CH 5 — Inventory & Cost of Goods Sold (Integrated Notes)

Your Name • 2025-10-21

Summary

Inventory: perpetual vs periodic systems, costing methods (Specific ID, FIFO, Weighted-Average), sales returns/allowances/discounts, LCNRV, analysis metrics, errors, ethics, and Excel XLOOKUP for multi-file analysis. :contentReference[oaicite:11]{index=11}

Learning Objectives

- **Perpetual system** mechanics (two entries per sale)
- **Costing methods** and comparisons
- **Standards**: comparability; LCNRV
- **Metrics**: gross profit %, turnover, days' inventory
- **Error effects** on FS; ethics
- **XLOOKUP** for inventory analytics
- **Periodic system** (appendix)

Perpetual Inventory System

Bar codes enable real-time updates. Each sale requires **two** entries:
1) Record revenue and cash/A/R
2) Record COGS and reduce Inventory
Gross profit (margin) = Sales revenue - COGS. :contentReference[oaicite:12]{index=12}

Determining Quantities & Costs

Shipping terms (ownership & cost)

Terms	Title passes	Counted by	Freight paid by
FOB Shipping Point	When goods leave seller	Purchaser	Purchaser
FOB Destination	When goods reach buyer	Seller	Seller

Inventory cost includes purchase price + freight-in + insurance + ready-to-sell costs - returns/allowances/discounts. :contentReference[oaicite:13]{index=13}

Costing Methods

Method	Description	Best for	Key trait
Specific ID	Track actual item cost	Unique items	Precise; costly for common goods
FIFO	Oldest costs to COGS first	Most businesses	Ending inventory at recent costs
Weighted-Average	Avg cost for all units	Homogeneous items	Smoothes price swings

When costs rise: FIFO ⟶ lower COGS, higher ending inventory & GP; Weighted-Average ⟶ higher COGS, lower ending inventory & GP. :contentReference[oaicite:14]{index=14}

Worked Costing Illustration (FIFO vs WA)

Data (Leon's lamps): Begin 10@ $11; buy 50 (assorted); sell 40; end 20.
FIFO idea: the 40 sold draw from earliest layers; ending inventory = most recent layers.
Weighted-average idea: compute average cost per unit over goods available; apply to COGS and ending inventory. :contentReference[oaicite:15]{index=15}

Sales Returns, Allowances, Discounts

Right of return → record:
• **Sales Refund Payable** (liability) for expected returns (sales side)
• **Estimated Inventory Returns** (asset) and adjust COGS (cost side)
Sales discounts like 2/10, n/30 incentivize prompt payment. :contentReference[oaicite:16]{index=16}

Reporting & Standards

Comparability: use consistent inventory methods across periods; if changed, justify and restate prior periods.
LCNRV: report inventory at min(cost, NRV). If NRV < cost → **write down** inventory (affects COGS / separate loss; disclose). :contentReference[oaicite:17]{index=17}

Example — LCNRV (sketch)

If NRV for ending inventory is $49,000 and cost is higher: report **Inventory = 49,000** on BS and recognize write-down (often via COGS). Disclose policy and the change's impact for users. :contentReference[oaicite:18]{index=18}

Inventory Metrics

• **Gross Profit %** = (Gross Profit / Sales) * 100
• **Inventory Turnover** = COGS ÷ Avg Inventory
• **Days' Inventory Outstanding** = 365 ÷ Turnover
Interpretation: higher turnover / lower days → faster movement; watch for stockouts vs obsolescence. :contentReference[oaicite:19]{index=19}

Effects of Inventory Errors

If **ending inventory overstated**: COGS understated → GP & NI overstated; carries to next period reversals. Net sales typically unchanged. :contentReference[oaicite:20]{index=20}

Ethics

Pressure to "cook the books": overstating ending inventory or creating fictitious sales. Uphold faithful representation; follow disclosure requirements. :contentReference[oaicite:21]{index=21}

Excel XLOOKUP (Analysis)

Pull item costs/attributes from reference files into a main analysis workbook to compute margins, turnover, and LCNRV flags quickly. :contentReference[oaicite:23]{index=23}

Examples

Example A — Perpetual sale entry (numbers illustrative)
1) DR Cash 1,000; CR Sales Rev 1,000
2) DR COGS 640; CR Inventory 640

Example B — Returns estimate
1) DR Sales Returns & Allowances 3,000; CR Sales Refund Payable 3,000
2) DR Estimated Inventory Returns 1,800; CR COGS 1,800

Example C — FIFO layer pick (outline)
Sold 40 units: draw 10 @ $11, then 20 @ $14, then 10@ $16 ⟶ COGS layers sum to $550; Ending inventory from most recent layers (e.g., 5@ $16 + 15 @ $18 = $350). :contentReference[oaicite:24]{index=24}

One-Page Reference

- Perpetual: **two entries per sale**
- Ownership by **shipping terms**
- FIFO vs Weighted-Average effects when costs rise
- LCNRV and disclosures
- Watch error propagation across periods