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Inventory

"The Real Cost Of Inventory —
Why You Can Have Too Much Of A Good Thing"

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It is a fact that for almost all retailers inventory is the single largest asset on the balance sheet. Yet, despite all the improvements in technology over the past twenty five years, inventory continues to be the least productive asset for most retailers.

To determine inventory productivity we use a measure called "turnover" which tells us how many times does inventory sell out in a year. In almost every segment of specialty retail - gift, clothing, sporting goods, jewelry, shoes, books, music, electronics, appliances, furniture, and many more – the stock turnover rates have held steady for over 25 years in the under 4 range and in a few cases, at less than 2 turns per year.

This means that for most of these stores they are carrying at least three months of sales in their store at any given moment, and in the case of books and some other categories, the inventory approaches a six month supply at most times. This amount of inventory is not only a drain on the stores' financial position, but it also often reduces customer service because in most cases the store cannot afford to re-stock what is selling because they have too much of what is not selling.

Clearly, retailers need to take a step back and critically address this problem and begin to manage this asset in a more planned and disciplined way.

There are three factors that have the biggest impact on inventory. First the SKU intensity of the product, second the re-order cycle time and lastly the nature of the merchandise, either consumables or discretionary. These three factors each bring a special twist to the inventory problem and we will discuss each one while giving you some insights into how to address them in order to maximize your inventory investment. We will also discuss some secondary factors such as seasonality, fashion and obsolesce as well as a critical measure of inventory productivity called Gross Margin Return On Inventory Investment (GMROII).

>> SKU Intensity

The first and often the most critical factor in inventory management is what is termed "SKU Intensity". This is simply how many stock keeping units (SKU's) you have per item. If you sell items such as gifts, you will often have just one SKU per item. Each item comes as a unique or single size piece and if you expect to sell, let's say, twelve of those items in a month, you only need to have twelve on hand to make those sales (if your order cycle is short, you may even have less on hand at any given moment, as we will discuss that later).

Contrast this with a clothing store, in which you may have an item which comes in four sizes (S, M, L, XL) and three colors (red, blue, green). How many items do you have to have in inventory to guarantee that you will sell twelve that month? The answer is the astounding number of one hundred forty four. As you would have to assume that it was possible that every customer that month would want the same size and same color, you would have to stock twelve of each size and color.

Now, in the real world we would not plan for a one hundred percent customer service level[1] and you would likely "tailor" your inventory, which means that, based on past history, you would/should know that ten percent of your customers are size small, thirty percent medium, forty percent large and twenty percent extra large. You would also know that your best selling color is blue, often over eighty percent, followed by red at twenty percent and that you never sell very many green of any type of this item. Based on this knowledge (which you must have from your POS and inventory system history), you can purchase and stock far less than the one hundred and forty four that was possible and you could easily attain a ninety five percent customer service level with as few as twenty items or less.

That is the power of tailoring a SKU intensive inventory, but it does require good sales history as well as good inventory history and an understanding that there are other factors that may be involved. So, for instance, imagine if your reports told you that you never sold any size small, what if you never had any size small to sell? Your POS system reports will tell you what sold but you also have to look at your inventory reports to know that you had stock on that size or color and the reason why you did not have a sale was because the customer did not buy, not because it was not there to purchase.

The more SKU intensive your inventory the more you have to depend on sales and inventory information when you purchase new items. The skill of tailoring an inventory is learned and each season you will get better at it.

There is another danger beyond out of stocks misrepresenting your true sales pattern. An item may not "trend" or "fit" or be "identical" to the past item. What if the new item that you are buying does not fit the same way? What if it is sized slightly smaller than other items in the past? If this happens your size balance will be all off as customers try the items and purchase a size larger than they did in the past, causing you to end up with no sales in small and not enough stock in extra large. Or, what if the traditional blue is not as good looking as the red in a particular item, or if customers' tastes change and more want green this season? These factors change the mathematical computation of required inventory to a more complex decision that requires that the buyer take into account not only the raw numbers but also the additional factors that can change the purchase mix.

You have to have both the hard sales and inventory numbers as well as knowledge of your merchandise and customers. It is a constant process that is never perfect but can be close to perfection if you work at it.

[1]Customer service level measures how many times you tell a customer that you are out of stock as a percentage to total demand. So a 100% customer service level means that you are never out of stock on an item.

>> Re-Order Cycle Time

The second factor that impacts inventory is what is termed "re-order cycle time" or simply how long it takes you to be re-supplied once you have either run out or determined that you have need for more. The longer the cycle time the greater the amount of inventory that you have to carry. The re-order cycle begins at the moment you determine that you need more inventory.

An inventory efficient retailer will have computer systems that identify when an item should be replenished. This is done by establishing what is called a "model stock", or a desired inventory level. Once this is established (by SKU), then the computer will keep an eye on that item and when sales reduce the amount on hand to the level that it needs to be replenished, the computer will either generate a "suggested order" report or automatically re-order that item. The two most important factors in establishing the model stock level are rate of sale and ship time.

For example, if you have an item that you know can be replenished by a supplier that is in your city and he/she always has the item on hand and can deliver in less than three days from the time the supplier receives the order, and you also know that it takes you two days to receive the merchandise and get it to the shelf, then if you are looking at your suggested re-order every day, you have a five day order cycle. However, if you look at your suggested re-order once a week, then your order cycle time is twelve days, (seven days for identifying need plus five days to get the merchandise). If you sell ten of that item per week, and you are running your suggested re-order report once a week, then you have to have a minimum of 18 on hand.[2] You may also want to "protect" yourself if this is an important item, by having what we call "safety stock". Safety stock is additional inventory that you will carry just in case something goes wrong. Maybe, the supplier will have a problem in shipping or picking up the item and it will be delayed by one or two days. Maybe, you will be on vacation and run the suggested replenishment report late. Maybe, a customer will buy more than expected or the item gets more popular for a short time.

Any or all of these factors may cause you to build-in a safety stock number that will ensure that you do not run out of stock and are covered for a period of twelve days to fifteen or even twenty. However, you should be very careful about increasing the stock coverage number as it not only increases your inventory levels but it decreases your stock turnover at the same time. In the above example, if you did not have a safety stock your stock turnover in units would be 28.8 (520 unit sales with an average unit inventory of 18). If you increased your safety stock to twenty days your unit turnover would drop to 17.9 (520 unit sales with an average inventory of 29 units) while your stock turnover would be reduced by 38%.[3] Any decision to build in a safety stock should only be made after careful consideration and an understanding of the impact on store performance.

>> Nature of the Merchandise

The third factor that will affect inventory productivity is the nature of the merchandise. Some products are purchased every day/week by customers and some are purchased much more infrequently. For example, a customer may buy five or six picture frames a year, or six or seven shirts or blouses a year, or nine or ten tubes of toothpaste per year. Conversely, they will likely buy only one television set every ten or fifteen years (although this may be reduced to an average of three to five years if they purchase additional TV sets for other rooms in the house).

Products that have a high purchase frequency almost always have a lower replacement price. Imagine if toothpaste costs as much as a TV set, purchase frequency and dental hygiene would both suffer! On the other hand, merchandise with a low purchase frequency has often a higher price. This is also termed "deliberation" merchandise because the customer often has to take time to consider the purchase and more than one trip to the store is often required. This is very common in furniture, floor covering, jewelry, electronics, appliances and many home improvement categories.

Deliberation merchandise will often stay on the selling floor longer than impulse or consumables and your stock turnover will reflect this difference. Even in consumables there may be certain sizes or types of merchandise that is more specialized and takes longer to sell.

[2]Formula is sales per day times the days required. In this example, ten per week is 1.4285 per day times twelve days equals 17.14 units rounded up to the next full unit, which is 18.
[3]Original stock turns of 28.8 minus new stock turn of 17.9 equals a loss of 10.9 turns divided by the original of 28.8 equals a decrease of 37.84%

You may have to carry a complete range of a product even though certain items are very slow sellers. For example, you may have accessories in an electronics store that have a good rate of turnover but specific couplers or adapters may only be needed by a very few customers yet you have to have them for those customers. You would therefore have some items in your accessories that only turned two times per year while the more common accessories turned over twelve times per year.

The key in ensuring profitability in the case of deliberation merchandise and slow moving items, is to make sure that they carry a higher margin than the faster moving items. They have to, in essence, "pay the rent" for all the time that they are just sitting on the shelf. This is also true in fashion merchandise where there is a degree of risk involved. Fashion merchandise may also include items that have very high possibility of obsolescence, such as, some consumer electronics that may be replaced by a newer model with more features or a lower price. Fashion merchandise has to carry a higher initial gross profit to accommodate the markdowns that will surely occur over the life of the item. Which leads us to the great equalizer in the inventory analysis and that is Gross Margin Return On Inventory Investment (GMROII).

>> GMROII

GMROII is a financial measure that tells us what return we are making on our inventory investment. It is the only financial ratio formula that returns a dollar answer not a percentage. The question that GMROII answers is "For every dollar that I invest in inventory, what is my return?" GMROII is the measure that helps you to balance the turnover of an item and its retail price. If you have an item that turns only twice a year you have to make a much higher profit on that item as you are only making the profit two times and yet paying to keep the item the entire year. Contrast this with an item that you will sell three of per week or 156 per year and only need to pay to keep six on hand. Your investment in the slow turning item is longer and therefore more costly.

The formula for GMROII is simply Gross Margin (the profit – or return on investment you make in selling an item – after any discounts/markdowns are taken) divided by the average inventory at cost (the "investment" that you have made).

Let's look at two very different items and the GMROII on each.

Item A > Fast selling, low price item. You sell 156 of this item per year. You buy it for $5.00 each and sell it for $7.00 each. You keep six in inventory all the time so your investment at cost is $30 ($5.00 times 6 items). In one year, if you sell the 156 at full price of $7.00 you make a profit of $2.00 per item for a total profit of $312.00. To make the $312 profit, you only had to invest $30 in inventory cost. So, your GMROII is $10.40 ($312 divided by $30), which means that for every dollar that you invested in inventory you made a $10.40 return.

Item B > Slow selling, high price item. You sell two of these items per year. You buy it for $325.00 and sell it for $999.00. You keep two in inventory so your investment is $650 ($325 times 2 items). In one year you sell two items for total sales of $1,998.00 and make $674 per item or $1,348 for the two. To make $1,348 sales you had to invest $650 in inventory. So, your GMROII is $2.07 ($1,348 divided by $650) which means that for every dollar that you invested in inventory you made a $2.07 return.

The two examples above clearly show the difference that a GMROII analysis can make. The first item has a Gross Margin of 28.6%[4] , while the second item has a Gross Margin of 67.5% . If we were just to consider Gross Margin, we would identify item B with the 67.5% margin as being very good and item A with a 28.6% margin as being not so profitable. Whereas, the GMROII analysis demonstrates the productivity of item A over item B.

However, we also have to remember that we don't pay the bills with percentages. Item A only put $312 in my checking account while Item B put $1,348. Clearly, a balance must be achieved between dollars and GMROII rates. A $2.07 GMROII may represent substantial dollars in the above example, but for most stores, this is actually a break even. The first dollar of the $2.07 is simply the dollar that we initially invested and the second $1.07 has to be used to pay all operating expenses such as rent, payroll, supplies, advertising etc. So a GMROII of $2.00 is considered just a break even and we really should be setting a benchmark of at least $3.00 for each category/item in our stores.

[4]Gross Margin percent is calculated by dividing selling price minus cost to selling price. So, $7.00 minus $5.00 equals $2.00 divided by $7.00 which equals 28.6%. This means that our profit is 28.6% of our selling price.

>> Getting Our Inventory in Balance

The best way to balance an inventory is not to overbuy in the first place, but that is easier said than done! The main way that retailers keep inventories in line is through the use of markdowns, or reductions in inventory selling price to incent customers to buy at the lower price. The main purpose of markdowns is either to promote an item for a limited time to get traffic and sales in the store (called promotional markdowns) or to properly value our inventory (called regular markdowns). The latter, to properly value our inventory, is what you should always strive for.

A good retailer examines their inventory on at least a monthly basis, some even do it weekly. An inventory evaluation begins with an examination of the age of the current inventory. Generally speaking, any inventory that is less than four months old is considered current inventory, although high turn retailers will lower this number to as little as eight weeks old. Any inventory from four months to eight months old is considered slow moving and may require a small markdown to increase the rate of sale. Any inventory over eight months old is considered old inventory and therefore subject to a deeper markdown to clear it. A good store will never have any "birthday" inventory, which is merchandise that has been around for over one year.

Generally speaking, the amount of discount or markdown required on any item is based on three factors: the current on hand, the current rate of sale and the desired stock turn. For example, if you have an item that has an on hand of 200 units, a rate of sale of ten per week, you know that you have twenty weeks supply of that item. If you are trying to turn it four times, you are not going to make it at the current rate of sale. Four stock turns would mean that an item is in inventory for no more than thirteen weeks, and this item may be here for twenty, so you have seven more weeks of supply than you need. You might take a small markdown (10 to 20%) to speed up the rate of sale on this item so that it sells fifteen per week and brings you to almost out within the thirteen weeks. Contrast this with an item that you also have 200 of, but the rate of sale is two per week. At that rate of sale, you have almost two years supply. Clearly, you have to take a substantial markdown to get the rate of sale up to fifteen per week. This item could easily require a markdown in the 70% off range.

A markdown should be viewed as 'tuition that we pay for an education about our customer'. A good rule is to never take a markdown unless you know why you are doing it.

>> Your Next Steps

Here are five suggestions that will help keep you out of inventory trouble:

1. Control your inventories (never buy more than you can realistically expect to sell in eight weeks). Ask yourself with every PO that you write, "Do I really need this much?" Remember that scarcity increases demand and that it is easy to buy 500 of any items, but much more difficult to find 500 customers that want it.

2. Always try to get exclusives so you are not being shopped on an apples to apples comparison basis. If you cannot get total exclusivity, then get time (first three months) or get geographic (only one in your city to sell it), or channel, (only gift store). Even if you can get different packaging that will make it look less like the others, it can work.

3. Nurture your customers who do not shop you on price alone. Send thank you cards and maintain close relationships with those good customers. Help them by creating gift registries, remembering important dates for them, become more than an item provider in their life. Add value to what you do for them.

4. Always keep your markdown items at the back of the store where the customer has to search to find them. Drag them through the total store and tempt them with your good items before they see the markdowns.

5. Remember, the price you paid for the item has nothing to do with the selling price. We have always said that "Your first markdown is the cheapest". If you take a markdown (and NEVER take a markdown without knowing the cause) and the item sells out immediately, do not regret the fast sale. Pat yourself on the back: you paid your tuition and do not make the same mistake again!

Inventory, can't live with it, can't live without it! A critical analysis of your current inventory and a plan for new buying can and will increase not only your profitability, but also your customer service levels. Good Luck!

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