Beware--Understand Inventory Valuations!

Chuck Hoyt | 2017

EXECUTIVE SUMMARY

From a day to day point of view what can happen with inventory is that an accounting entry is made with a varying degree of detail that has the effect of reducing expenses and at the same time increasing an inventory asset. Wow, that can sound really good; at the end of the year I can decrease my expenses and create an asset just with the stroke of an accounting entry. A tempting combination. Decreasing expenses shows more profit (or less loss) for the current period and increasing inventory creates a larger borrowing base for which to borrow funds. Both are key factors for the business owner, banker or investor. Inventory management involves subjective decisions that can substantially effect Profit and Loss. If not performed correctly, this process can produce very misleading results. *When there is substantial inventory involved, if we do not understand how the inventory is valued, we do not really understand the Profit and Loss of this year or next.*

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Introduction

When we book inventory we are creating an asset from a cash expenditure of some sort. Depending on our accounting process, we either book a purchase directly to inventory and then expense it as we use it or we book it directly to expense and move the unused portion out of expense to inventory. Either way, you can see there is a significant direct impact on our expenses depending on how we handle inventory. So when we look at net income for a given period and there is significant inventory on the balance sheet, we are really only seeing a portion of what happened during that particular period. Some very important questions must always go along with this:

- At what cost level is the inventory being listed and how was it calculated?
- Does it include overhead, interest or depreciation?
- Is the value at the lower of cost or market value?
- How does inventory value fit into next year's profit and loss?

Without understanding the answers to these questions, the net income for this period might hide some interesting surprises for next year's net income.

From a text book point of view, inventory might be as simple as using one of the inventory turn formats such as first in first out (FIFO) at the direct purchase cost for the inventory; however, in a manufacturing or farming environment, it is not so simple. Work in process or valuing a finished manufactured product can become challenging and in the case of agriculture, the market value of the inventory item can change on a daily basis. Inventory, whether in a finished product form or work in process, needs to be translated to a finished cost of goods sold and compared to net realizable sales value.

Variable Cost

What I look for is that inventory be valued as an asset using the variable cost of bringing the item to that point (direct labor, ingredients, utilities, repairs, manufacturing overhead, etc.). Generally, I do not like to see general overhead, interest or depreciation included in inventory value. In all cases, however, I want to understand how overhead is included or not included in the inventory calculation.

Having said this, depreciation on manufacturing equipment will often be included with manufacturing overhead and both included in the cost of manufactured inventory. That situation will present the challenge of making sure that EBITDA (Earnings before Interest, Depreciation and Amortization) calculations are made backing out the correct level of depreciation. If depreciation was included in last year's inventory which will then roll out to this year's Cost of Goods Sold, calculating EBITDA must be done carefully by excluding only the amount of depreciation that is represented in the COGS and the pertinent annual expense category which can be different than the total depreciation shown on the depreciation schedule.

Inventory Shrink

Another very important factor will be useable quantities in inventory. In my experience, especially with perishable items or ingredients, there usually will be less quantity coming out of inventory than what went in. This is called shrink, which is spoilage, deterioration, obsolescence or damage which happens to most items that are put into inventory. Find out what factors were used to account for this. If 5,000 units went into inventory at $20/unit and 4,500 useable units came out, the Cost of Goods Sold or expense just went to $22.22/unit. With a tight margin, this may make a substantial impact on next year's net income.

In all cases, though, consistency between years or periods is a key factor to look for in inventory calculations.

Lower of Cost or Market

Of course, after all is said and done, inventory should be listed at the lower of cost or market, and if we are using variable costs w/o overhead, hopefully this is an easy test to pass. In the case of work in process however, this test becomes much more difficult by having to consider the variable costs needed to complete the item and the net realizable sales price for the item. After all the completed costs for the inventory items are calculated, I then compare the percentage of the projected completed variable costs to the net realizable sales cost and compare that with the historical Cost of Goods Sold. As per "Hoyt's Law" (things will not tie out at first try), I then listen to the explanations offered by the company for the reasons that those calculations don't match. I learn a lot about the company's inventory valuation process after going through this exercise.

I have seen many variations of the inventory valuation process and in some cases have seen significant negative impacts and surprises involving how inventory was booked as an asset. In my experience, this has been a significant reason that companies end up with surprises with their net income and end up in a troubled asset classification with their lenders. Often management either did not understand or used rationalized science and the lenders did not realize the criteria that was being used for inventory valuation.

Conclusion

If you are a business, pay attention to inventory and what impact it will have on next year's earnings. Sometimes this can point to positive things on the horizon and sometimes it can point out upcoming problems. If you are a lender or investor, don't get too wrapped up with this year's net income before you understand what the inventory valuation says about next year.

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Chuck Hoyt is the owner and founder of Charles Hoyt Company, an agricultural management consulting firm in Fresno, CA. For over 30 years, Mr. Hoyt's company has helped agricultural businesses with strategic planning, debt management, budgeting, accounting restructure, financial workouts and general management issues.

In 2017, Mr Hoyt put the experience that he has gained over the years into a cloud based business modeling application called ThruThink.com. This is a platform where the User enters their earnings history, current assets and liabilities and forward-looking projections for an existing business, new business acquisition or real estate deal. *ThruThink*SM produces the standard Balance Sheet, P&L, and Cash Flow analysis for each year of the User defined time period as well as a Deal Score and Evaluation of the "Deal". *ThruThink*SM is used to experiment with profit margins, overhead expenses, debt structure, equity arrangements and partial ownerships.

