

Principles of Accounts



Analysis and Interpretation of Final
Accounts

Class 4C...

Can You Help Semmi Chen?





Situation

Semmi has made lots of money during her singing career. She is thinking of retiring one day from singing and is looking hard at how she can invest her savings wisely.

But she wants you to help her make good investment decision. Semmi hears that investing in good companies will earn her more money. She has been recently invited to invest \$100,000 in the firm XYZ, which seems to be a promising and profitable firm.

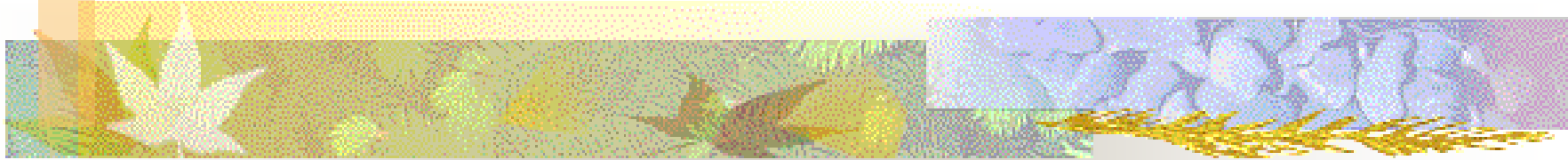
Can You Help Me?

I hear that you are an expert in preparing clear and accurate P&L Statement and Balance Sheet. Can you recommend to me whether I should invest in XYZ firm?"

XYZ's most recent financial statements are [HERE](#).



First, An Introduction to...



Financial Ratios



Financial Ratios

- Ratios show important relationships between financial figures.
- Compare the business' performance over several financial periods.
- Compare the business' performance with that of other business within the same industry.



Four Uses of Financial Ratios

- Profitability of the business
 - Gives an indication of the level of returns that the owner is getting:
 - Gross profit margin
 - Mark-up on cost
 - Net profit margin
 - Rate of return on capital



Four Uses of Financial Ratios

- Level of efficiency of business activity
 - Indicates the way the business uses its assets:
 - Rate of stockturn or Rate of stock turnover
 - Percentage of expenses to turnover



Four Uses of Financial Ratios

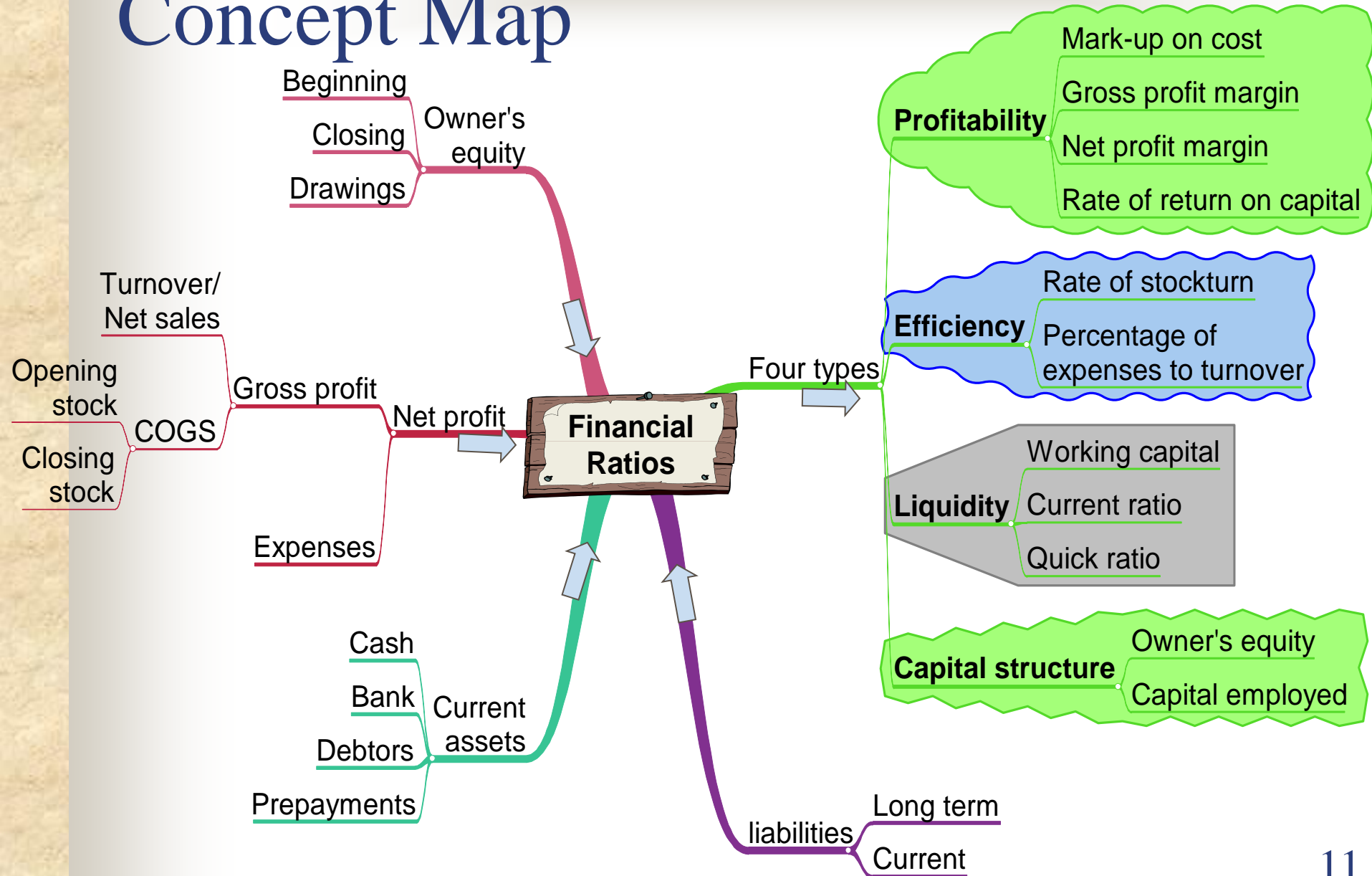
- Liquidity of the business
 - Indicates the business' ability to pay its debt and manage its working capital:
 - Working capital
 - Current ratio
 - Quick ratio



Four Uses of Financial Ratios

- Capital structure of the business
 - Show the composition of and relationship between equity capital and other long-term sources of finance eg long-term loan:
 - Owner's equity
 - Capital employed

Concept Map





Mark Up on Cost

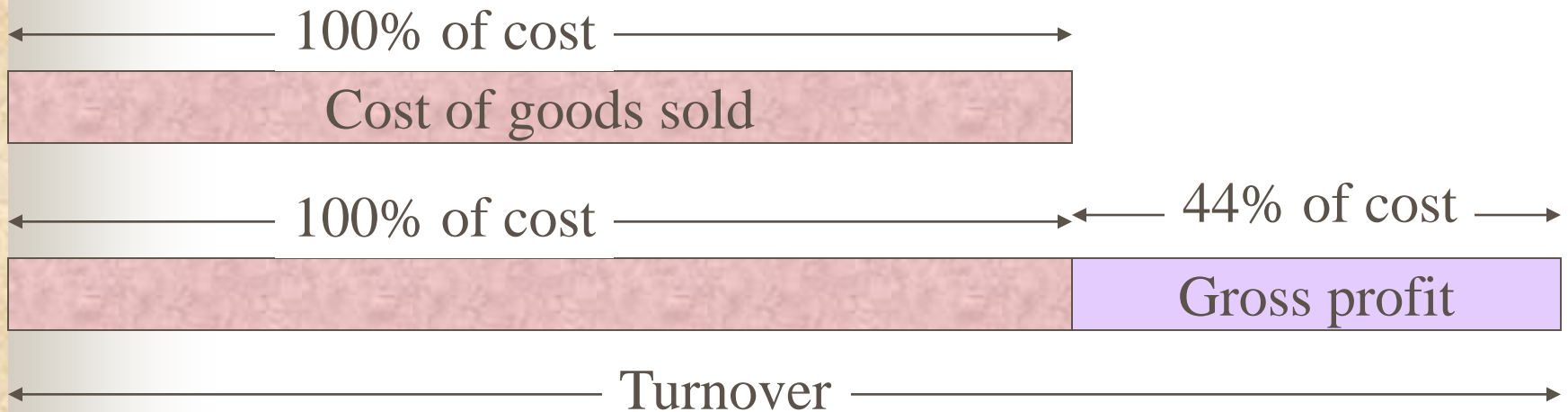
- Profit as a % of cost price

$$\text{Mark up} = \frac{\text{Gross profit}}{\text{Cost of goods sold}} \times 100$$

Application

$$\text{Mark up} = \frac{\text{Gross profit}}{\text{Cost of goods sold}} \times 100$$

$$\text{Mark up (XYZ firm)} = \frac{\$305,000}{\$695,000} \times 100 = 44\%$$





Gross Profit Margin

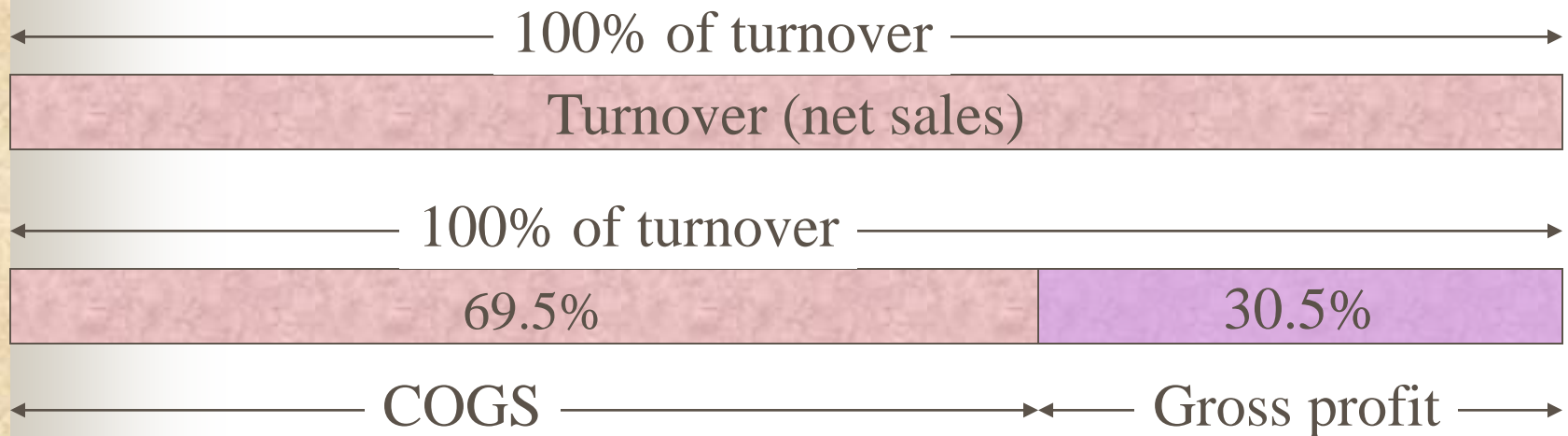
- Also known as:
 - Gross profit ratio
 - Gross margin
 - Margin
- As a % of gross profit to turnover

$$\text{Gross profit margin} = \frac{\text{Gross profit}}{\text{Turnover}} \times 100$$

Application

$$\text{Gross profit margin} = \frac{\text{Gross profit}}{\text{Turnover}} \times 100$$

$$\text{Gross profit margin} = \frac{\$305,000}{\$1,000,000} \times 100 = 30.5\%$$





Net Profit Margin

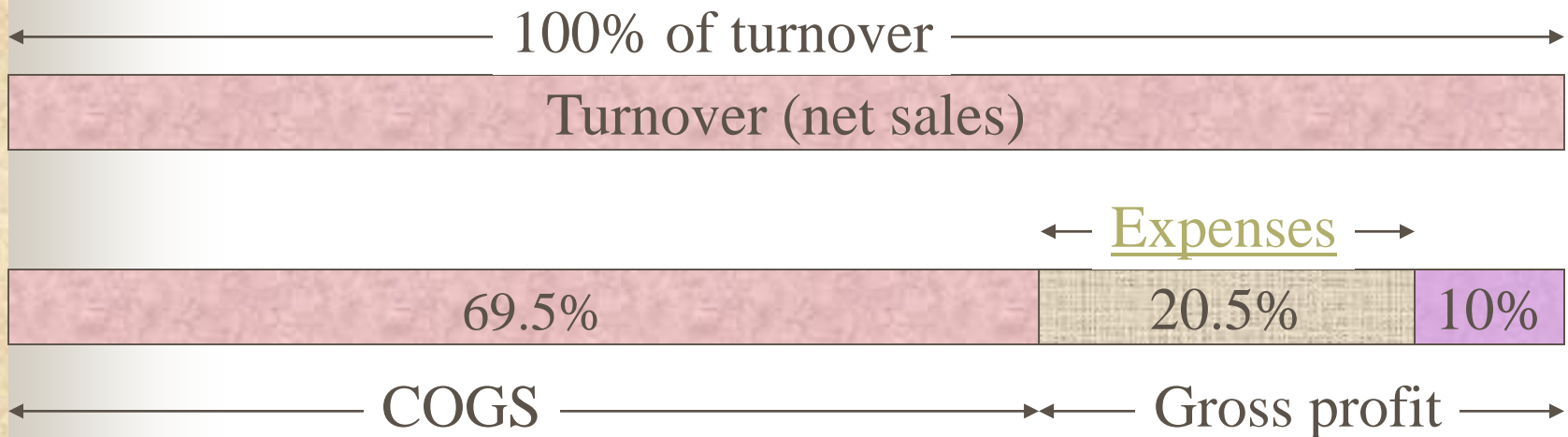
- Also known as Net profit ratio
- As a % of net profit to turnover

$$\text{Net profit margin} = \frac{\text{Net profit}}{\text{Turnover}} \times 100$$

Application

$$\text{Net profit margin} = \frac{\text{Net profit}}{\text{Turnover}} \times 100$$

$$\text{Net profit margin} = \frac{\$100,000}{\$1,000,000} \times 100 = 10\%$$





Percentage of Expenses to Turnover

- As a % of expense per dollar of sale

$$\text{Percentage of expense to turnover} = \frac{\text{Total expenses}}{\text{Turnover}} \times 100$$

Application

$$\text{Percentage of expense to turnover} = \frac{\text{Total expenses}}{\text{Turnover}} \times 100$$

XYZ' s Percentage

$$\text{of expense to turnover} = \frac{\$205,000}{\$1,000,000} \times 100 = 20.5\%$$

← 100% of turnover →

Turnover (net sales)	20.5%
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← Expenses →



Practice Time

- Mark up on cost
- Gross margin
- Net profit margin



Rate of Stockturn

- Also known as Rate of stock turnover
- No. of times in a year the average stock can be sold off



Rate of stockturn

$$\text{Rate of stockturn} = \frac{\text{Cost of goods sold}}{\text{Average stock at cost price}} \times 100$$

Where:

$$\text{Average stock at cost price} = \frac{1}{2} (\text{opening stock} + \text{closing stock})$$



Application

Average stock at cost price = $\frac{1}{2}$ (opening stock + closing stock)

XYZ's average stock = $\frac{1}{2}$ (\$200,000 + \$190,000) = \$195,000

XYZ's

Rate of stockturn = $\frac{\$695,000}{\$195,000} = 3.56$ times

Application(cont...)

XYZ's

$$\text{Rate of stockturn} = \frac{\$695,000}{\$195,000} = 3.56 \text{ times}$$



Average stock
at cost price



Rate of Stockturn — another formula

- Calculating rate of stockturn based on the selling price of goods sold:

$$\text{Rate of stockturn} = \frac{\text{Turnover}}{\text{Average stock at selling price}} \times 100$$

Summary I

Trading & Profit & Loss	
Beg Stock	Turnover
Net Purchases	(Net Sales)
Ending Stock	
COGS	
GP c/d	
=====	
Total Expenses	GP b/d
NP c/d	
=====	
	NP b/d

$$\text{Mark - up on cost} = \frac{\text{GP}}{\text{COGS}} \times 100$$

$$\text{GP margin} = \frac{\text{GP}}{\text{Turnover}} \times 100$$

$$\text{NP margin} = \frac{\text{NP}}{\text{Turnover}} \times 100$$

$$\text{Rate of stockturn} = \frac{\text{COGS}}{\text{Average stock}}$$

$$\text{\% of expenses to turnover} = \frac{\text{Total expenses}}{\text{Turnover}} \times 100$$



Working Capital

- Amount of capital used to meet the day-to-day expenses of running a business.

Working capital = Current assets - Current liabilities



Think...

- Is working capital of \$100,000 adequate or \$1,000,000 be adequate or too much?
- How can we determine how many times current assets are available to pay current liabilities?



Working Capital Ratio

- Indicates the business ability to pay its bills
- Also known as Current ratio

$$\text{Working capital ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

Application

$$\text{Working capital ratio} = \frac{\text{Current assets}}{\text{Current liabilities}}$$

XYZ's

$$\text{Working capital ratio} = \frac{\$320,000}{\$100,000} = 3.2 \text{ times}$$

Current liabilities

1x	1x	1x	0.2x
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Current assets



Quick Ratio

- Also known as:
 - Liquid ratio
 - Acid test ratio

$$\text{Quick ratio} = \frac{\text{Current assets} - \text{Stock} - \text{Prepayment s}}{\text{Current liabilities}}$$

Application

$$\text{Quick ratio} = \frac{\text{Current assets} - \text{Stock} - \text{Prepayments}}{\text{Current liabilities}}$$

XYZ's

$$\text{Quick ratio} = \frac{\$320,000 - \$200,000 - \$10,000}{\$100,000} = 1.1 \text{ times}$$

Current liabilities



Why do we exclude stock & prepayments from current assets in calculating quick ratio?

Owner's Equity

- Also known as Owner's capital

Owner's equity = Assets - Liabilities

or

Owner's equity = Capital at beginning of period +
Net profit - Drawing + Additional capital

What's XYZ's Owner's equity?

\$1,300,000



Capital Employed (Net Worth)

- Is the effective amount of money actually being used in a business, regardless to whom it belongs

Capital employed = Owner's equity + Long - term liabilities

XYZ's

Capital employed = \$1,300,000 + \$20,000 = \$1,320,000



Rate of Return on Capital

- Is the net profit as a % of capital at the beginning of the period

$$\text{Rate of return on capital} = \frac{\text{Net profit}}{\text{Capital}} \times 100$$

XYZ' s

$$\text{Rate of return on capital} = \frac{\$100,000}{\$1,210,000} \times 100 = 8.26\%$$

Summary II

Balance Sheet	
Fixed Assets	Beg Capital
	Net Profit
	Ending Cap
<u>Current Assets:</u>	<u>Liabilities:</u>
Cash	Long-term
Bank	Current
Debtors	
Stock	
Prepayments	

$$WC = CA - CL$$

$$WC \text{ ratio} = \frac{CA}{CL}$$

$$\text{Quick ratio} = \frac{C + B + D}{CL}$$

$$\text{Cap} = FA + CA - \text{Liab}$$

$$\text{Cap employed} = \text{Cap} + \text{LTL}$$

Rate of return

$$\text{on cap} = \frac{\text{Net profit}}{\text{Cap}} \times 100$$



Practice Time

- Effects of transactions on
 - Working capital
 - Owner's capital
 - Capital employed



Stock Valuation

- Every business will carry out a physical stock-take ie. count the units of goods NOT sold
- For some firms, physical stock-take is important because:
 - Closing stock may be a main component of current assets. Incorrect valuation will affect the true and fair value of assets of the business.



Stock valuation (cont...)

- Incorrect valuation will affect the cost of goods sold, in turn affecting the gross profit and net profit.
- Since the closing stock of the current year is the opening stock of the subsequent year, incorrect valuation will not only affect the current year profit and value of assets but also the profit of the subsequent year.



Basis of Stock Valuation

- Cost or net realisable value (NRV), whichever is LOWER
- Cost = purchase price + ALL other expenses incurred in bringing the goods to the present location
- Net realisable value = amount received from the sale of the stock after deducting all expenses that will be incurred in selling the goods

Concept of Conservatism

- Closing stock is valued at the LOWER of cost or NRV
- If closing stock at cost is \$50,000 and at NRV is \$45,000, what is the appropriate closing stock value? Answer: \$45,000. This adheres to the concept of conservatism.

\$45,000



Stock-taking and Balance Sheet Date

- Stock-taking is time consuming and usually takes a few days to complete
- The work may be carried out before or after Balance Sheet date
- Meanwhile, business as usual
- Need to make adjustments to arrive at the value of stock on Balance Sheet date

Before Balance Sheet Date

Go to question



28 December 2002

Balance Sheet Date

31 December 2002

\$12,345

- add purchases
- less sales
- add returns inwards
- less returns outwards

THE END

