

## What Is the True Value of Your Finished Goods Inventory?

Keeping a large finished stock inventory is the surest way to turn a large fortune into a small one.



One of my favorite learning moments was a discussion between myself and a professor about the difference between cost and value. My mindset was distinctly focused on “value” while the lesson to be learned was that “accounting is about costs, not value, Mr. Free.” Recently, I participated in a great conversation at a committee meeting with a shop owner and another company’s controller, and the question came up about the actual value of the finished goods inventory. Once we wrestled our way past some definitions — Kanban is not keeping a year’s worth of finished goods to ship from when a release is called in — we had an interesting conversation and came to a very startling conclusion.

### “Accounting is about costs, not value, Mr. Free.”

Hat tip to my accounting professor for this. Let’s look at the costs that are incurred in the process of converting raw materials into work in process, and then into finished goods in inventory. For an engineer, this seems to be an easy mass balance kind of calculation —we have the costs of the raw materials, less the scrap and any outside work if any. This is called net material and outside work cost. Next, we have the direct labor used to convert the material into suitable parts- operators- as well as indirect labor- supervisor, engineers, quality, purchasing, maintenance, among others. The total of direct and indirect labor is called total factory labor, and that is an accountable cost.

Factory overhead is the next important input. It considers perishable tools, metalworking fluids, utilities, depreciation and amortization, rent, taxes, maintenance materials and supplies, insurance and taxes are the main items found here. The kitchen sink may not be here, but the washroom sink certainly is. Other employee benefits are also counted here— payroll tax, group insurance, etc. The sum of total factory labor and net factory overhead make up our shop’s total conversion cost.

**You do not have absolute certainty that you will recover all of the “costs” that you invested into your parts in inventory.**

In that accounting class, we were taught that the difference between the selling price (revenue) and the net material and outside work cost was called value added. (If only I had been sharp enough to say, “Hey professor, here is some ‘value’ being accounted for by accounting!”) We will come back to this value-added idea in a moment.

If we subtract the net material and outside work and total conversion cost from net sales, we arrive at our gross profit. Remember, direct and indirect labor are components of conversion cost. Some shops account for shop employees in the direct labor portion by tracking shop working hours to arrive at the shop’s gross profit. These shops typically only carry the value of raw material forward into inventory for the parts. This gives a best-case scenario for inventory value. It is not over bloated with direct labor, overhead, burden etc., but the value is still overstated as they have lowered the value of the material by converting it into the custom part.

Now that we have covered all the operational aspects of getting to having work in process or finished goods in stock, we still need to account for our selling and administrative expenses. Totaling these to get our total sales and administrative expense, we can subtract this from our gross profit to arrive at our operating profit. After adjusting for interest expense as well as other income and expense, we arrive at our net profit before taxes. But is this a real thing?

But we do not yet have that profit, what we have is anticipated profit — if we sell all of our production. So, what is the value of those products boxed up on your shelves waiting delivery? This the “trust me” part of the story. You see, the student in me argues that the products in the boxes are truly only “scrap value” until they are magically converted to a receivable at time of loading onto truck. Yes, you have invested “value added” into them by process of manufacturing, quality verification, and maintaining

identification and packaging. But these investments are, until the product is shipped, sunk costs. Until the production has been converted into revenue, it is a net cost to you — not an asset. I argued, as did the owner of the shop in our conversation, that the “VALUE” of all of those parts in all those nice boxes on the shelf were actually scrap value — less than the original value of the raw material which with we started. (Basically, the “quick ratio” as applied to inventory.) The other person in the conversation, found this to be challenging, as those parts are being carried on the books at their production cost.

While we anticipate receiving the full value selling price for our production, the reality is that we have incurred sunk costs to convert bar stock into a custom form which may only recover scrap value if the customer fails to accept the parts as ordered. The other costs associated with making this “scrap” are “sunk” until the magic of shipping happens.

This is why I always emphasize the importance of contract review. Besides technical aspects, we need to review the commercial aspects as well. Do you have absolute faith and trust in your counterparty? Are they on record as committed to taking each and every one of those parts that you put in stock? Have they given you firm release dates? If not, how long will your invested (sunk) costs into those parts drag down your cash flow? Are those parts perishable? Can they rust, stain, or become obsolete due to redesign? You do not have absolute certainty that you will recover all of the “costs” that you invested into your parts in inventory and the risk increases over time.

How much have you lost due to inflation by pre-making that full year’s supply of finished goods? The index for final demand rose 7.4 percent for the 12 months ended in November, according to the U.S. Bureau of Labor Statistics. That is a lot of money to have stripped from you by merely the passage of time. Unless your contract had price escalators, you are selling at yesterday’s costs (a plus) but actually selling below today’s replacement costs. Do you win? Do you lose? The time cost of money is accruing regardless of this difference, as long as your parts are sitting on a shelf rather than creating an immediate receivable.

What is the true value of your finished goods inventory? Our very startling conclusion —The value of your finished goods inventory is the dollars that you can recover from selling it as scrap, until you have converted it into a cash

revenue receipt. The banker may consider it to have more worth as collateral, but my guess is that your bank agreement has covenants regarding how much you are holding in inventory as opposed to cash.

The object of this discussion is not to prove my misalignment with the way most people think of accounting. The object is to point out that it is prudent to minimize our shop’s encumbering our cash by making too much finished goods under the guise of mistakenly thinking it is a Kanban, or that I am saving “set ups.” Unless you have done an analysis on the costs involved in setups, all that

you have accomplished by doing a full year’s production run is to reduce your inventory turns from a small integer value (like four, or five) to an inventory turn of 1 or less! And that inventory that is losing value at the accumulated rate of inflation, which you are not

recovering. Plus, the risk of devaluing to scrap value by perishability, obsolescence or commercial issues that befall your customer or your relationship with that customer.

Your finished goods inventory is one of the biggest risks that your company can take, if you are making for stock to hold over the long term, rather than producing as demanded and ensuring inventory turns and unencumbered cash. The fundamental value of your finished goods inventory is scrap value over the long term. It is not treasure. It is a perishable and obsolescing asset.

Yes, you have invested in the conversion of raw material by adding value, factory labor, factory expense, selling and administrative expense and other charges. Just like one can invest their entire paycheck into a lottery ticket, the “investment” is evident. However, the payoff is far less likely to be assured, the more we have tied up in finished goods (sunk costs).

Building stock in a single run for a calendar year of releases is investing in risk. A better approach is to determine the best economic quantities that optimize return on investment — and to manufacture to that cadence. Inventory turns are good for cash and cash is good for business. **P**

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