting point.
* Enter all formulas with cell addresses versus raw numbers to maintain their ability to automatically recalculate.
* Use functions such as SUM to create shorter formulas.
* A double underline indicates the value is a grand total.
* For each business in the distribution chain—manufacturer, distributor, and retailer—COGS (Cost of Goods Sold) is a significant expense item in the budget.
* Gross profit is calculated as Total Income minus COGS.
* Profit Before Taxes is calculated as Gross Profit minus Expenses.
* Almost all-important business decision involves an analysis of the budget.
* A relative cell address (B3) or absolute cell address ($B$3) only affects how the formula is copied.