INVENTORY COUNTS

For many PQs, the new year heralds the busy season, not least because of the number of inventory counts (or stock takes). Here Cat Hill explains how to measure inventory under IAS 2

With so many companies having a 31 December or 31 March year end, inventory counts all seem to come at once (and with Easter on 1 April 2018, this year might involve counting a lot of chocolate eggs!). Whether you are performing the count itself, or auditing the count, the next question to ask is 'how should this be measured in the financial statements?'.

Measurement: IAS 2 states that Inventory must be measured in the financial statements at the lower of cost and net realisable value, so we first need to determine each of these amounts, then decide which is lowest.

Cost: IAS 2 gives two main formulas for calculating the cost:
– First-In-First-Out (FIFO)
– Weighted Average Cost (WAC)

Companies can choose which one to use based on what's most appropriate to their business. Let's look at each one in turn:

FIFO example – Foodie Co, milk

Foodie Co buys milk to sell in its supermarket. Foodie Co is invoiced and pays once every two weeks and the milk costs for the month ended 31 December 20X7 are as follows:

Invoice date	Million Litres	Total cost $m
4 Dec	6	1.8
18 Dec	10	6.0

The month-end inventory count shows 2 million litres of milk at 31 December 20X7 and for this example we will assume there was no opening inventory.

Clearly, for a supermarket, the first milk bought will be the first milk sold. Foodie Co won't have the milk from 4 December still sitting in the fridge on 31 December, so the FIFO method is most appropriate.

That means, the milk Foodie Co DOES have on 31 December X7, must be the very last milk bought at the end of the year, and therefore was bought at the most recent price.

The last purchase had a price per litre of 60 cents ($6.0 million/10 million litres).

Therefore the 2 million litres at the year-end cost $1.2 million (2m x 60 cents).

Students often try to value inventory using the earliest prices, rather than the later ones. Just remember how awful that milk would be…

WAC example – Foodie Co, petrol

Foodie Co also has petrol stations outside its supermarkets, where it sells petrol to consumers. The petrol is delivered by tanker and poured into underground storage, where it mixes with any petrol already there. When a customer buys petrol, it is pumped out of the underground storage into the consumer's car, so there's no way of knowing if the remaining petrol in the underground storage was bought at the start of the month, or the end.

This is where WAC is appropriate. Rather than using the cost from a specific date, WAC calculates an average cost, which changes every time a purchase is made. Therefore, the cost is weighted towards the most recent prices.

Foodie Co's sales and purchases of petrol for the month ended 31 December 20X7 are as follows:

Activity	Date	Million Litres	Total cost $m
Purchase	4 Dec	6	1.8
Sale	13 Dec	4	
Purchase	18 Dec	10	6.0
Sale	28 Dec	10	

Every time there is a purchase, the WAC is re-calculated using the inventory held at that date, and every time there is a sale, the cost of the inventory sold is calculated using the most recent WAC. Again, for this example we will assume there was no opening inventory.

Event	Million Litres	Inventory in million litres	Cost of Inventory	Total cost $m	WAC per litre $ Total cost/litres	Total Inventory $m
4 Dec - Purch	6			1.8	0.30	1.8
13 Dec - Sale	(4)		4 x 0.30 =	(1.2)		
		2		0.6	0.30	0.6
18 Dec - Purch	10			6.0		
		12		6.6	0.55	6.6
28 Dec - Sale	(10)		10 x 0.55 =	(5.5)		
		2		1.1	0.55	1.1

The final inventory is 2 million litres, with a total value of $1.1m.

Consequences

A common exam question is: 'What effect do rising prices have on inventory?'

We can see that although Foodie Co had the same purchases, prices and quantity of inventory at the month end for milk and petrol, FIFO and WAC have given different results when prices are rising during the year.

The milk was valued at the very last price paid of $0.60 per litre totalling $1.2m but the oil was valued at the WAC of $0.55 per litre totalling only $1.1m.

This means, in times of rising prices, FIFO gives a higher inventory valuation than WAC.

If prices were falling, FIFO would give a lower inventory valuation than WAC, because FIFO would use the last and lowest price, whereas WAC would be an average.

Net Realisable Value

Businesses hope they can sell their inventory for more than it cost – that's how they will make profit. But if the inventory is damaged or customers don't want to buy it, the selling price might fall below the cost.

The inventory can't be recognised in the accounts for more than its worth, so IAS 2 states inventory must be measured at the lower of cost or net realisable value.

It is called net realisable value, because any costs of selling the inventory must also be deducted from the selling price; and that includes any future costs the business needs to incur before they can sell it.

NRV example – Home Co

Home Co makes bookcases. At their year-end of 31 December 20X7, they have a partly finished bookcase in their inventory. The costs incurred so far are $100. When it is finished, they can sell it for $120, but it will cost them another $30 to finish it.

This is often where students trip up.

We can't add the costs to complete of $30 onto the costs incurred of $100, because we haven't spent that money yet; that would artificially inflate the value.

Instead, we are trying to compare how much we have spent so far ($100), with what that bookcase is going to be worth to us in the future ($120 - $30 = $90).

Lower of Cost and NRV

Once we have the Cost and the NRV, we have to choose the lowest. For Home Co that's NRV of $90.

Exam tip

Comparing Cost and NRV seems easy, but don't forget to make this decision separately for each inventory line. PG

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