

APPLYING TO DAY TO DAY ORDERING DECISIONS

(Addendum to talk given at INATS Denver 2008)

Please go to www.newleaf-dist.com/ICforRetailers for a spreadsheet with all of the formulas you need. All you have to do is plug in numbers and the calculations are done for you.

The hypothetical examples given in the above presentation for GMROI on orders used general assumptions to make an emphatic point of principle, but to make this really useful, you need to know how to use the formula for day to day ordering decisions. This same formula can be used to compare ordering a whole line or individual items. In other words, you can use it to compare ordering 5 units at a 45% discount to 2 units at a 40% discount. Or you can use it to compare ordering 100 units directly from publisher/producer at 50% discount with ordering 80 units from a wholesaler at 40% discount.

NOTE: For simplicity, I have not introduced what is called lead time. This is the time that elapses from when you place an order to when it is received and available on your shelves. What is important about lead time is that the longer it takes to replenish, the more inventory you need to carry to avoid out of stocks. Just know that lead time that is any more than one week, greatly reduces GMROI, or worse, if you run out, sales.

Again the formula:

GMROI = GM% x Sales in Period / Avg. Inventory

- GM% is either the discount off of retail or if using mark up, or $1 - (1 / M.U.)$
- For the period, we use the first month from the date the order is received.
- Sales in the period will be your anticipated average unit sales per month times average retail price for items in the order.
- Average Inventory = (Beginning Inventory + Ending Inventory) / 2

Sales in Period

We all know that unit sales for various inventory items can fluctuate dramatically, however since sales should be the same no matter what our margin is, we only need to get close for the purpose of comparing ordering options. In fact, if you have a pretty good 'seat of the pants' idea that you sell around 3 of these a month, that's close enough.

If you have a computer system, there is probably a report that will show unit sales per month for various inventory types. If you do not have a computer system and feel a need to be more precise, you will need to calculate your average unit sales per month for various inventory types in your store. This is useful to know anyway.

Start with finding your average unit cost for a particular inventory type. The best way to get this is to go back to your last physical inventory and divide your inventory value by the total number of units for each type of inventory. For example, if you had 18,000 books in inventory worth \$180,000, then your average unit cost is \$10.00.

If you are unable to use a physical inventory, then you can use a cross sampling of vendor invoices. From each invoice take the total cost of a particular inventory type and divide by the number of units. For example:

	\$ Cost	Units shipped	
Invoice A	\$432.00	45	
Invoice B	\$639.45	63	
Invoice C	\$748.25	79	
Etc.			
Average Cost per Unit	\$1819.70	187	\$9.73

(The larger the sampling, the more accurate your average cost per unit will be. Also, be sure your sampling is representative in the proportion of the number of orders you place with various suppliers at various discounts.)

Once you have your **average unit cost**, you calculate historical average unit sales per month by dividing monthly COGS for the inventory type by average unit cost.

Ending Inventory

Ending Inventory will be beginning inventory – COGS if you do not receive any more of the items within the month. Beginning inventory is the cost of the order or of the item ordered if comparing for single items.

Example:

If you order 10 units and your anticipated sales are 5, you will have 5 units at the end of the month. Your ending inventory would be 5 x Unit Cost.

If you receive additional inventory during the month it is more complicated, but you can estimate your average.

Example:

If you order 3 units and your anticipated sales are 5, and each week after that you order 2, your ending inventory would theoretically be 4. (3 units week 1, 2 units each in weeks 2, 3 and 4 = 9 units received – 5 sold)