# A Method of Determining Inventory Levels for Retail Jewelers 



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## Inventory management and control is an economic imperative

Your need to deconstruct the components of your business in order to have a deeper understanding of its parts is an imperative. In the stages of deconstruction, you'll begin to ascertain what elements are vital in the analysis of determining inventory levels...and determining inventory levels is your most significant objective. However, determining a goal for inventory levels is a personal one. It's personal because of what comprises your company's sales and your desired debt levels and cash flow, rather than relying on a formula that only measures turnover or GMROI (Gross Margin Return on Inventory).
The most often asked question is: How much inventory should a jewelry store own?
For example, if you were to generate $\$ 1$ million in sales with a $50 \%$ Gross Profit (GP), how much inventory should you own in order to achieve a one-time turn? This is not an academic question; it pertains to nearly every jeweler at every level of sales volume.

The overwhelmingly erroneous response to this question is $\$ 500,000$. It's wrong for a number of reasons and this article is going to address each of those reasons and demonstrate how to analyze every jewelry store, regardless of the specific model or sales volume.

## When inventory goals are based on Sales, the store will be significantly overstocked.

Special Orders, Repairs, Custom (and in some cases Over The Counter purchases) are almost always included in 'Sales' and need to be taken out of the equation. While the netting out of non-showcase sales is becoming more commonplace, there are two other significant factors which also need to be considered when determining your company's inventory levels. The first is gross profit and the second is some calculated return on investment. For the purposes of this discussion, we will use GMROI as a measure of return on investment.

The budgeting process always begins with finding a starting point, but which numbers do you use to access your inventory goal? Should you use Total Sales or do you begin simply with showcase sales and calculate from there? The issue gets further complicated because each store's sales are made up of different components (for example, varying percentages of special orders, custom work, repairs or watches). Also, since the merchandise mix and pricing philosophies of each business are different, gross profit margins are going to be different, and as you will see, margin will have a significant impact on your inventory levels. Until now, there has not been a uniform formula that addresses an individual business.
While we're on this subject, it's important to note that your merchandising philosophy is a separate, although no less important area, but is beyond the scope of this particular discussion.
It can be argued that if your merchandise mix is not producing a healthy gross profit and turnover, your inventory levels are irrelevant and we should "fix the mix" as it were, first.

## THE CHALLENGE

The challenge in developing a budgeting process is finding a single formula that all companies can use to get a close approximation of an inventory goal for their individual business model.

However, it also has to take into consideration the variations from one business to another.
The budgeting process historically began with the Profit \& Loss (P\&L) or Income Statement. The majority of the budgeting formulas used begin with Sales (which is the first line of the Income Statement). However, Sales, as it turns out, may be the wrong number to begin with. For the purposes of this discussion, Sales will not be called "SALES" at all, but Revenue, since the number is a report of all cash coming into the business, regardless of the source.

## INCOME STATEMENT MISNOMERS

Since all monies coming into the company is considered SALES on the Income Statement, regardless of what generated that income, the report will be misleading relative to your inventory needs. However, this exact information is relied upon in many circumstances to develop budgets:

| JEWELER A |  |
| :--- | :--- |
| SALES | $\$ 4,673,989$ |
| COST OF SALES <br> as listed on this jeweler's P\&L | $(\$ 2,835,441)$ |
| GROSS PROFIT | $\$ 1,838,548$ |

You may have seen statements that begin with SALES, subtracts Cost of Goods Sold (COGS), ends at Gross Profit (GP), from which Expenses are deducted, leaving a net profit or loss.

What can we glean from this information relative to our inventory levels? While this example may work for accounting purposes, the data is actually misleading for developing inventory budgets. In the case of Jeweler A above, if a turnover goal of 1 X is used, this jeweler would aim for an inventory goal of $\$ 2,835,000$, based on their COGS. If it was this simple, the industry's inventory levels and cash flow would be just fine - but they are not.

There are two things that are misleading from the P\&L: Aggregating income from all areas of the business masks the various sources of that income, and Generally Accepted Accounting Principles allows items to be included in COGS that have nothing to do with the cost of the inventory. These items need to be segregated for inventory budgeting purposes in order to focus on the parts of sales and COGS related to inventory budgeting.

A typical Chart of Accounts is often set up so that expenses other than the cost of the goods are built into Cost of Sales. These numbers were taken from the P\&L statement of Jeweler A:

Of the $\$ 2,835,441$ Cost of Sales, $\$ 2,161,992$ is the cost of the merchandise. $\$ 673,000$ is included in Cost of Sales on the Income Statement, but has nothing to do with the cost of the inventory that was sold. When you are determining your goals for inventory from your Income Statement rather than your POS system, make sure you are only

| COST OF SALES <br> FROM JEWELER A |  |
| :--- | ---: |
| COST OF SALES |  |
| COST OF GOODS SOLD | $\mathbf{2 , 1 6 1 , 9 9 2}$ |
| OTC GOLD COSTS | 477,574 |
| OTC GOLD PARTY COSTS | 19,748 |
| CREDIT CARD EXPENSE | 49,439 |
| WELLS FARGO FEE | 18,059 |
| DISCOUNTS EARNED | $-12,455$ |
| WAGE SHOP | 49,750 |
| OUTSIDE JEWELRY REPAIR | 1,747 |
| OUTSIDE WATCH REPAIR | 41,130 |
| OUTSIDE REPAIRS | 2,663 |
| TOTAL COST OF SALES | $2,835,441$ |

looking at the cost of the inventory, not what is included in Cost of Sales which may be appropriate only for accounting purposes. Other examples we see included in COGS that are not on this list is often freight-in and sometimes packaging.

## DECONSTRUCTING THE INCOME STATEMENT

We have established that SALES (the Total Sales coming into the company) is not the correct number to use for determining inventory levels. Showcase Sales should be used to calculate inventory levels. But what are Showcase Sales?

## Showcase Sales excludes Custom Sales, Repair Sales and Special Orders from Revenue.

Let's consider the example of a 3.00 ct diamond that you buy for $\$ 90,000$ and sell for $\$ 100,000$. That sale will have an effect on Revenue, but will not have any effect on how much inventory you should carry. The accumulation of all sales that do not come out of the showcases will often total $40 \%$ or more of the company's total sales. Inventory goals that are based on Total Sales or Revenue will, therefore, be far too high.

## SPECIAL CIRCUMSTANCES

We also have to address any special circumstances that may be specific for your business. Any high-volume lines should be removed from your sales data to give you a more realistic picture of what is happening without those lines. Rolex and Pandora are the most obvious examples of this. We remove Rolex because the jeweler cannot easily determine how much inventory to carry, as Rolex dictates that. Also, sales from Rolex are typically very high relative to the company's total revenue and the margins are usually far lower than the rest of the business. This combination, high sales volume and low margin, masks what is otherwise happening in the business (making budgeting far more difficult) and so, we will set Rolex data off to the side to be managed independently.
I would remove Pandora from your budgeting process because of the effect that the line (and similar lines in this category) has on virtually all of your Key Performance Indicators.

Due to the extremely high unit volume but low average unit cost, Pandora will also skew your numbers and should be analyzed apart from the rest of your sales inventory.

| REMOVING ROLEX |  |
| :--- | :--- |
| COST OF GOODS SOLD | $2,161,992$ |
| ROLEX COGS | $(313,506)$ |
| COGS WITHOUT ROLEX | $\$ 1,848,486$ |

## WHETHER TO INCLUDE OR EXCLUDE A SPECIAL ORDER

There are two schools of thought about special orders. On the one hand, if the item did not come from the showcase, than it's a special order. On the other hand, for items such as wedding bands ordered in a specific finger size, since you are merely replacing the ring you own, it should not be thought of as a special order. Therefore, the nature of the special order should be considered when you decide whether to include that item in your calculation or exclude it. If you are in doubt, I would recommend that you choose the more conservative answer (exclude it) - you can always buy more inventory!

## OTC PURCHASES AND SALES

It should be obvious, but in case there is any confusion, Over the Counter (OTC) purchases that are scrapped out are not to be considered a part of sales, but rather should be a separate line on your P\&L statement. OTC Sales and OTC COGS should each have their own Chart of Accounts account and be shown on your Income Statement separately. However, if you are buying goods OTC and adding them to your Estate Department, this becomes Owned Inventory and you would want to include these in your Showcase Sales, COGS and owned inventory numbers.

## HOW TO DEAL WITH MEMO

## Memo Sales as well as memo inventory should usually be excluded from your calculations.

While it is important to understand how each of the areas of your business contributes to your SALES, we are looking to answer a specific question: How much asset inventory should you own at cost to do the business that you are currently doing? As we shall see, we will use a GMROI goal to provide the answer. Treat memo sales and inventory as you would a line such as Rolex; remove memo sales and inventory from the numbers and treat it as a separate business.

## GMROI EXPLAINED

Gross Margin Return on Inventory is quite simple.
GMROI measures the relationship between inventory and gross profit dollars, expressed in dollars and cents.

For example, for every dollar you own in inventory, at cost, how much Gross Profit are you generating? When you generate the same in Gross Profit Dollars as you have in inventory, your Gross Margin Return on Inventory will equal exactly $\$ 1.00$. This is an extremely important concept to understand.

Historically, you will find that various formulas have been used. Accounting formulas use an average inventory throughout the year, which is fine for determining GMROI for accounting purposes. However, when buying, we will need to know our current inventory positions to determine whether to feed a category or not. While your inventory will likely go through wide swings throughout the year, the average is going to be just that... an average. When we are buying for the Spring season, what you had in stock last November has nothing to do with your current inventory requirements, so your current inventory is far more useful than your average inventory.

It is fairly common knowledge within the industry that inventory should turn at least one time. But what would be considered a good GMROI goal? As mentioned above, for merchandising purposes GMROI should be measured via a snapshot of your current inventory. Therefore, GMROI is going to fluctuate from month to month and a range can be expected. A GMROI goal of at least $\$ 1.00$, but not much more than $\$ 1.50$ is a very good target range. Meaning, for each dollar you own, you are generating at least $\$ 1.00$ in Gross Profit. However, when GMROI goes above $\$ 1.50$, it can be argued that the inventory is getting a bit lean and sales opportunities may be missed.

EXAMPLE A:

| $\$ 4,673,989$ | $39 \%$ | $\$ 2,835,441$ | $\$ 1,838,548$ | $\$ 2,184,222$ | 1.30 | $\$ .84$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SALES | GP\% | COST | GP\$ | INVENTORY <br> ON HAND | TURNOVER | GMROI |

Jeweler A generated Sales of $\$ 4,673,989$, and a gross profit of $\$ 1,838,548$ with a current inventory of $\$ 2,184,222$. While turnover looks good at 1.30 times, for every dollar of owned inventory on hand, only 84 cents of gross profit dollars is being generated. How can we be doing so well with turnover, but have a relatively low GMROI? The answer has to do with margin. This jeweler is doing a good job in keeping inventory low relative to sales, but there are areas of the business that are pulling down margin, likely Rolex and OTC purchases. If this jeweler's goal was to achieve a GMROI of $\$ 1.00$, one of two things will have to happen; either GROSS PROFIT has to increase, or inventory has to decrease (or a combination of the two). GMROI will equal $\$ 1.00$ when inventory $=$ gross profit. In this case, inventory will have to decrease by $\$ 350,000$, or gross profit will have to increase by the same amount in order to raise GMROI to $\$ 1.00$.

## NETTING OUT YOUR NUMBERS

Understanding the components that should be removed from Total Sales will help you determine your proper inventory goals. As we net out the numbers in our example from Jeweler A, just over $\$ 2,500,000$ of the $\$ 4,700,000$ was generated
by sales from the showcases (without Rolex). As you will clearly see below, there will be a dramatically different result in the inventory budgets between the following two analyses.

| TOTAL SALES | $\mathbf{\$ 4 , 6 7 3 , 9 8 9}$ |
| :--- | ---: |
| ROLEX | $\mathbf{4 7 8 , 7 6 2}$ |
| SPECIAL ORDERS | $\mathbf{5 9 3 , 6 7 0}$ |
| MEMO | 154,882 |
| REPAIR \& CUSTOM SALES | 163,046 |
| OTC SALES | 759,168 |
|  | $(2,149,528)$ |
| NET SHOWCASE SALES | $\mathbf{\$ 2 , 5 2 4 , 4 6 1}$ |

We began this discussion with the example: A jeweler with $\$ 4,674,000$ in Revenue and $\$ 2,800,000$ Cost of Goods Sold. What inventory levels would we have determined when relying only on that information? In just a few short steps, we netted out the non-showcase sales, as well as Rolex (sales and COGS), to show what is actually happening. In fact, showcase sales are only $\$ 2,524,461$ of the total sales. In other words, showcase sales (without Rolex) is only $54 \%$ of total SALES! It is common to discover that at least $40 \%$ of total "SALES" has nothing to do with how much inventory your store needs, even without considering a line like Rolex.
How much inventory should this $\$ 4,700,000$ jeweler have in stock? After netting out Repairs, Special Orders, Custom and Memo sales, as well as revenue from Over the Counter purchases, and removing Rolex from the equation as well, the store does $\$ 2,524,000$. If the gross profit is $47 \%$ for this portion of the sales, then the Cost of Goods Sold is $\$ 1,337,000$ (without Rolex) and Gross Profit is $\$ 1,186,000$. Therefore, this store needs an inventory of $\$ 1,337,000$ not including Rolex inventory, just to achieve a one-time turn. Currently, the store has an inventory of $\$ 2,184,222$, with about $\$ 400,000$ at cost of Rolex, or $\$ 1,784,000$ without Rolex.

## EXAMPLE B:

| \$2,524,461 | 47\% | \$1,337,720 | \$1,186,280 | \$1,784,222 | . 75 | \$. 66 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NET SHOWCASE SALES WITHOUT ROLEX | GP\% <br> WITHOUT ROLEX | $\begin{aligned} & \text { COST OF } \\ & \text { GOODS SOLD } \\ & \text { WITHOUT } \\ & \text { ROLEX } \end{aligned}$ | GP\$ | COST ON HAND WITHOUT ROLEX | ACTUAL TURNOVER | GMROI |

Consider the relationship between each of these numbers. The COGS without Rolex needs to be compared with the Cost of On Hand inventory, again without Rolex. In this case, there is $\$ 450,000$ more inventory on hand at cost than in Cost of Goods Sold, resulting in a turnover of .75. GMROI is calculated by comparing our Gross Profit Dollars with Cost of On Hand inventory. The $\$ 1,186,000$ of Gross Profit is compared with our on hand inventory of $\$ 1,784,000$ for a GMROI of just $\$ .66$. This store would have to reduce their inventory by $\$ 600,000$ in order to achieve GMROI of $\$ 1.00$ !

It is vital to understand the difference between the two sets of numbers represented between Examples A and B. The contribution of OTC and other non-showcase-generated gross profit masks the true nature of turn and GMROI.

It will be dangerous to rely upon the gross profit of the non-showcase areas included in SALES to keep the company's cash flow and bottom line healthy. For example, this company will run into cash flow challenges when OTC purchases suddenly stops. This store went from a healthy turn of 1.30 to an anemic turn of .75 by deconstructing what makes up the numbers in their financial statement. When inventory levels are determined by top line sales, and that number is a compilation of income that has no relevance to your inventory, your inventory levels will be far too high.

## GROSS PROFIT MARGINS

We see that determining an inventory goal should be based on the Gross Profit Margin generated from the net revenue as described above, and it is this number that will be used for our inventory budget. This does not presume that we are completely satisfied with current GP; however, we need to work with the Gross Profit that the business has been able to generate.

Each area of the business - showcase sales, repairs, OTC purchases and for our purposes lines such as Rolex, are going to generate very different Gross Profit percentages. The Income Statement that does not break out the Sales, COGS and GP\% for each of these areas isn't going to be helpful when determining your inventory levels.

## GMROI VS. TURNOVER

Using turnover to arrive at an inventory level works if the company's gross profit is right around $50 \%$.
For companies with GP significantly higher or lower than $50 \%$, using turnover is simply erroneous. The reason is the cost of your inventory does not drive your business, Gross Profit does! When Gross Profit is at (or very near) 50\%, Cost of Goods Sold and Gross Profit are nearly identical, so using either GP or COGS would work just fine. However, since many jewelers, especially highly branded stores, have margins in the low 40's; using turn will not be useful when determining inventory levels.
In this next example, a $\$ 10+$ million business has a GP of $42 \%$. Note the difference between Cost of Goods Sold of $\$ 6,138,000$ and GP of $\$ 4,385,000$.

As you can see, the company is getting nearly a one-time turn, but based on their available Gross Profit dollars, they are more than $\$ 2$ million overstocked, resulting in challenging cash flow and high debt levels to both banks and the trade.
The relatively low Gross Profit, combined with a relatively low turnover, results in the anemic GMROI.

| $\$ 10,523,151$ | $\$ 6,138,042$ | $\$ 4,385,109$ | $\$ 6,639,197$ | .092 | 0.42 | $\$ .66$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SALES | COST OF <br> GOODS | GP\$ | COST ON <br> HAND | TURN- <br> OVER | GP\% | GMROI |

## SEASONALITY

Your inventory levels will vary depending on the time of year. We expect it to be at a peak in the fall and at a low point in January or certainly by the end of Q1. The ebb and flow of inventory levels is normal - but when inventory gets too high, and stays too high, cash flow (or bank debt) becomes a problem. The goal is to maintain inventory at a healthy level throughout the year.

## CURRENT SALES VS. PROJECTED SALES

A typical approach to determining inventory levels is using projected sales. An Open to Buy plan, for example, begins with your expectation of what sales will be over a future period, say the next 12 months, and you would build your inventory budgets based on that 'estimate'. There is an inherent danger in using an estimate of future sales, rather than starting with what you actually know - sales from the past 12 months. If your sales increase, so will your turnover, and only then should adjustments be made to your inventory levels. You will be making those adjustments within the categories (and price points) where you are experiencing your growth, and not just increasing overall inventories based on a projection. Far too many stores become significantly overstocked due to looking forward and basing their inventory levels on the expected continuation of rising sales. When those increases do not occur, cash flow suffers immediately.

## ARRIVING AT A FORMULA

The first half of this article described which numbers to use (and which to ignore) for determining an inventory budget. Now, we will jump into figuring this out for any jewelry company.

First, your inventory levels will be determined by removing all non-showcase sales from your total revenue. Next the variable of your company's GP\% has to be included in the formula, since as GP\% rises and falls, so should inventory levels. Finally, we have to use some factor to arrive at our goal, and that factor, also variable based on your individual company, is GMROI.

## The formula, written out, looks like this:

Inventory will equal Revenue, after removing all non-showcase sales, factoring in your GP\% and dividing the result by your GMROI Goal.

Inventory = Revenue - (Custom Sales + Repair Sales + Special Orders) X GP \% / GMROI Goal

## Expressed as an equation:

I = R - (CS+RS+SO) x GP\% / GG

## Here it is again, using dollars and percentages.

Inventory $=\$ 1,000,000-(\$ 100,000+\$ 100,000+\$ 200,000)$ X . $45 / \$ 1.20$
Inventory = Revenue - (Custom+Repairs+Special Orders) X GP\% / GMROI
Inventory should equal your total Revenue ( $\$ 1,000,000$ ), minus all non-showcase sales (Custom, Repair and Special Orders), multiplied by your GP\% (45\%) divided by your GMROI Goal of \$1.20.

In this example, Inventory $=\mathbf{\$ 2 2 5 , 0 0 0}$

## The entire process step by step

```
Inventory = Revenue - (Custom Sales + Repair Sales + Special Orders) X GP \% / GMROI Goal
Inventory = \$1,000,000 - (\$100,000+\$100,000+\$200,000) X . 45 / \$1.20
Inventory = \$1,000,000 - (\$400,000) X . 45 / \$1.20
Inventory = \$600,000 X . 45 / \$1.20
Inventory = \$270,000 / \$1.20
Inventory = \$225,000
```


## WHY GP MARGIN AND GMROI GOALS MATTER

Now let's look at the same size business, but demonstrate what happens as margin and GMROI change. Taking exactly the same situation, but for a company that is generating $55 \%$ GP rather than a $45 \%$ GP, there will be a significant impact on the inventory level. Also, because GMROI is your goal to set, you may determine that a GMROI of $\$ 1.20$ won't leave you with the inventory levels you are comfortable with. Or perhaps, because of your current mix of merchandise, you may find that a GMROI goal of $\$ 1.20$ is not possible, at least until your merchandise mix changes. Whatever the reason, a GMROI goal is going to be based on your current situation and what you anticipate achieving over the next 12 months. As your product mix changes, and as you work on replenishing fast-sellers and moving out aged inventory, it will be easier to raise your GMROI goals in the future.
By improving GP margin and lowering your GMROI goal, your inventory budget will change dramatically.

In this scenario, we will increase GP to $55 \%$ and lower your GMROI goal to $\$ 1.00$. This combination, higher GP and lower GMROI, will result in a significantly higher inventory budget. (Currently, the average true GMROI in the jewelry industry is in the $\$ .70-\$ .75$ cent range, regardless of what you have seen written on the subject).
Inventory $=\$ 1,000,000-(\$ 100,000+\$ 100,000+\$ 200,000) X .55 / \$ 1.00$
Inventory $=\mathbf{\$ 1 , 0 0 0 , 0 0 0 - ( \$ 4 0 0 , 0 0 0 )}$ X . $55 / \$ 1.00$
Inventory = \$600,000 X . 55 / \$1.00
Inventory = \$330,000 / \$1.00
Inventory = \$330,000
As you can see, by changing two things, GP and our GMROI goal, the inventory budget was increased by more than $\$ 100,000$. This is a $50 \%$ increase over the budget in the first example, and it demonstrates the impact that GP margin and your GMROI goal will have on your inventory levels. Please remember this when considering your own GMROI goals and use a realistic and achievable number.

## UNDERSTANDING THE EFFECTS OF THE TWO VARIABLES

The two variables, GP \% and GMROI, are combined to determine your inventory budget. For a given GP\%, as GMROI increases, inventory must decrease! However, as you increase GP and decrease GMROI, higher inventory levels are allowed. A store with one million dollars in showcase sales, a $50 \%$ GP and a GMROI goal of $\$ 1.00$, will have an inventory budget of $\$ 500,000$. Yet, the same store, but with a $53 \%$ GP and a GMROI goal of $\$ 1.30$ will actually have a lower inventory budget! (Please study the effect that the combination of these two variables will have on your inventory in the table provided below.)
This is the part of this discussion that many people find confusing. If you keep GMROI fixed, at say, $\$ 1.00$, as you move into higher GP margins, inventory will indeed increase. A store that achieves $53 \%$ vs. $45 \%$ GP can have $\$ 80,000$ more inventory, which is pretty easy to follow. But remember that we need to establish our GMROI goal as well, and it is here where things tend to get fuzzy. GMROI is the number that measures return on your inventory investment. The lower your return, the more inventory you will have. The higher the return, the less inventory you will have.
As you can see in the table below, a store with $\$ 1$ million in sales and a $53 \%$ GP that has $\$ 663,000$ in inventory is producing a GMROI of $\$ .80$. The store that achieves $\$ 1$ million in sales, but does it with $\$ 408,000$ in inventory, has a GMROI of $\$ 1.30$. Remember that GMROI is your goal to set - and it is this goal that will determine how much inventory you will have in your inventory budget.

PROJECTED INVENTORY AT COST PER \$1 MILLION IN SALES*

| GMROI | $\$ 0.80$ | $\$ 0.90$ | $\$ 1.00$ | $\$ 1.10$ | $\$ 1.20$ | $\$ 1.30$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $45 \%$ | $\$ 563,000$ | $\$ 500,000$ | $\$ 450,000$ | $\$ 409,000$ | $\$ 375,000$ | $\$ 346,000$ |
| $46 \%$ | $\$ 575,000$ | $\$ 511,000$ | $\$ 460,000$ | $\$ 418,000$ | $\$ 383,000$ | $\$ 354,000$ |
| $47 \%$ | $\$ 588,000$ | $\$ 522,000$ | $\$ 470,000$ | $\$ 427,000$ | $\$ 392,000$ | $\$ 362,000$ |
| $48 \%$ | $\$ 600,000$ | $\$ 533,000$ | $\$ 480,000$ | $\$ 436,000$ | $\$ 400,000$ | $\$ 369,000$ |
| $49 \%$ | $\$ 613,000$ | $\$ 544,000$ | $\$ 490,000$ | $\$ 445,000$ | $\$ 408,000$ | $\$ 377,000$ |
| $50 \%$ | $\$ 625,000$ | $\$ 556,000$ | $\$ 500,000$ | $\$ 455,000$ | $\$ 417,000$ | $\$ 385,000$ |
| $51 \%$ | $\$ 638,000$ | $\$ 567,000$ | $\$ 510,000$ | $\$ 464,000$ | $\$ 425,000$ | $\$ 392,000$ |
| $52 \%$ | $\$ 650,000$ | $\$ 578,000$ | $\$ 520,000$ | $\$ 473,000$ | $\$ 433,000$ | $\$ 400,000$ |
| $53 \%$ | $\$ 663,000$ | $\$ 589,000$ | $\$ 530,000$ | $\$ 482,000$ | $\$ 442,000$ | $\$ 408,000$ |

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## ADJUSTING FOR SPECIAL CIRCUMSTANCES

Now let's go back and look at the jeweler who carries a line like Rolex and how this will change our formula a bit. As mentioned above, Rolex should be handled as a separate business, and addressing it is just a minor addition to our formula.

Inventory = Revenue - (Custom Sales + Repair Sales + Special Orders + Rolex) X GP \% / GMROI Goal

## Expressed as an equation:

```
I = R - (CS + RS \(+S O+R X) \times\) GP\% / GG
Inventory = \$2,000,000 - (\$100,000+\$150,000+\$250,000+\$700,000)X.52 / \$1.00
Inventory = \$2,000,000 - (\$1,200,000) X . 52 / \$1.00
Inventory \(=\$ 800,000\) X \(.52 / \$ 1.00\)
Inventory \(=\$ 416,000 / \$ 1.00\)
Inventory = \$416,000
```

For this example, we started with total Revenue at $\$ 2,000,000$, kept Custom Sales at $\$ 100,000$, raised Repair Sales to $\$ 150,000$ (Rolex repairs will bring in the additional repair revenue) and kept Special Order sales at about $20 \%$ of Revenue without Rolex. We used a GP of $52 \%$ (again, without Rolex) and a GMROI Goal of $\$ 1.00$

The resulting inventory level may appear to be low at $\$ 416,000$, but remember that this is without Rolex. Add back the Rolex inventory and this budget will increase significantly; it may likely double. The problem remains one of trying to figure out your inventory goals while having all of these disparate parts added together on the Income Statement under SALES, where there is no simple way to unravel it all.

## SIMPLIFYING THE FORMULA

Some people have already made the adjustments to their Chart of Accounts to track only Showcase Sales. If this is the case, there is no reason to begin with Revenue. The formula for determining inventory is then simply:

Showcase Sales X GP\% / GMROI Goal
I = SC x GP\% / GG
Inventory = Showcase Sales x GP\% / GG
Inventory $=\$ 600,000 \times .55 / \$ 1.00$
Inventory $=\$ 330,000$

## SIMPLIFYING EVEN FURTHER

If you have the ability to measure the GP Dollars generated from your Showcase Sales, you can simplify the formula even further.
I = GP\$ / GG
Inventory = GP Dollars / GMROI Goal
Inventory $=\$ 330,000 / \$ 1.00$
Inventory $=\$ 330,000$

## ESTIMATING USING PERCENTAGES

In case you cannot get the exact breakouts of these numbers from your Income Statement or your POS system, you can still approximate the results by using the following percentages.

## 10\% of Revenue for Repair Sales

$10 \%$ of Revenue for Custom (unless you are a business geared towards custom work)
$20 \%$ of Revenue for all Special Orders
It isn't as important to get these percentages exactly right. Instead, spend more time on the concepts and calculating your inventory levels based on the net showcase sales.

## ALL INVENTORY IS NOT CREATED EQUAL

Developing a budget does not address the quality of your inventory...how it's performing and how you are managing it - it is simply a dollar figure to aim for. While this article was not intended to delve into how to deal with non-performing inventory or how to manage your inventory, we would be remiss were we to ignore the quality of the inventory you own. All things being equal, a company with $20 \%$ aged inventory is in far better shape than a company with $60 \%$ aged inventory. Therefore, even though you may be close to having the correct amount of merchandise, you have to analyze further to determine if your dollars have been invested in the best way possible. If not, steps should be taken to move out non-performing merchandise and to re-order fast-selling items.

## DEVELOPING YOUR GMROI GOAL

We had the opportunity to discuss this article in depth with dozens of our retail clients and the one area that was most challenging was how best to determine your GMROI goal. At first blush, one would expect that higher goals are always better goals which led to discussions about why we would want our GMROI goal to be a relatively low number, instead of shooting for, say, a GMROI of $\$ 2.00$. The answer is in having a better understanding of how to use GMROI as a guide for developing inventory levels.
It is up to the person or persons responsible for achieving the company's goals to guide the process of inventory performance. In the case where the systems are in place for frequent replenishment of fast-selling items and higher than average turns are being achieved, we would expect GMROI to be in the $\$ 1.20$ to $\$ 1.50$ range. Much above $\$ 1.50$, we would suggest looking at feeding the inventory somewhat to encourage increases in sales.

However, in an area where you determine you can take market share but are under-inventoried, investing in inventory beyond what your historical sales would dictate to be the 'right amount' is often called for.

## The result of increasing inventories beyond what would have been a prudent level will lower your GMROI immediately.

We do this in order to grow sales in this underserved category. Since we are always looking for sales growth opportunities, it is expected that certain categories of your business will have lower GMROI than other, more developed categories.

## CONCLUSION

You expect there to be differences in GP margins among your categories. Loose diamonds will generally produce far less GP\% than will sterling silver. Margins also differ widely from business to business in each of the areas that we are excluding from SALES: Repairs, Special Orders and Custom. While each of these non-showcase-sales areas are removed from your total sales numbers, they will be producing additional GP dollars as well and you may consider the contribution of these GP dollars when determining your GMROI goal. This is all well and good, but the purpose of this discussion is about dealing only with the amount of inventory you should carry based on the amount of merchandise that is sold from the showcases, the GP that those sales generate and your target return on the investment of that inventory, using GMROI as the calculation.

## Arriving at your inventory goal begins with understanding the parts of your business that require

 inventory.Today, Alloy Samples readily available for your bridal department would augment the need to stock hundreds of thousands of dollars of live 'sample' inventory.
Varying margins achieved from the different areas of your business makes the need to deconstruct your business, separating the parts on your Income Statement, extremely important. Regardless of what numbers you start from, Sales or GP Dollars, you can fairly easily determine an ideal average inventory goal based on GMROI.
This process should also point out the pressure that declining GP Margin has on your ability to merchandise your company, buy new merchandise and pay your bills.

This process also supports the concept of introducing higher-margin inventory to offset the low-margin areas, and rethink your markup strategies as well as your discounting policies. Keep in mind that as margins decline, it will become ever more important to manage the dollars that you have budgeted. Having a dollar budget is a good start, but if the fast-selling inventory is not being replaced and non-performing merchandise is not being dealt with, the dollar budget will be meaningless insofar as your cash flow is concerned - but this for another discussion.
It will be infinitely easier to do this work when your Income Statement reflects the various parts of your business as outlined above.

Your POS system should also separate showcase sales, special orders and custom sales for you. If it does not do this already, speak with your POS provider to see if there are some workarounds for you to use.
And finally, it's important to understand the nature of budgeting inventory using a formula. I have attempted in this article to explain an approach for determining inventory levels that can be used by any business, regardless of its makeup. However, using a goal, such as GMROI to arrive at an inventory budget does not address the myriad strategic decisions that should be considered when working on your own company's budgets.
An overarching merchandising strategy must be considered when deciding whether to over-inventory your watch or bridal departments, for example, not so much to generate a desired return on investment, but in order to own a specific position in the market or when you may be fighting to take market share. Deciding to invest more than a formula would dictate in order to take advantage of a significant purchase of loose diamonds, may take precedence over the adherence to a simple formulaic approach to the budgeting process. While I wanted to bring this to your attention, a more comprehensive discussion is beyond the scope of this article.

