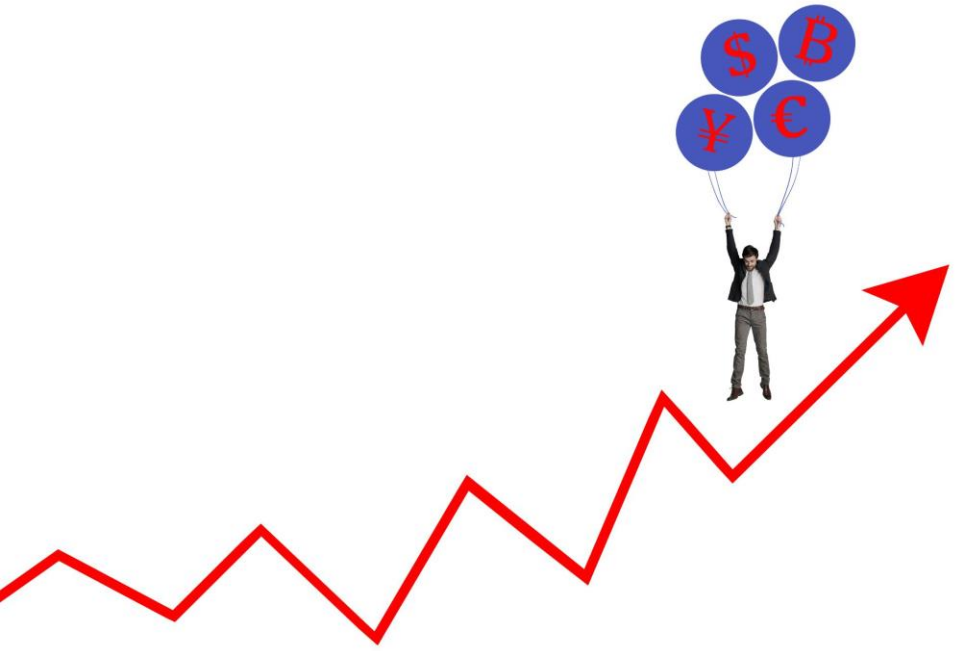
KEY FINANCIAL FORMULAS IN CIPS LEVEL 4

YOUNG
PROCUREMENT

timyoungmcips@outlook.com

Introduction



Welcome to this presentation on **Key Financial Formulas in CIPS Level 4**.

Understanding these essential financial concepts is crucial for making informed decisions in procurement and supply processes. Throughout this presentation, we will explore various financial tools and techniques that can help you analyse costs, set pricing strategies, and assess profitability.

By mastering these concepts, you will be better equipped to navigate the financial aspects of procurement and supply chain management.

Costing Methods

Understanding Absorption Costing

- Absorption costing includes all manufacturing costs in product costs.
- It combines fixed and variable costs for a comprehensive view.
- Example: A company producing 1,000 units incurs $10,000 in fixed costs.

Absorption costing, also known as full costing, includes all manufacturing costs, both fixed and variable, when calculating product costs. This method provides a complete understanding of the total production costs. For instance, if a company incurs $10,000 in fixed costs while producing 1,000 units, each unit would absorb part of that fixed cost, affecting pricing and profit analysis.

Activity-Based Costing Explained

- Activity-Based Costing (ABC) is an accounting method that allocates costs to products based on the activities they require. This method offers a more accurate view of product costs, leading to informed decision-making.
- For example, if a product requires extensive machine setups, the costs associated with those setups would be allocated specifically to that product, providing better insights into profitability.

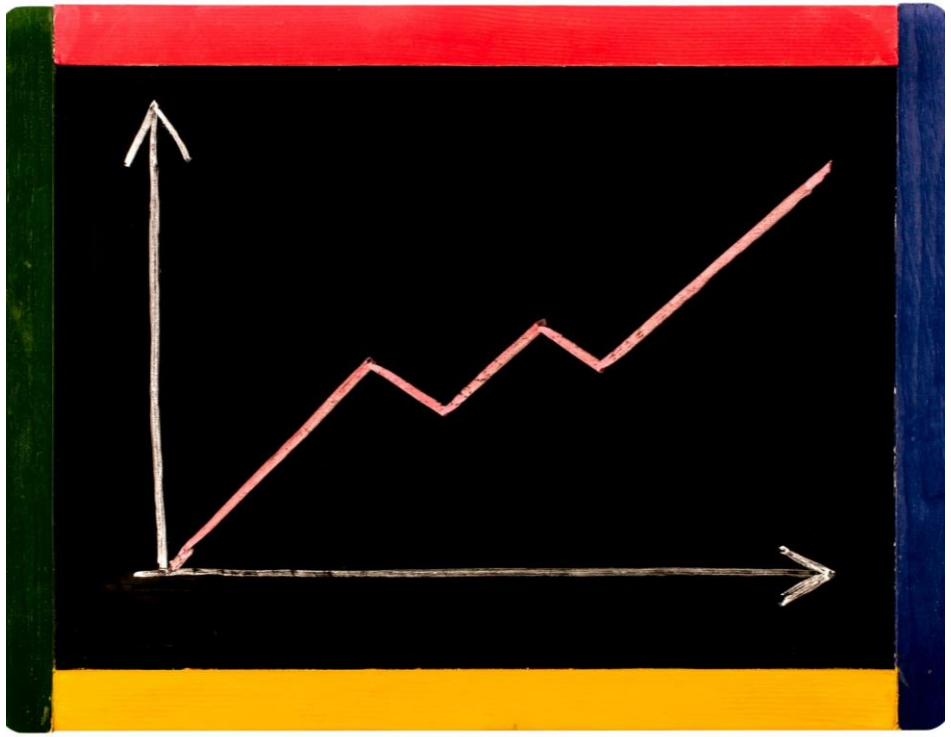
Break Even Analysis

Break Even Analysis

- Break Even Analysis is a financial tool used to determine the point at which total revenue equals total costs, resulting in neither profit nor loss. This point is known as the Break Even Point (BEP). Understanding break-even analysis helps businesses determine the minimum sales volume needed to prevent losses and assess their financial viability.
- **Importance of Break-Even Analysis**

- **Decision-Making**: It assists businesses in making informed decisions about pricing, production levels, and cost management.
- **Financial Viability**: Analysing the Break Even Point helps businesses evaluate their financial health and future profitability

Break Even Analysis



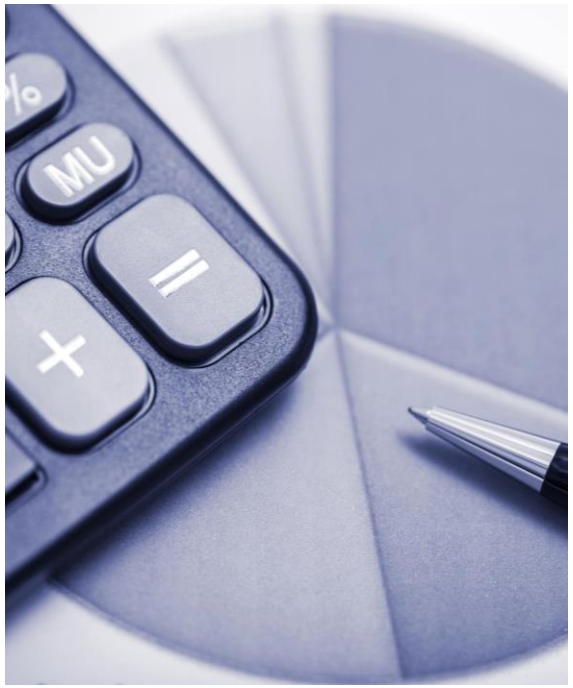
Definition of Break Even Analysis

Break Even Analysis identifies the point where total revenue equals total costs, indicating no profit or loss.

Importance of Analysis

Understanding break-even analysis helps businesses determine the minimum sales volume needed to prevent losses.

Calculating Break Even Point



Understanding BEP

The Break Even Point (BEP) determines when total revenues equal total costs, indicating no profit or loss.

BEP Formula

The formula to calculate BEP is: Fixed Costs divided by (Selling Price per Unit - Variable Cost per Unit). This helps in decision-making.

Financial Viability

Analysing the Break Even Point assists businesses in assessing their financial viability and future profitability.

Margin and Mark Up

Margin and Mark Up

Understanding Margin

Margin is the difference between sales and the cost of goods sold, expressed as a percentage. It is crucial for assessing profitability.

Understanding Mark Up

Mark Up is the amount added to the cost of goods to determine the selling price, influencing pricing strategies.

Pricing Strategies

Both margin and mark up play a vital role in developing effective pricing strategies for products and services.

Margin and Mark Up are crucial for pricing strategies. Margin refers to the difference between sales and cost of goods sold, expressed as a percentage of sales. Mark Up, on the other hand, is the amount added to the cost to determine the selling price.

Calculating Margin

Understanding Margin Calculation

Margin is calculated by subtracting the cost from the selling price and dividing by the selling price. This formula helps in assessing profitability.

Importance of Margin Percentage

The margin percentage indicates the profit made for each dollar of sales, which is critical for business sustainability. Higher margins generally mean better profitability.

Calculation

Margin can be calculated using the formula: Margin = (Selling Price - Cost) / Selling Price. This percentage indicates how much profit is made for every dollar of sales.

Calculating Mark Up

Markup Formula

The Markup formula is used to determine how much above cost price a product is sold. It helps in pricing strategy.

Selling Price vs Cost

Understanding the difference between selling price and cost is crucial for effective pricing decisions in business.

Business Insights

Calculating markup offers valuable insights into profitability and helps businesses strategize their pricing effectively.

Calculation

Mark Up is calculated using the formula: Mark Up = (Selling Price - Cost) / Cost. This provides insight into how much more than the cost price a product is sold.

Understanding Margin

- Margin is the difference between selling price and cost of goods sold.
- Expressed as a percentage of the selling price.
- Higher margin indicates better profitability.

Margin Calculation Example

- Cost of Goods Sold (COGS): £50
- Selling Price: £100
- Margin = (Selling Price - COGS) / Selling Price x 100
- To illustrate margin calculation, consider a product with a cost of goods sold of £50 and a selling price of £100. The margin is calculated as: Margin = (Selling Price - COGS) / Selling Price x 100, resulting in a margin of 50%.

Understanding Markup

- Markup is the amount added to cost to determine selling price.
- Expressed as a percentage of the cost price.
- Important for setting pricing strategies.

Markup Calculation Example

- Cost of Goods Sold (COGS): £50
- Desired Markup: 100%
- Selling Price = COGS x (1 + Markup/100)
- For example, if a product has a cost price of £50 and a desired markup of 100%, the selling price is calculated as: Selling Price = COGS x (1 + Markup/100), resulting in a selling price of £100.

Marginal Costing

Marginal Costing

Understanding Marginal Costing

Marginal costing helps businesses understand the variable costs linked to producing additional units, essential for financial analysis.

Decision-Making Support

This practice aids in making informed decisions regarding pricing strategies and production levels based on variable costs.

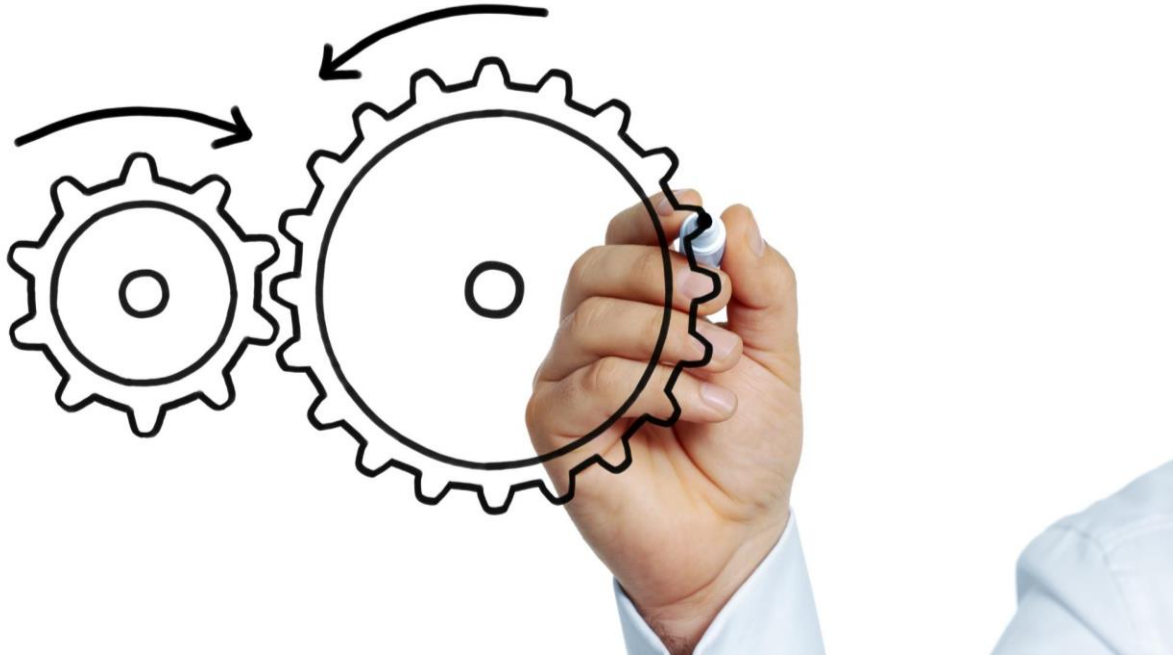
Example:

- Let's say a company produces and sells widgets. The fixed costs (such as rent, salaries, and equipment) are $10,000 per month. The variable cost per widget (including raw materials and direct labour) is $5. The selling price per widget is $15.
- **Scenario 1: Producing 1,000 Widgets**
- **Total Fixed Costs**: $10,000
- **Total Variable Costs**: $5 * 1,000 = $5,000
- **Total Costs**: $10,000 + $5,000 = $15,000
- **Total Revenue**: $15 * 1,000 = $15,000
- **Profit**: $15,000 - $15,000 = $0
- In this scenario, the company breaks even by producing and selling 1,000 widgets.

- **Scenario 2: Producing 1,500 Widgets**
- **Total Fixed Costs**: $10,000
- **Total Variable Costs**: $5 * 1,500 = $7,500
- **Total Costs**: $10,000 + $7,500 = $17,500
- **Total Revenue**: $15 * 1,500 = $22,500
- **Profit**: $22,500 - $17,500 = $5,000
- By producing and selling 1,500 widgets, the company makes a profit of $5,000.

Absorption Costing Example

- Absorption costing includes both fixed and variable manufacturing costs.
- A company producing 1,000 units incurs $10,000 in fixed costs.
- Total cost calculation helps in pricing strategies.



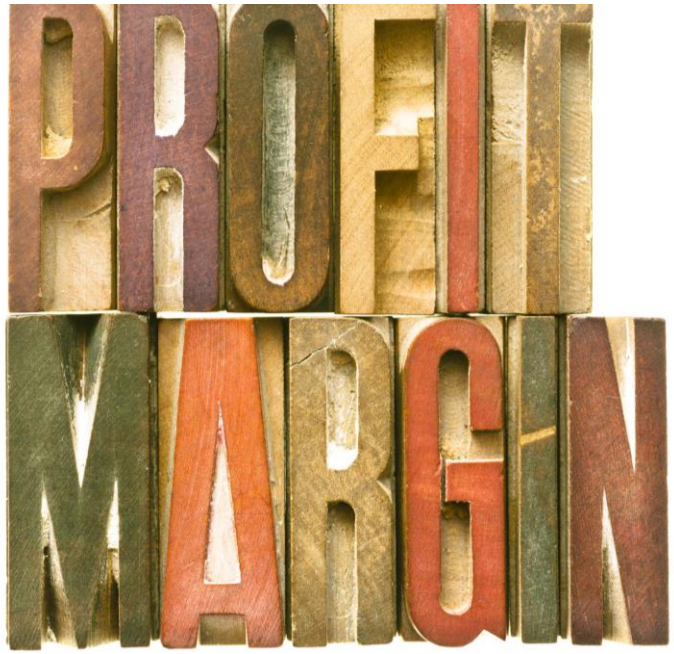
Activity-Based Costing Example

- Activity-based costing assigns costs based on specific activities.
- It improves precision in product costing and resource allocation.
- Machine setup costs can significantly impact overall costs.

Break Even Analysis Example

- Break-even analysis determines when total revenue equals total costs.
- Fixed costs are $10,000, selling price is $15, and variable cost is $5.
- The break-even point helps in assessing financial health.

Margin Calculation Example

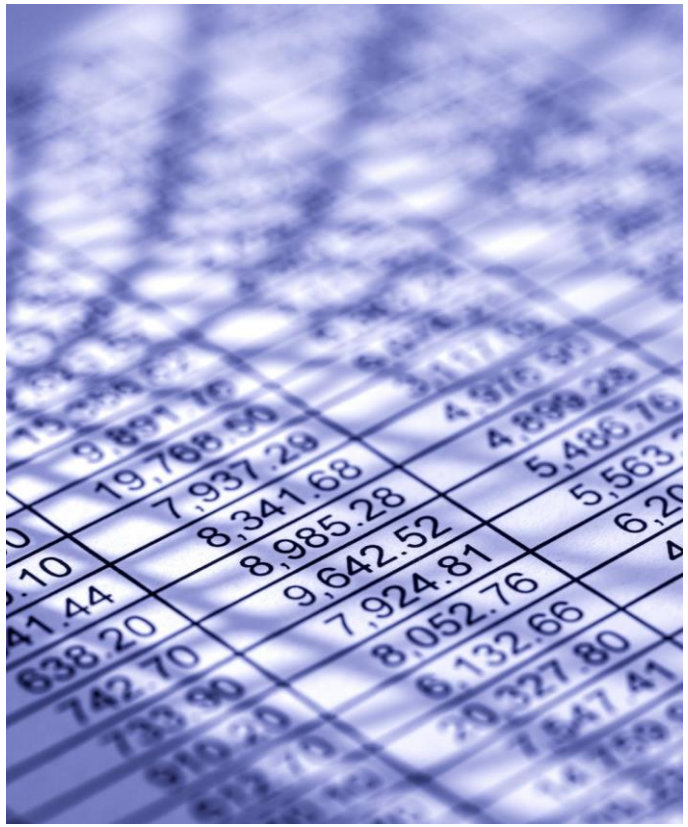


- Margin indicates the profitability of a product.
- Margin is calculated as a percentage of the selling price.
- Understanding margin helps set effective pricing strategies.

Mark Up Calculation Example

- Markup helps determine the selling price above cost.
- A desired markup of 100% on a £50 COGS gives a selling price of £100.
- Calculating markup informs pricing decisions.

Benefits of Marginal Costing



Pricing Decisions

Marginal costing aids in making informed pricing decisions by analysing variable costs and their impact on profitability.

Cost Control

It provides businesses with essential insights for effective cost control, helping to identify and manage variable costs efficiently.

Profitability Analysis

Marginal costing is crucial for profitability analysis, enabling businesses to assess the impact of variable costs on overall profits.

Price Elasticity of Demand

- Price elasticity of demand (PED) measures how the quantity demanded of a good or service changes in response to a change in its price.
- It is a crucial concept in economics that helps businesses and policymakers understand consumer behaviour and make informed decisions about pricing strategies

Types of Price Elasticity

1. **Elastic Demand**: When the absolute value of PED is greater than 1, indicating that a small change in price leads to a significant change in quantity demanded.
2. **Inelastic Demand**: When the absolute value of PED is less than 1, indicating that a change in price has a relatively small effect on the quantity demanded.
3. **Unitary Elastic Demand**: When the absolute value of PED is equal to 1, indicating that the percentage change in quantity demanded is equal to the percentage change in price.

PED

- Elastic (PED > 1 in absolute value): Consumers are sensitive to price changes.
- Inelastic (PED < 1 in absolute value): Consumers are not very sensitive to price changes.
- Unit Elastic (PED = 1 in absolute value): Changes in price lead to proportional changes in quantity demanded.

Formula for Price Elasticity of Demand:

$$\text{PED} = \frac{\%\text{ change in quantity demanded}}{\%\text{ change in price}}$$