

FOUNDATIONS SERIES

Baratelli Foundations: Inventory & COGS Reference

Count it, cost it, and tie it out — the working mechanics behind the inventory line.

Inventory is the line on the balance sheet that absorbs every operational mistake — a miscount, a missed cutoff, a freight cost booked to the wrong place — and then quietly flows into cost of goods sold. This reference teaches the mechanics the job actually requires: how to run a physical count (even when you can't stop shipping), how the four cost-flow methods work, how to value and reserve, and where the book numbers meet the tax rules. It is built for doing the job, not for a test — and it stays at the introductory mechanical altitude, pointing you to the paid guides when a topic needs auditor-defensible depth.

For: the bookkeeper, office manager, owner-operator, or controller-in-training responsible for the inventory and COGS numbers.

Section	What it covers
1 · Count Operations	The physical count, shipping during a count, in/out isolation, prep, tags, cycle vs wall-to-wall, auditor observation
2 · Cost-Flow Methods	The COGS identity, FIFO, LIFO, weighted average, specific ID, periodic vs perpetual, standard cost
3 · Valuation & Reserves	Lower of cost or NRV, E&O reserves, shrinkage, FOB cutoff, consignment, in-transit, freight
4 · System & Process	Perpetual subledger, three-way match, receiver discipline, bin/lot, turns, DIO, the cash conversion cycle, reorder points
5 · Tax Method Touchpoints	Book-vs-tax bridge, LIFO conformity (§472), the LIFO reserve at exit, §263A UNICAP, the small-business exception

How to use this reference. Each topic gives you the working mechanic. Where a topic needs auditor-defensible methodology or operating discipline beyond the introductory level, a “Go deeper” note points you to the exact paid chapter that carries it.

1 Count Operations

If the count is wrong, every number downstream is wrong. This is the part no paid guide teaches in operational detail — so it is taught here, in full.

1.1 The physical inventory count process

A physical count establishes what you actually have on hand so the books can be corrected to reality. Run it as a controlled event, not a scramble:

- **Team:** work in two-person teams — one counts, one records — or use scanners with a supervisor floating to resolve questions.
- **Scope:** count everything you *own* and that is on hand, including back rooms, owned trucks, and the shop floor. Exclude goods you hold but don't own (consignment in); include goods you own but are off-site (consignment out, in-transit goods you hold title to).
- **Sequence:** move systematically through numbered zones so nothing is counted twice or skipped.
- **Blind counts:** don't print the expected quantity on the sheet. If counters see "system says 100," they tend to write 100. A blind count surfaces real variances.
- **Supervision & sign-off:** a supervisor spot-checks completed zones and signs them off before they're released.

Tip: freeze data entry (no shipping/receiving postings) during the count window if you possibly can. A moving target cannot be tied out.

1.2 What to do when you can't stop shipping during the count

Many businesses cannot go dark for a count — orders still ship and trucks still arrive. The answer is a documented **cutoff freeze**, not a frozen warehouse:

- Pick a hard **cutoff moment** and record the last document numbers at that instant: last shipment/packing-slip number out, last receiver number in. Everything before the cutoff is "in" the count; everything after is "out."
- For anything that *must* move during the count, log it on a manual movement sheet with a timestamp, and reconcile those movements back to the counted quantity afterward (add receipts that arrived after a zone was counted; subtract shipments that left).
- Goods picked and staged for shipment where **title has already passed** are no longer your inventory — tag them "SOLD — DO NOT COUNT."

Tip: the single most common count error is a cutoff error — counting goods you've already sold, or missing goods you've already received. The document-number cutoff is your defense.

1.3 Isolating incoming product from outgoing orders

The receiving dock and the shipping dock are where miscounts are born. Physically separate and clearly mark them before counting:

- **Receiving area:** rope off and tag goods that have arrived but are *not yet recorded*. Pick one rule and apply it consistently — either record and count them, or exclude both.
- **Shipping/staging area:** goods staged to ship are the trap. If title has passed, they're sold (exclude); if not, they're still yours (include). Use the FOB terms (Section 3.4) to decide.
- Use the cutoff document numbers from 1.2 to draw the bright line between "ours, on hand" and "not ours / already gone."

1.4 Pre-count preparation

- **Housekeeping:** clean and organize so like items are together; a messy floor guarantees miscounts.
- **Labeling & staging:** label bins/shelves and pre-stage scattered stock to its home location.
- **Pre-count high value:** count and seal high-value or slow-moving items in advance to shorten count day.
- **Freeze & print:** freeze postings, print blind count sheets or load scanners, assign zones, brief the teams.

1.5 Count sheets vs scanners — tag control

Whether you use paper tags or barcode scanners, the discipline is **tag control**: every count record must be accounted for so none is lost or double-entered.

- **Paper tags:** use pre-numbered tags. Issue them in sequence, and at the end account for every number — used, voided, or unused. A missing tag = a missing count.
- **Scanners:** faster and self-tallying, but still reconcile total scans to the zone map so no zone is missed.
- **Reconciliation:** total the tags/scans, compare to the perpetual system, and route variances over tolerance to recount (next).

1.6 Recount thresholds & variance investigation

Not every variance is worth chasing. Set a **tolerance** — a variance below a small percent or dollar threshold is accepted; anything above triggers a recount and a root-cause look (miscount, mis-ship, theft, receiving error). Investigate the dollars, not the line count.

Go deeper → The CFO & Controller's Guide, Ch 26, carries a variance-tolerance table by item class and the SOX-control framing for documenting investigations.

1.7 Cycle counts vs annual wall-to-wall

A **wall-to-wall** count stops everything and counts all inventory once a year. **Cycle counting** counts a rotating subset continuously, so high-value items get counted often and the business never goes dark. Most maturing operations move from annual wall-to-wall toward cycle counting as their perpetual system becomes trustworthy.

Go deeper → CFO & Controller's Guide, Ch 26, covers the SOX-404 control implications of replacing the annual count with a cycle-count program.

1.8 ABC stratification

ABC stratification sorts SKUs by value so counting effort follows the money: a small set of "A" items carries most of the dollar value and is counted frequently; "C" items are low-value and counted rarely. The mechanic is simple; the calibrated program is not.

See paid guide → The canonical A/B/C tier table (SKU%% × value%% × count cadence × variance tolerance) lives in CFO & Controller's Guide, Ch 26. Use that as the build spec.

1.9 Auditor observation of the count

If your financials are audited, the auditor will *observe* your physical count to get comfort that inventory exists and is complete. They are not counting for you; they are testing your count. Expect them to:

- Make independent **test counts** and trace them both ways — floor-to-sheet (completeness) and sheet-to-floor (existence).
- Record the **cutoff** document numbers themselves to test your period-end cutoff.
- Watch for **obsolete or damaged** goods that should be reserved or written down.

Tip: a clean, well-run count earns audit trust and shrinks the audit. A chaotic one invites expanded testing and questions about your controls.

2 Cost-Flow Methods

The format of COGS is famous; the build is what trips people up. Start with the identity, then the four methods.

2.1 The COGS identity

Every cost-of-goods-sold figure, under any method, is built from one identity:

$$\text{Beginning Inventory} + \text{Purchases} - \text{Ending Inventory} = \text{COGS}$$

Purchases include **freight-in** and other costs to get goods ready for sale (Section 3.7). “Ending inventory” is what your physical count (Group 1) proves you still have. Rearranged, the same identity tells you what COGS *should* be once the count is in — which is why an accurate count is the foundation of an accurate gross margin.

Line	Example
Beginning inventory	\$40,000
+ Purchases (incl. freight-in)	110,000
= Goods available for sale	150,000
– Ending inventory (counted)	45,000
= Cost of goods sold	\$105,000

2.2 FIFO — first-in, first-out

FIFO assumes the **oldest** units are sold first, so COGS reflects older costs and ending inventory reflects the **most recent** costs. In a rising-cost environment, FIFO produces lower COGS, higher reported income, and a higher inventory value. FIFO usually mirrors the actual physical flow of perishable or dated goods.

Worked example: buy 10 units @ \$5, then 10 @ \$7; sell 12. FIFO COGS = (10×\$5) + (2×\$7) = \$64; ending inventory = 8×\$7 = \$56.

Go deeper → CFO & Controller’s Guide, Ch 26, carries the four-method decision table with the GAAP/IFRS/tax-impact and best-fit columns.

2.3 LIFO — last-in, first-out

LIFO assumes the **newest** units are sold first, so COGS reflects recent (higher, in inflation) costs and ending inventory sits at **old** costs. In inflation this lowers reported income and therefore taxes — the main reason it’s elected. LIFO is permitted under US GAAP but **prohibited under IFRS**, and it carries the tax conformity rule covered in Section 5.2.

Same example: buy 10 @ \$5, then 10 @ \$7; sell 12. LIFO COGS = (10×\$7) + (2×\$5) = \$80; ending inventory = 8×\$5 = \$40.

Go deeper → CFO & Controller’s Guide, Ch 26 (mechanics) and Ch 14 (tax coordination) carry the LIFO conformity and LIFO-reserve depth.

2.4 Weighted average

Weighted average pools all cost and spreads it evenly: average unit cost = total cost of goods available ÷ total units available. It fits commodities and interchangeable units where tracking layers is pointless.

Same example: total cost \$120 ÷ 20 units = \$6 average; sell 12 → COGS = \$72; ending inventory = 8×\$6 = \$48.

2.5 Specific identification

Specific ID tracks the **actual cost of each individual item** and expenses that exact cost when the item sells. It is required (or natural) for unique, high-value, serial-tracked goods — vehicles, jewelry, fine art, custom equipment — and impractical for high-volume interchangeable stock.

2.6 Periodic vs perpetual systems

This is a *system* choice, independent of the cost-flow method:

	Periodic	Perpetual
When COGS is known	Only at period end, after a count	Continuously, with every sale
Inventory record	Updated by the physical count	Live subledger per SKU
Best for	Small/low-SKU operations	Most growing businesses on software
Watch-out	No visibility between counts	Drifts from reality without cycle counts

Even a perpetual system needs physical counts (Group 1) — the subledger is only as honest as the last time you proved it against the shelf.

2.7 Standard cost vs actual cost

Standard costing books inventory at predetermined “standard” costs and records the difference from actual as a **variance** (price variance, usage variance). It simplifies day-to-day bookkeeping but requires you to investigate and clear variances so they don’t quietly distort margins; at period end, material variances are reconciled back so inventory and COGS approximate actual cost.

Go deeper → The full standard-cost buildup — setting the standard, decomposing price / usage / overhead variances, and the variance-disposition entries at close — is carried in the CFO & Controller’s Guide, Ch 26. Foundations gives you the concept; the paid guide gives you the buildup.

3 Valuation & Reserves

Cost is where inventory starts. Valuation is what you carry it at after reality intervenes — markdowns, obsolescence, shrink, and the cutoff rules that decide whose books it sits on.

3.1 Lower of cost or net realizable value (ASC 330)

Inventory is carried at cost unless its **net realizable value** (estimated selling price minus costs to complete and sell) has fallen below cost — then it’s written down to NRV. You write down; you do not write back up. This is the ASC 330 lower-of-cost-or-NRV test.

See paid guide → CFO & Controller’s Guide, Ch 26, carries the multi-step NRV test and the reserve table by aging bucket.

3.2 Slow-moving & obsolete (E&O) reserve

Rather than writing off item by item, most operations book an **excess-and-obsolete reserve** based on aging — the older and slower-moving the stock, the higher the reserve percentage applied. It’s a contra-asset that lowers net inventory and books the expense before the item is finally scrapped.

See paid guide → The aging / months-of-supply / specific-ID reserve methodology table is canonical in CFO & Controller’s Guide, Ch 26.

3.3 Shrinkage

Shrinkage is the gap when the physical count comes in **below** the book quantity — from theft, breakage, spoilage, miscounts, or unrecorded movement. The fix is an adjusting entry that reduces inventory and records the loss (typically to COGS or a shrinkage expense account). Track shrink as a percentage of sales over time; a rising trend is an operational or control problem, not an accounting one.

3.4 FOB shipping point vs FOB destination

FOB terms decide **who owns goods in transit** at period end — the heart of the cutoff:

Term	Title/risk passes	At period end, in-transit goods belong to
FOB shipping point	When the seller ships	The buyer (count them in buyer’s inventory)
FOB destination	When the buyer receives	The seller (still seller’s inventory)

Go deeper → CFO & Controller’s Guide, Ch 26, ties FOB cutoff to revenue recognition and the period-end close.

3.5 Consignment inventory

Consigned goods stay on the **consignor's** (owner's) books until the consignee sells them to an end customer — even though they physically sit in the consignee's location. So: count consignment-*out* as yours; exclude consignment-*in* that you hold but don't own.

Go deeper → CFO & Controller's Guide, Ch 26, treats consignment as an ASC 606 edge case alongside bill-and-hold.

3.6 Inventory in transit

Goods in transit at period end belong to whoever holds title under the FOB terms (3.4). The common error is leaving in-transit goods off both parties' books, or counting them twice. Decide ownership from the FOB term and the ship date, and document it.

3.7 Freight-in vs freight-out

A frequent small-business error. **Freight-in** (the cost to bring goods to you) is *inventoriable* — it's added to the cost of inventory and flows through COGS as the goods sell. **Freight-out** (the cost to ship goods to your customer) is a *period selling expense*, not part of inventory or COGS. Mixing them distorts gross margin.

4 System & Process

The controls and ratios that keep inventory honest between counts and turn it from a number into a managed asset.

4.1 The perpetual inventory subledger

A perpetual subledger is a live record of quantity and cost **per SKU** that updates with every receipt and sale. It's the detail behind the single inventory number on the balance sheet, and the thing your physical count reconciles to. Treat any unexplained gap between the subledger total and the general-ledger control account as a red flag.

4.2 The three-way match

Before paying a supplier invoice, match three documents: the **purchase order** (what you ordered), the **receiving report** (what arrived), and the **invoice** (what you're billed). All three must agree on item, quantity, and price. It's the core control that stops overbilling and phantom receipts.

See paid guide → CFO & Controller's Guide, Ch 25 (Accounts Payable), carries the full three-way-match control table.

4.3 Receiver discipline

The receiving report is the linchpin of inventory accuracy: receipts must be recorded **promptly** and by someone independent of purchasing and payment (segregation of duties). Late or skipped receivers are a leading cause of cutoff errors and count variances.

See paid guide → CFO & Controller's Guide, Ch 25, carries the receiver-timing and segregation-of-duties table.

4.4 Bin location & lot tracking

Bin locations assign every SKU a home so it can be found and counted; **lot tracking** tags batches with a lot/expiry so you can trace and recall by batch and apply FIFO to perishables. For a growing operation, getting bins and lots right is what makes cycle counting and recalls possible at all.

4.5 Inventory turns

Inventory turnover measures how many times you sell and replace inventory in a period:

$$\text{Inventory turns} = \text{COGS} \div \text{Average inventory}$$

Higher turns generally mean less cash tied up in stock — but too high can mean stockouts. The right target is industry-specific.

See paid guide → CFO & Controller's Guide, Ch 26, carries the turns-vs-cash-deployment table; Business Operator's Blueprint, Ch 31, frames turns as a working-capital lever.

4.6 Days inventory outstanding (DIO)

DIO converts turns into days — how long, on average, a dollar sits as inventory:

$$\text{DIO} = (\text{Average inventory} \div \text{COGS}) \times 365$$

See paid guide → Business Operator's Blueprint, Ch 31, owns the DIO operating discipline with a three-scale dashboard and ownership map.

4.7 DIO, DSO, and DPO inside the cash conversion cycle

Inventory days don't live alone. The **cash conversion cycle** nets them against receivables and payables:

$$\text{CCC} = \text{DIO} + \text{DSO} - \text{DPO}$$

It's the number of days cash is tied up between paying suppliers and collecting from customers. Shortening DIO (and DSO), or extending DPO sensibly, frees cash.

See paid guide → Business Operator's Blueprint, Ch 31, is the canonical cash-conversion-cycle treatment. (The free *Cash Flow Calculation Schedule* Excel tool also lets you see the working-capital effect on cash directly.)

4.8 Safety stock & reorder point

The **reorder point** is the on-hand level that triggers a new order so you don't stock out during the supplier lead time:

$$\text{Reorder point} = (\text{Average daily usage} \times \text{Lead time in days}) + \text{Safety stock}$$

Safety stock is the cushion held against demand spikes and late deliveries. More safety stock means fewer stockouts but more cash tied up — the same tension turns and DIO measure.

5 Tax Method Touchpoints

Where the book inventory numbers meet the tax rules. This is a known gap in the paid tax guide — so the introductory mechanics are taught here, with pointers to the practitioner depth in the CFO & Controller's Guide.

5.1 Book vs tax inventory methods — the bridge

Your financial (book) inventory method and your tax inventory method don't have to be identical, and where they differ you carry a **book-to-tax difference** (reconciled on the return's Schedule M). The most common driver is UNICAP (5.4): more cost capitalized into inventory for tax than for book. Keep the bridge documented so the two sets of numbers can always be tied together.

5.2 LIFO conformity election (IRC §472)

The LIFO **conformity rule** is the catch on the LIFO tax benefit: if you use LIFO for tax, you generally must also use LIFO in your financial statements reported to owners and creditors. You can't show high (FIFO) profits to the bank and low (LIFO) profits to the IRS.

Go deeper → CFO & Controller's Guide, Ch 26, carries the §472 conformity treatment at practitioner depth.

5.3 The LIFO reserve — and why it matters at exit

The **LIFO reserve** is the difference between inventory valued at FIFO and the lower LIFO carrying value — effectively the cumulative tax deferral LIFO has produced. It matters most at a sale or ownership change: a buyer adjusts for it when valuing the company, and a change away from LIFO can trigger recapture of that deferred income. If your business is on LIFO and a transaction is on the horizon, the reserve is a real number in the deal.

5.4 §263A UNICAP — uniform capitalization

The §263A **uniform capitalization** rules require certain *indirect* costs (portions of purchasing, handling, warehousing, and some administrative costs) to be capitalized into inventory for tax rather than deducted immediately. The effect is to push some current deductions into future periods as the inventory sells — and it's a frequent driver of the book-to-tax difference in 5.1.

Go deeper → CFO & Controller's Guide, Ch 14, carries the §263A UNICAP capitalization table.

5.5 The small-business taxpayer exception

Smaller businesses get a major simplification. A taxpayer whose average annual gross receipts are under the inflation-adjusted threshold (set at \$25 million by the TCJA and indexed upward each year — roughly the high-\$20-millions for 2026; **confirm the current-year figure**) is exempt from the general §471 inventory rules and from §263A UNICAP. In practice such a business may treat inventory as non-incidentals and supplies, or follow its books — a meaningful reduction in complexity.

Tip: the threshold is indexed annually and has moved across recent tax acts. Don't rely on a remembered number — check the current-year amount before relying on the exception.

→ **Where to Go Next**

This reference is the introductory, mechanical layer. When a topic needs auditor-defensible methodology, decision criteria, or operating discipline, the paid guides go ten times deeper:

When you need...	Go to
NRV & E&O reserve methodology, the four-method decision table, ABC program design, the standard-cost buildup, cost-flow & LIFO depth	CFO & Controller's Guide — Ch 26 (Inventory)
Three-way match & receiver-discipline controls	CFO & Controller's Guide — Ch 25 (Accounts Payable)
§263A UNICAP & the book-to-tax bridge at depth	CFO & Controller's Guide — Ch 14 (Tax Coordination)
DIO, the cash conversion cycle, working-capital operating discipline	Business Operator's Blueprint — Ch 31 (Working Capital)
Inventory in due diligence, obsolescence as a Q-of-E adjustment	Practitioner's Guide to Private Equity — Ch 16
See the working-capital effect on cash, hands-on	Free tool: Cash Flow Calculation Schedule (Excel)

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