**ACC1701X**
**ACCOUNTING FOR DECISION MAKERS**
**SEMESTER 1 2022 / 2023**

# TUTORIAL 7 ANSWER SOLUTION

Inventory

## Understanding Financial Statements - Samsung

(a) What costing method does Samsung uses for determining its cost of inventories? If costs included in inventories have declined on average during the period, would (i) the cost of ending inventories and (ii) cost of sales, be higher or lower if FIFO is used compared to the average cost method?

Samsung uses the average cost method (Note 2.8). If costs have declined, cost of ending inventories under FIFO would be lower and cost of sales would be higher.

(b) How much did Samsung write down its ending inventories as of December 31, 2021 and December 31, 2020 from applying the lower of cost and net realizable value?

Refer to Note 8, valuation allowance of ₩1,892,979 million in 2021 and ₩1,324,492 million in 2020.

(c) Calculate and compare the inventory turnover and days' sale in inventory ratios of Samsung for the financial years of 2021 and 2020. (Use average inventory for your ratio calculations)
Note: You will need to search for and extract the necessary 2019 financial figures to calculate your ratios for 2020. (*Hint: Look for the 2020 or 2019 annual reports online)*

| *(In ₩'000,000)* | **2021** | **2020** |
|---|---|---|
| Cost of Goods Sold | 166,411,342 | 144,488,296 |
| Inventory - Beginning | 32,043,145 | 26,766,464 |
| Inventory - Ending | 41,384,404 | 32,043,145 |
| Average Inventory | 36,713,775 | 29,404,805 |
| **Inventory Turnover Ratio** | **4.53** | **4.91** |
| **Days' Sale in Inventory** | **80.53** | **74.28** |

Samsung's inventory turnover ratio was slightly higher in 2020, indicating that it is able to sell its inventory faster in 2020. It takes Samsung an average of 75 – 80 days to sell its inventory in 2020 and 2021.

(d) Calculate the operating cycle and number of days' purchases in accounts (trade) payable of Samsung for the financial years of 2021 and 2020. Use the "Cost of Sales" figure from the

Statement of Profit or Loss for calculate your ratios. How would you interpret Samsung's net operating cycle from the two ratios?

Note: You will need to search for and extract the necessary 2019 financial figures to calculate your ratios for 2020. *(Hint: You will also need to refer to some of the ratios you have calculated in Tutorial 5)*

| *(In ₩'000,000)* | **2021** | **2020** |
|---|---|---|
| Days' Sale in Inventory | 80.53 | 74.28 |
| Average Collection Period (Tutorial 5) | 46.79 | 50.94 |
| **Operating Cycle** | **127.32** | **125.22** |
| Cost of Goods Sold | 166,411,342 | 144,488,296 |
| Increase in Inventory (End - Beg) | 9,341,259 | 5,276,681 |
| Total purchases | 175,752,601 | 149,764,977 |
| Trade Payable - Beginning | 9,739,222 | 8,718,222 |
| Trade Payable - Ending | 13,453,351 | 9,739,222 |
| Average Trade Payable | 11,596,287 | 9,228,722 |
| **Number of Days' Purchases in Payable** | **24.08** | **22.49** |

For 2020 and 2021, Samsung's operating cycle is about 125 – 127 days, but its number of days' purchases in payable is only 22 – 24 days. This shows that between paying for its inventory and the cash collected from the sale of inventory, Samsung must wait about 102 – 103 days. As Samsung has a high level of current assets and is generating cash from its operations, it is likely to be able to finance this "gap" in its net operating cycle through its own internal funds without relying on much external financing.

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## SSA Textbook Tutorial Assignment:

### E 8-16 (LO5) Lower of Cost or Net Realizable Value

**1. The inventory items should be written down by the following amounts (in NT$):**

| Item | Write-Down | | |
|---|---|---|---|
| **Plywood** | **21 units at $100 ($450 – $350)** | **=** | **$ 2,100** |
| **Maple** | **23 units at $50 ($1,900 – $1,850)** | **=** | **1,150** |
| **Pine** | **38 units at $50 ($700 – $650)** | **=** | **1,900** |
| **Redwood** | **Not written down** | | **—** |
| | | | **$5,150** |

**P 8-10 (LO4) Periodic Inventory System with Different Cost Formulas**

**1. FIFO**

| | | |
|---|---|---|
| **Cases remaining** | | **4,370** |
| **Cost of goods available for sale:** | | |
| **5,100 at £10.50** | | **£ 53,550** |
| **1,210 at £12.00** | | **14,520** |
| **1,050 at £12.50** | | **13,125** |
| **2,120 at £13.00** | | **27,560** |
| **9,480** | | **£108,755** |

**Cost of goods sold:**

| | |
|---|---|
| **5,100 cases at £10.50 =** | **£53,550** |
| **10 cases at £12.00 =** | **120** |
| | **£53,670** |

| | |
|---|---|
| **Cost of goods available for sale** | **£108,755** |
| **Cost of goods sold** | **53,670** |
| **Ending inventory** | **$ 55,085** |

**2. Weighted Average cost**

| | |
|---|---|
| **Cost of goods available for sale** | **£108,755** |
| **Total units available** | **÷ 9,480** |
| **Weighted average cost per unit** | **£ 11.47** |

**Ending inventory: £11.47 x 4,370 = £50,123.90**
**Cost of goods sold (cost of goods available for sale – ending inventory):**
**£108,755 – £50,123.90 = £58,631.10**

**Additional Question for P8-10:**

**Assuming that Fresh Wholesale uses the perpetual inventory system, calculate the COGS and Ending Inventory using (1) FIFO and (2) Weighted average cost.**

**(1) FIFO (Perpetual system)**
**Cost of goods available for sale:**

| | | |
|---|---|---|
| **5,100** | **at £10.50** | **£ 53,550** |
| **1,210** | **at £12.00** | **14,520** |
| **1,050** | **at £12.50** | **13,125** |
| **2,120** | **at £13.00** | **27,560** |
| **9,480** | | **£108,755** |

**Cost of goods sold:**

| | |
|---|---|
| **5,100 cases at £10.50 =** | **£53,550** |
| **10 cases at £12.00 =** | **120** |
| | **£53,670** |

**Cost of goods available for sale ..... £108,755**
**Cost of goods sold ..... 53,670**
**Ending inventory ..... $ 55,085**

## (2) Weighted Average cost (Perpetual system)

| Dates | (a) Units | (b) £ / Unit | (c) Cost of Inventory *[(a) x (b)]* | (d) Total Inventory Units *[prior (d) + (a)]* | (e) Total Cost in Inventory *[prior (e) + (c)]* | (f) Average Cost/Unit *[(e) / (d)]* |
|---|---|---|---|---|---|---|
| Beginning Inv | 5,100 | 10.50 | 53,550.00 | 5,100 | 53,550.00 | 10.50 |
| Purchase: May 4 | 1,210 | 12.00 | 14,520.00 | 6,310 | 68,070.00 | 10.79 |
| *Sales: May 9* | *(1,020)* | *10.79* | *(11,005.80)* | *5,290* | *57,064.20* | |
| Purchase: May 13 | 1,050 | 12.50 | 13,125.00 | 6,340 | 70,189.20 | 11.07 |
| *Sales: May 19* | *(1,750)* | *11.07* | *(19,372.50)* | *4,590* | *50,816.70* | |
| Purchase: May 26 | 2,120 | 13.00 | 27,560.00 | 6,710 | 78,376.70 | 11.68 |
| *Sales: May 30* | *(2,340)* | *11.68* | *(27,331.20)* | *4,370* | *51,045.50* | |
| | | **Total COGS** | **$ (57,709.50)** | | | |

**Cost of goods sold ..... £57,709.50**
**Ending inventory ..... £51,045.50**

*(The following table shows an alternative way to show your workings/calculations for weighted average cost under the perpetual system. It is for your additional reference)*

| DATE | BEG INVENTORY and GOODS PURCHASED | | | COGS | | | INVENTORY BALANCE | | |
|---|---|---|---|---|---|---|---|---|---|
| | UNIT | PRICE | AMOUNT | UNIT | PRICE | AMOUNT | UNIT | PRICE | AMOUNT |
| 1-May | 5100 | 10.50 | 53,550 | | | | 5100 | 10.50 | 53,550.00 |
| 4-May | 1210 | 12.00 | 14,520 | | | | 1210 | 12.00 | 14,520.00 |
| | | | | | | | **6310** | **10.79** | **68,070.00** |
| 9-May | | | | 1020 | 10.79 | 11,005.80 | 5290 | 10.79 | 57,064.20 |
| 13-May | 1050 | 12.50 | 13,125 | | | | 1050 | 12.50 | 13,125.00 |
| | | | | | | | **6340** | **11.07** | **70,189.20** |
| 19-May | | | | 1750 | 11.07 | 19,372.50 | 4590 | 11.07 | 50,816.70 |
| 26-May | 2120 | 13.00 | 27,560 | | | | 2120 | 13.00 | 27,560.00 |
| | | | | | | | **6710** | **11.68** | **78,376.70** |
| 30-May | | | | 2340 | 11.68 | 27,331.20 | 4370 | 11.68 | 51,045.50 |
| TOTAL | **9480** | | **108,755** | **5110** | | **57,709.50** | **4370** | | **51,045.50** |