

COST OF SALES & INVENTORIES

The **Cost of Sales (COS)** is a key figure in the Statement of Profit or Loss as it allows us to find the **Gross Profit (GP)**. Cost of sales is essentially the **basic price paid** for all goods which are sold, before any general overheads or administrative costs are taken into account. Cost of sales **includes all conversion costs**, such as direct labour and material costs, production line wages and production overheads, as well as **purchasing costs**, such as import duties.

$$\text{Revenue} - \text{Cost of Sales} = \text{Gross Profit}$$

To calculate the cost of sales, we must take into account any goods held in inventory at the start of the year, by **adding opening inventories** to purchases in the year. Any goods which are unsold at the end of the reporting period are held in the inventory, but the cost of these goods should be carried forward and matched against future revenue. Therefore, the closing inventory should **not** be included in the costs of sales.

REMEMBER: under the accruals concept, we should recognise the sales and related costs in the relevant accounting period only.

Carriage is the cost of transporting any purchased goods from the supplier to the purchaser (this is equivalent to postage and packaging costs). This is counted as a purchasing cost and is therefore included in the cost of sales figure.

CARRIAGE OUTWARDS	Goods are going out of the business. Distribution cost → deduct from gross profit in the SPL.
CARRIAGE INWARDS	Goods are coming into the business. Purchase expense → add to cost of sales in the SPL.

We therefore get the following equation:

$$\text{Cost of Sales} = \text{Opening Inventory} + \text{Purchases} + \text{Carriage Inwards} - \text{Closing Inventory}$$

The opening inventory is an **expense** in the SPL; the closing inventory is a current asset (as it is something that will turn into cash in the near future) on the SFP. We recognise these with the following double entries:

OPENING INVENTORY	DR Cost of Sales CR Inventory
CLOSING INVENTORY	DR Inventory (SFP) CR Cost of Sales (SPL)

INVENTORY DRAWINGS (INVENTORY TAKEN BY OWNER)	DR Drawings CR Cost of Sales
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SERVICE BASED BUSINESSES

Businesses which provide services instead of selling products calculate their cost of sales in a different way:

- 1) **Direct labour and related costs** – e.g. cost per hour of people working on the project, direct legal costs of securing the contract
- 2) **Materials used** – e.g. printing costs, cost of travel
- 3) **Sales commission** – e.g. where a business pays a commission to staff for securing work from a customer

Projects will often measure the work in progress (WIP) when it comes to valuing a project that has been started, but not yet fulfilled at the end of an accounting period. The WIP is the number of billable hours already worked on a project (e.g. project value), and so is calculated on time and expenses incurred rather than budgeted hours.

Chapter 7: Cost of sales, and inventories

Questions: 1 – 3, 10, 11, 26, 36, 37

QUESTION
BANK

INVENTORIES

International Accounting Standard (IAS) 2 provides the required accounting treatment for inventories. Inventories can include **raw materials**, **work in progress** and **finished goods**. At the end of each reporting period, a stock count is taken to determine the total number of items in the closing inventory.

Sometimes companies may struggle to shift inventory or inventory may become damaged, so it may be sold at a loss meaning that the value of stock will need to be written down (reduced) to the net realisable value (which could be nothing).

Inventory is valued at the LOWER of **Cost** and **Net Realisable Value** (NRV):

COST		NRV
Original purchase costs	LOWER OF:	Expected selling price (less: selling costs)

Please note that each individual item of inventory needs to be valued at the lower of cost and NRV. This is generally done by grouping similar products, as shown in the example below. As inventory is held at the lower of cost and NRV, no inventory write-offs should be required (NRV may be £0).

EXAMPLE

CLOSING INVENTORY VALUATION

QUESTION

At the recent year-end stock count, ABC Ltd.'s inventories are as follows.

What should be stated as closing inventory on the SFP?

	Direct Cost (material & labour) £	Production Overheads £	Expected selling costs £	Expected selling price £
Product A	4,765	1,000	140	5,999
Product B	1,200	750	75	2,000
Product C	9,675	5,125	195	15,795

ANSWER

Step 1 – Work out the NRV and cost for each of the three products. The cost will be the direct costs plus any direct overheads (i.e. include the production overheads). The NRV is the selling price less the selling costs.

Step 2 – Add up the lower of cost and NRV for each of the three products to give the total value of the inventory.

	Cost £	NRV £	Lower: Cost/NRV £
Product A	5,765	5,859	5,765
Product B	1,950	1,925	1,925
Product C	14,800	15,600	<u>14,800</u>
			22,490

The answer is £22,490.

If inventory has been stolen or destroyed, a company is likely to have insurance in place. To avoid the stolen purchases from distorting the gross profit we complete both of the following steps:

- 1) Remove damaged goods from **purchases** and instead include under **expenses**
- 2) Treat insurance claim as **other income** (as a cash or receivable)

What happens if cost of the item in question changes over the year?

When a product from a warehouse is sold, it is very hard to know which purchase batch it belonged to. Different types of valuation will lead to a different total inventory valuation, and thus the chosen method will have an **effect on the profit** of the company.

There are five main valuation methods, however FIFO (first in, first out) and AVCO (average cost) are the only examinable methods.

1	<p><u>STANDARD COST</u></p> <p>A 'standard' pre-determined cost is chosen to be used for all purchases. Variances between purchase price and the standard cost are written off.</p>
2	<p><u>REPLACEMENT COST</u></p> <p>The cost is assumed to be the amount it would cost to replace the item now.</p>
3	<p><u>LIFO (LAST IN, FIRST OUT)</u></p> <p>Items which have most recently been added to the inventory are the first to be used. LIFO is disallowed under the International Accounting Standards.</p>
4	<p><u>FIFO (FIRST IN, FIRST OUT)</u></p> <p>Items are used in the order in which they are received - the oldest items are used first.</p>
5	<p><u>AVCO (AVERAGE COST)</u></p> <p>The items are valued at the average cost. Every time a new purchase is made, a new average is calculated.</p>

EXAMPLE

FIFO & AVCO

QUESTION

No items were held in the opening inventory. Purchases throughout the year are as follows:

	NO. UNITS BOUGHT	NO. UNITS SOLD	COST PER UNIT (£)
Jan	40	-	5
Mar	95	-	6
Apr	-	50	-
Jul	40	-	7
Nov	-	25	-

What is the Closing Inventory valuation using FIFO and AVCO?

ANSWER

FIFO

As there is no opening inventory, the first 50 items sold in April must have come from both the 40 units bought in January and 10 of the units bought in March.

A further 25 units from the March purchase must then have been sold in November, leaving $95 - 10 - 25 = 60$ units.

This leaves 60 units in March at £6/unit and 40 units from July at £7/unit.

See overleaf.

DATE	UNITS BOUGHT	UNITS SOLD (APR)	UNITS SOLD (NOV)	ITEMS LEFT	COST PER UNIT (£)	TOTAL VALUE (£)
Jan	40	(40)	-	-	5	-
Mar	95	(10)	(25)	60	6	360
Apr	-	50	-	-	-	-
Jul	40	-	-	40	7	280
Nov	-	-	25	-	-	-
TOTAL						640

The total inventory under FIFO is £640.

AVCO

Every time a new purchase is of inventory (receipt) made; we must recalculate the average cost of each unit. This is calculated as the total value of units / total units of inventory.

In January, there are 40 units with total value of £200, which is £5/unit.

In March, a further £6 x 95 = £570 worth of purchases are made.

This gives us a total value of £770 for 40 + 95 = 135 units. Applying the formula, this is £770/135 = £5.70/unit.

The AVCO calculated of £5.70/unit is then applied to the 50 units being sold. Units sold are always deducted from total inventory units and total value as they are coming out of inventory.

We now have 85 units in inventory at a value of £485.

In July 40 more units are bought at a cost of £7/unit (value of £280) which means we need to calculate a new AVCO.

Applying the formula $(85+40) / (485+280) = £6.12/\text{unit}$.

The AVCO calculated of £6.12/unit is then applied to the 25 units being sold.

DATE	NO. UNITS BOUGHT	NO. UNITS SOLD	COST PER UNIT (£)	TOTAL UNITS	TOTAL VALUE (£)	UNIT COST (£)
Jan	40		5	40	200	5
Mar	95		6	135	770	5.70
Apr		(50)	8	85	485	
Jul	40		7	125	765	6.12
Nov		(25)	9	100	(153)	-
TOTAL					612	

The total inventory under AVCO is £612.

Chapter 7: Cost of sales, and inventories

Questions: 4 – 9, 12 – 25, 27 – 35

Chapter 14: Company financial statements under UK

Question: 3

QUESTION
BANK

MARK UP & MARGIN

It is very common to use either the mark-up or margin to determine the sales price based on the cost of the item.

The mark-up is calculated on cost; the margin on selling price. Take an item which costs £100, using a percentage of 20% (cost = £100, X = 20%):

MARGIN			
Margins are based on the SALES price			
	%	%	£
Sales	100	100	125
Cost	(100 – X)	80	100
GP	X	20	25
Sales Price = £100 / 0.8 (80%)			
= £125			

MARK-UP			
Mark-ups are based on the COST			
	%	%	£
Sales	100 + X	120	120
Cost	(100)	(100)	(100)
GP	X	20	20
Sales Price = £100 x 1.2 (120%)			
= £120			