#### **INTRGROUP SALES OF INVENTORY**

- The point of profit realisation for the group is when the inventory is sold outside the group to a third party
- Worksheet adjusting entries for intra-group sales of inventory include:
  - eliminate the effect of intra-group sales and purchases
  - o eliminate any outstanding intercompany balances at year end
  - eliminate unrealised profit included in carrying amount of inventory assets (relevant accounts: profit and loss, cl. Inventory; op. retained earnings, op. inventory)
  - o consider also all necessary tax effect journals
  - o and we also need to be clear about whether we have a periodic or perpetual system

#### Periodic vs perpetual systems of inventory

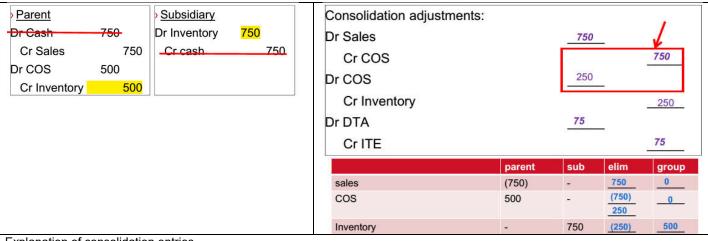
| PERIODIC  | PERPETUAL  |  |  |
|---|--|--|--|
| We maintain 3 ledger accounts that are combined into COGS in the P&L:  Opening Inventory + Purchases – Closing inventory = COGS | <ul> <li>Inventory (asset) account debited as we purchase inventory</li> <li>As we sell we debit a COGS or COS account and credit Inventory (asset)</li> </ul> |  |  |
|   | Purchases of inventory initially recognised as asset before being expensed when the inventory is sold (to COGS)  |  |  |
|   | Also annual stocktake to compare what is on hand versus the running balance in the inventory account and recognise any losses                                  |  |  |
| The value of COGS is not known until stock take is conducted  | Constantly updated   |  |  |
| Consolidation: can involve adjustments any of the 3 main accounts   | Consolidation: Only COGS account is adjusted   |  |  |

# DOWNSTREAM Sale in CURRENT period- PERPETUAL Unrealised profit in CLOSING INVENTORY

#### Example 1:

Parent purchased inventory from external supplier for \$500,000 in the current year. Soldto subsidiary for \$750,000

- Assume the subsidiary still held all of that inventory at year end
- Assume perpetual inventory system
- We can appreciate that there is unrealised profit in that inventory balance from the perspective of the group of \$250,000
  - SO YOU WANT TO SHOW THE VALUE OF INVENTORY AT \$500,000 AND REMOVE PROFIT RECORDED BY PARENT OF \$250,000
- Alternatively we might tell you that inventory of subsidiary included goods purchased fromparent company for \$750,000 at mark-up of 50% on cost- Original cost to parent =\$750,000/1.5 = \$500,000 (see customised text pp. 216-217)

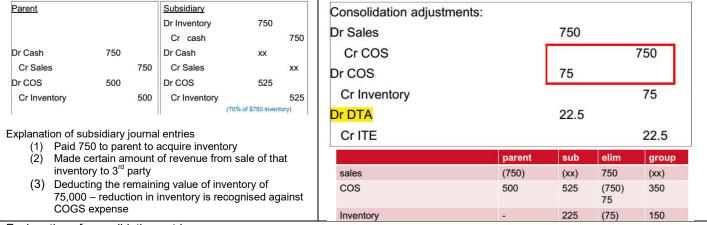


### Explanation of consolidation entries

- (1) Eliminating the sales of inventory against COGS (reverse initial sales entry by parent)
- (2) Now adjust the existing group balance of COGS to zero (because the inventory is yet to be sold to third party) offset that against Inventory
  - a. Remember that in doing this, the cost of inventory needs to be adjusted to the lower of cost/NRV (which in this case is 500)
- (3) Because the parent has recorded profit but the group hasn't you need to reverse the tax expense initially recognised by the parent (hence CR income tax expense against DTA)

#### **Extension of previous example:**

Now assume the subsidiary still held 30% of that inventory at year end. The unrealised profit in inventory from the perspective of the group is now  $$250,000 \times 30\% = $75,000$ 



#### Explanation of consolidation entries

- (1) Elimination of the sales recognised by the parent for the 750 worth of inventory
- (2) Remember that we are trying to adjust to reflect values of the group. From the group's perspective the value of COGS should be 70% of \$500 (which was the value of the inventory when purchased by parent –right at the beginning) hence we need to create a journal entry which will create an ending group COGS balance of 500 x 0.7 = 350 (offset against inventory)
- (3) Initially the parent recognised profit and income tax expense however, from the group's perspective- not all of that profit has been realised (still 30% remaining) hence we take that portion of tax expense and put it back into DTA (as above)

Consolidation journals:

## UPSTREAM sale of inventory- PERIODIC Unrealised profit in CLOSING inventory

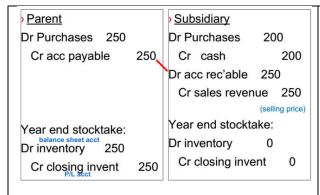
#### Example 2:

Upstream credit sale of inventory from subsidiary (S) to parent (P) for \$250,000 (purchased for cost \$200,000).

- Inventory is still on hand at year end by P

Differences to last 2 examples:

- P has not paid S by year end
- Periodic system used



Remember that under periodic system, the inventory (balance sheet) is closed to the 'closing inventory' on P/L statement in order to determine the value of COGS at the end of the year

Remember that 'current tax payable' is recorded by individual companies and under the assumption that the group is not a single tax entity- this account must NOT change on consolidation

| Consolidation journals.                             | וט               | Cl                 |
|---|------------------|--------------------|
| i) Eliminate the transaction of sales and purchases | rolating to intr | agroup transaction |
| Sales revenue                                       | 250              | agroup transaction |
| Purchases (or to COGS if perpetual)                 |                  | 250                |
| ii) Eliminate the balance                           |                  |                    |
| Acct payable  | 250              |                    |
| Acct receivable                                     |                  | 250                |
| iii) Eliminate unrealised profit                    |                  |                    |
| Closing inv (COGS)                                  | 50               |                    |
| Inventory (BS)                                      |                  | 50                 |
| iv) Tax effect                                      |                  |                    |
| DTA   | 15               |                    |
| ITE   |                  | 15                 |
|   |                  |                    |

Dr

Cr

#### Explanation of consolidation entries

- (1) Reversing the purchase and sales revenue recorded by parent and subsidiary respectively
- (2) Eliminating the acct payable/receivables
- (3) Because the inventory has not yet been sold to an external party, the profit 'earned' by the subsidiary (250-200) is unrealised profit and hence needs adjustment. At present, the inventory of the group is valued at 250 but it needs to be valued at 200 (the value at which it was bought by subsidiary at the start) hence you need to CR inventory by 50 against closing inventory (COGS)
- (4) The effect of (iii) creates a temporary difference because the CA of inventory in CFS and the tax base (CA < TB → DTA). Or another way you can look at it is that if closing inventories is too high then COGS is too low and group profit before income tax expense will be overstated