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Misunderstanding the CPVs

Every management decision and every employee action in distribution impacts profit through what are commonly called the CPVs—the Critical Profit Variables.⁶ That is, decisions and actions cause sales to go up or down or expenses to rise or fall, or other of the CPVs to change. As a final result, profit changes.

Despite the complexity of operating a distribution business, there are only five really important CPVs:

- **Sales Volume**—The revenue generated by the firm.
- **Gross Margin**—The bag of dollars left over from sales after paying for the merchandise (and possibly services) sold by the firm. In some firms this is referred to as Gross Profit.
- **Expenses**—The costs of operating the business. As stated before, payroll (fully loaded) is the major expense category. Anything else associated with running the business also is included here—rent, utilities, interest, the cost of the insightful decision to purchase this book. Anything and everything else.
- **Accounts Receivable**—The investment associated with selling merchandise to customers on terms and then waiting for them to take their own sweet time to pay.
- **Inventory**—The value of the merchandise carried to support sales.

There are some other factors that are impacted by managerial decisions and actions, such as the investment in equipment and machinery. For manufacturers such an investment would be an additional CPV. For distributors it is

⁶ The Critical Profit Variables (CPVs) are sometimes referred to as Key Profit Drivers (KPDs) or Key Profit Indicators (KPIs). The terms are interchangeable. Using different terms allows consultants to present very old wine in what appears to be a brand new bottle.

one of the PPVs (Puny Profit Variables). Distributors must focus on the big five. Notice the term *must*.

This chapter is organized into three sections:

- **The Hierarchy of the CPVs**—Some of the CPVs are more important than others. This section will attempt to set priorities based upon profit analysis rather than conjecture or whim.
- **CPV Trade-offs**—Every one of the CPVs cannot be maximized at the same time. In almost every decision, one of the CPVs must be sacrificed for the greater good. This section will introduce the trade-off process.
- **A Brief Sojourn into the World of GMROI**—An example of how the failure to evaluate trade-offs properly causes things to go awry despite the best intentions of all involved.

The Hierarchy of the CPVs

Everybody agrees that the CPVs are, well...the critical profit variables. Where disagreement—and the occasional fist fight—emerges is in determining which of the CPVs is most important. Even within the big five, every factor can't be equal.

Setting a hierarchy is critical. If companies don't put their effort where the payoff is greatest, then profit will not improve. Luckily a brief review of the stockpile of business maxims helps develop the hierarchy:

- Nothing happens until somebody sells something.
- Every dollar of revenue in your business is the result of a pricing decision.
- Inventory is the largest investment in most businesses. Controlling inventory is the key to success.
- Expense control is actually much more powerful than sales in driving higher profits.
- The purchasing department is the one key area of your business where dramatic profit improvements can be made.

In short, *everything* is most important. Or at least everything is most important to somebody.

This was referred to in the previous chapter as a large pile of bad information. This does not mean the authors of the tomes quoted anonymously above are not incredibly smart folks with a sincere desire to help firms be more successful. What it does mean is that everybody filters information through their own kidneys.

If you are a sales consultant, sales are your life. You know for an unsalable fact that sales volume is the most important factor in the business. For inventory consultants, inventory is the most important factor. Candidly, though, if you are an inventory consultant your life is probably pretty dull.

The reality is that everything can't be most important or even above average in importance.⁷ There must be some hierarchy involved. That hierarchy must be specific to distribution, not to banks or pizza parlors.

Luckily, good old Mountain View Distributing can be utilized to develop that hierarchy. It is absolutely essential to note that what is good for Mountain View is good for every other distributor, including your firm. The exact numbers will be different, but the hierarchy will not.

The CPVs can be ranked for Mountain View with regard to their impact on Return on Assets (ROA). As a quick reminder, ROA is pre-tax profit expressed as a percent of total assets. It is the single most important measure of profitability ever developed.

The ROA analysis will be conducted in four exhibits, creatively labeled Exhibit 3 through Exhibit 6. For readers with inquiring minds that want to know, a detailed proof of the exhibits is provided in Appendix A. For the moment assume that the author actually knows something and consider only the four exhibits and the text that supports them. Feel free to go forward to Appendix A when done.

All of the exhibits are identical in structure. Once the concept behind one exhibit is understood, the rest are automatically in the bag. To make sure there is complete understanding of the structure, prepare to spend some quality time with **Exhibit 3**.

Gross Margin

The exhibit (like all of the others) measures ROA on the vertical axis. The intersection point on that graph is 8.0%, which is where Mountain View is as of this moment. Mountain View is slightly above the long-term ROA level of 7.0% for all of distribution. That is still not knocking 'em dead.

On the horizontal axis in every exhibit, Mountain View will be making a series of percentage improvements in one of the CPVs. In Exhibit 3 that improvement is in the gross margin dollars that the firm is generating. The improvements range from 0.0% (for the slothful) to 25.0%. A 25.0% improvement in anything, including gross margin, is a whopping big change.

⁷ Devotees of Garrison Keillor will remember that in Lake Wobegon every child is above average in intelligence. Keep G.K. in mind when reading business books.

Even Tom Peters would blush.⁸

The resulting graph demonstrates what happens to ROA as the improvements are made. For gross margin the line slopes upward to the right at a fairly rapid rate. Improvements in gross margin cause ROA to increase quickly.

Exhibit 3 notes on the horizontal axis that the percentage increases in gross margin are generated without increasing sales. That means the firm is producing a 5.0% increase in gross margin dollars on the existing \$20.0 million of sales volume.

The easiest way to conceive of this is that the firm is selling the same quantity of merchandise at the same prices as before. Sales volume remains \$20.0 million. However, the firm is now buying merchandise cheaper. Therefore, on the same sales volume the firm is generating 5.0% to 25.0% more gross margin dollars.

Two caveats are important in all of the graphs. They involve the time frame being analyzed and the impact of the action on the other CPVs.

Time Frame—All of the graphs are for the current year only. For example, Exhibit 3 describes what *would have happened* to ROA if the firm had generated anywhere from 0.0% to 25.0% more gross margin dollars than it actually did this year. Next year things will change, so a new graph will be needed. It is an extremely useful graph, but it must be limited to this year.

Impact on the Other CPVs—Changing one of the CPVs (like gross margin) might cause one of the other CPVs to change also. To be considered in the analysis, that additional change must be one that happens automatically. It can't be an arbitrary change even if that arbitrary change seems logical.

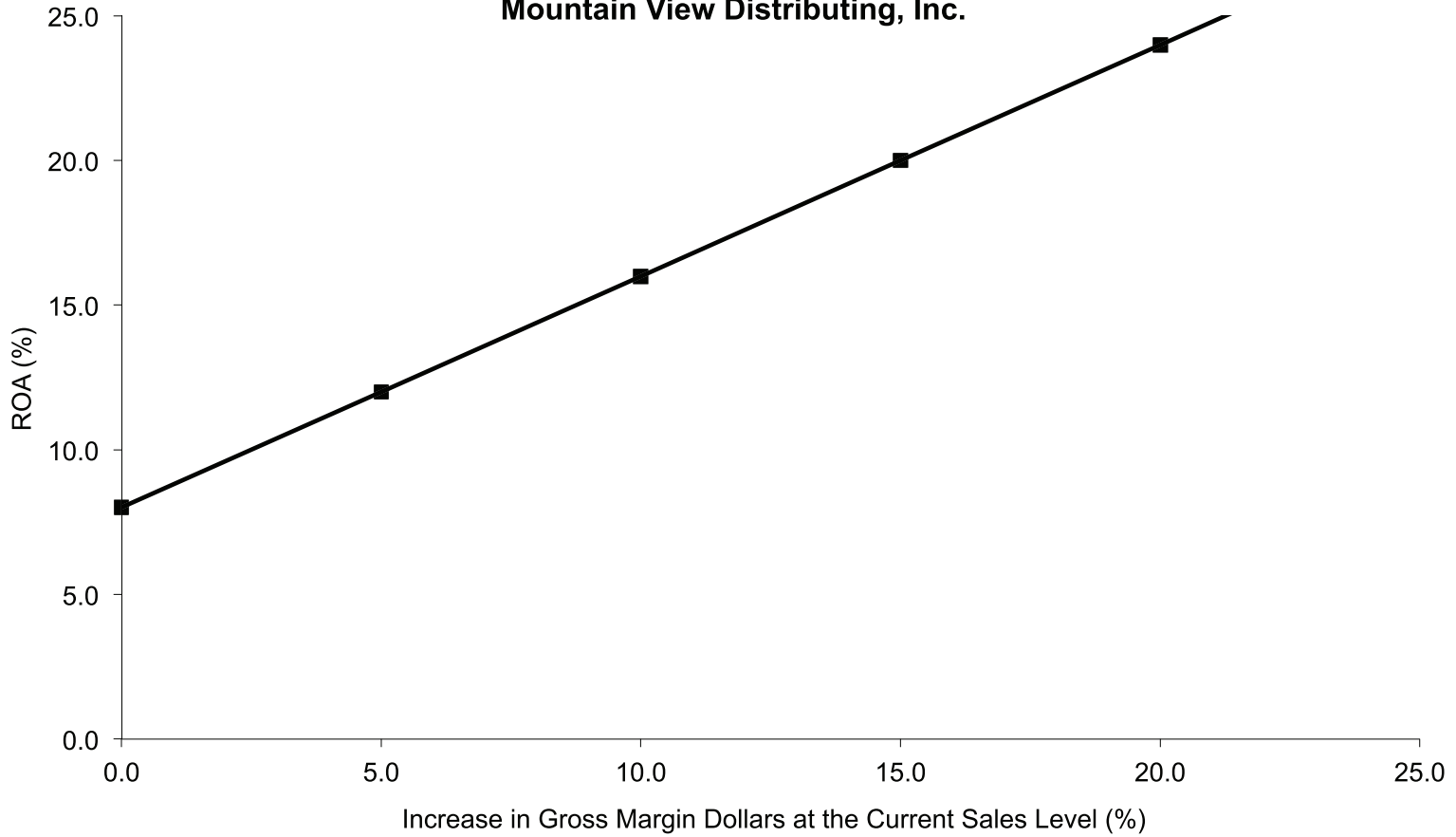
For example as gross margin dollars are increased on existing sales (Exhibit 3) it might be logical to assume that expenses would increase. The buying staff might have to be increased to find those opportunistic purchasing situations that are driving gross margin up.

This is a logical assumption, but is also blatantly arbitrary. The graphs are driven by the CPVs themselves and nothing else, unless that something else happens automatically.

These two assumptions are only minor limitations (or possibly irritations). The graph in Exhibit 3 clearly reflects the impact that increasing gross margin dollars has on the ROA the firm produces. It is a steep line. In point of fact, it is the mother of all lines. No other CPV drives ROA up as fast as increasing the

⁸ Tom Peters was the leading proponent of making gigantic changes quickly in business. See Tom Peters and Robert H. Waterman, Jr., *In Search of Excellence*, 1982. Despite its breathless tone, the book should be on every manager's bookshelf.

Exhibit 3
The Relationship Between an Increase in Gross Margin
and Return on Assets
Mountain View Distributing, Inc.



gross margin dollars. Gross margin should be priority number one for every distributor. Wow, a conclusion about the CPVs already.

Sales Volume

Exhibit 4 applies the same analytical process to sales volume. It is still the current year and the percentage increases in sales displayed (up to 25.0%) are over and above what the firm *actually* did. It is a classic series of “what ifs,” just like Exhibit 3.

The increase in sales is made while holding the gross margin at 25.0% of revenue. This means that when sales increase by 5.0%, the total dollars of gross margin generated also increase by 5.0%.

In addition, the expense structure of fixed and variable remains in place. Variable expenses are 5.0% of the increased sales, and fixed expenses remain constant—it is still this year. At the 25.0% sales increase level the employees may be begging for additional personnel to help do all of the extra work. Logical—but arbitrary—so it doesn't happen.

Don't get too upset; the “no change in the other CPVs unless it is automatic” rule gets stretched a little here. The stretching is on the investment side. As sales rise, two investment factors also rise—accounts receivable and inventory.

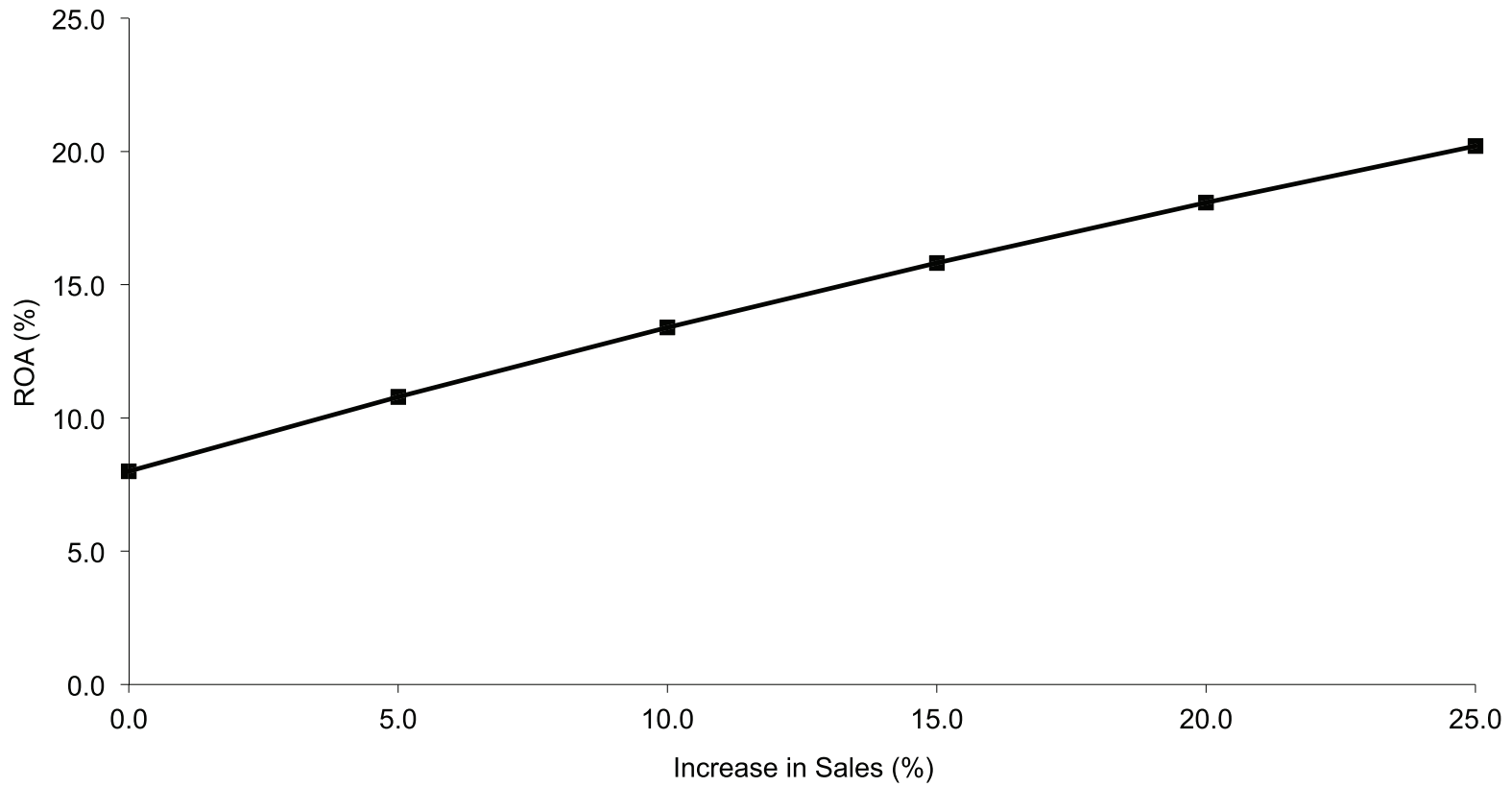
The increase in accounts receivable is certain to happen. As the firm sells more, it is automatically owed more by its customers. With 5.0% more sales there is a 5.0% increase in accounts receivable. There is no assumption stretching yet.

Inventory is something of a different matter. Ultimately, an increase in sales will require more inventory. At the left side of the graph, though, it might be possible to do just a little more sales with the same amount of inventory. Towards the right side more inventory is definitely needed, but how much more is an open issue.

In the long run, inventory will ultimately increase proportionately to sales, unless the firm installs a better inventory control system (arbitrary assumption). In the short run inventory will *probably* increase proportionately to sales. The result is an imperfect assumption, but good enough to see the concept.

The net result is a line that is steep, but one that pales in comparison to the growth in ROA due to gross margin seen in Exhibit 3. In short, from a “bang-for-the-buck” perspective, more margin on the same sales is much more powerful than increasing sales. This says nothing yet about whether or not any of

Exhibit 4
The Relationship Between a Sales Volume Increase
and Return on Assets
Mountain View Distributing, Inc.



this can be done. It may be impossible to increase either gross margin or sales. That conundrum will be addressed shortly.

Expenses

Exhibit 5 drops the proverbial other shoe. For most readers it will be a size 16DDD brogan. The line reflecting the ROA improvement from decreasing expenses is a lot *steeper* than the ROA line for increasing sales. That means that a 5.0% decrease in expenses does a lot more to improve ROA than a 5.0% increase in sales.

Once again there is the “no impact on the other CPVs” assumption. In this case, when expenses are reduced there is no parallel decline in sales volume. As always, a pretty good assumption for small reductions in expenses and a pretty bad assumption for large reductions.

The fact that reducing expenses has a more dramatic impact on ROA than increasing sales does not sit well with very many managers. It is just too unpleasant a thought for comfort. Most managers will simply ignore this bothersome fact and assume that it will go away. There is a phrase for this: continuing to believe the conventional wisdom.

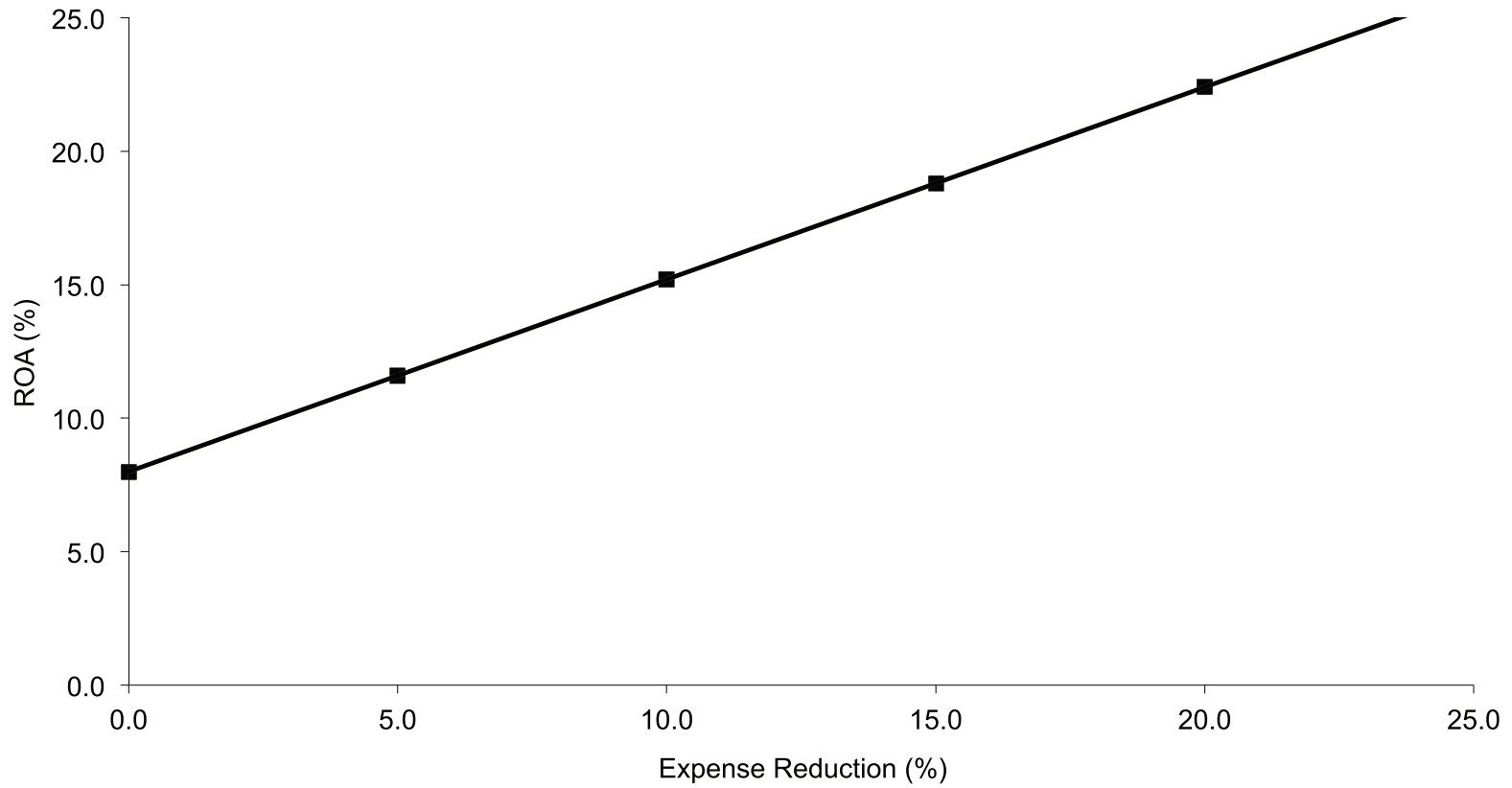
Even managers who accept the conclusion (since it is presented so brilliantly) dislike the comparison between Exhibits 4 and 5. In the case of Sales Managers, dislike morphs into outright hatred.

The problem is that while expense control is great at increasing ROA, it has lousy public relations. From a PR perspective, expense control is viewed as better than the Ebola virus, but not as good as the United States Postal Service. To change metaphors in mid-paragraph yet again, expense reductions are always viewed as a retreat while sales increases are always viewed as a charge up San Juan Hill.

There is absolutely nothing in the exhibit that says such views can't be kept. Managers must believe in what they do. However, it must be remembered that while expense reductions are absolutely distasteful, they are very profitable.

So far the priorities are gross margin, then expenses, and finally, sales. Since some readers only get to this point while kicking and screaming, they will be forgiven if they take a quick peek at the first three sections of Appendix A and make sure the author is not lying through his teeth. The kicking and screaming is about to get worse.

Exhibit 5
The Relationship Between an Expense Reduction
and Return on Assets
Mountain View Distributing, Inc.



Key Investment Factors

It is now time to switch to a topic that is chock full of controversy. At its core, it is a topic that suggests much of what distributors have been doing over the course of the last five years has been wasted effort.

It is also a topic that will require a rather lengthy discussion. Namely, **Exhibit 6** indicates that reducing inventory and accounts receivable has only a miniscule impact on ROA. The graph is flatter than the beer at closing time.

Feel free to shout “That can’t be right.” It has been shouted before. You’re not breaking new ground. Do not go so far as to close the book in disgust. The fact that the graph is flat is a point that must be understood if distributors are going to reach their full profit potential.

From a common sense perspective, lowering either inventory or accounts receivable *absolutely must* have a huge impact on ROA. This is because such a change will improve both the numerator and denominator in the ROA calculation.

Profit will rise with less investment, so the ROA numerator goes up. The asset base will decline so the denominator will go down. With two factors working at the same time, the slope of the line really should be steep. Sorry, but it isn’t.

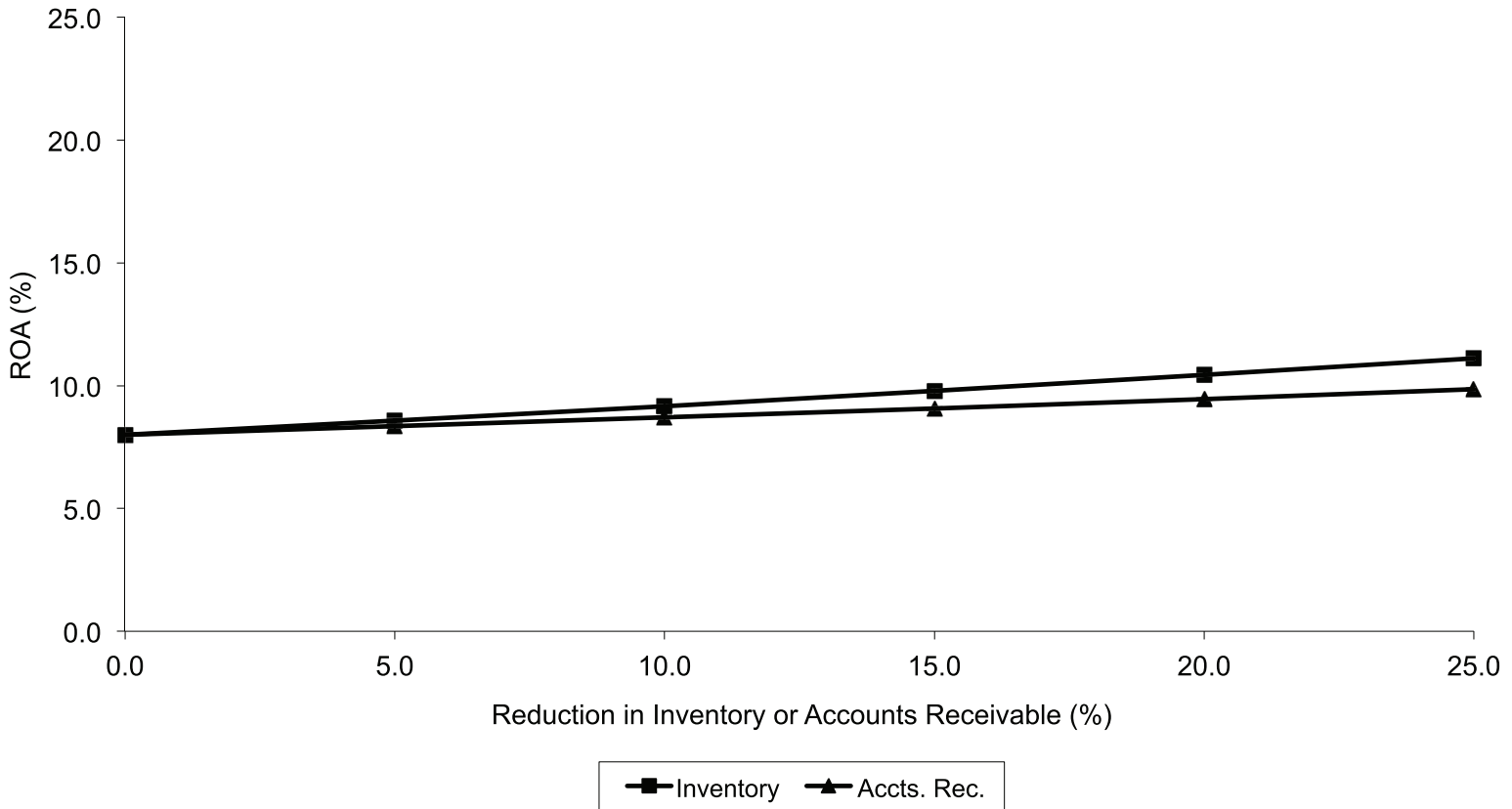
Many readers will want to go to Appendix A right now. Resist that urge. **Exhibit 7** is lifted whole cloth from Appendix A. That exhibit and the accompanying discussion will cover what is happening as succinctly as possible by focusing on inventory.

An analysis of the impact of changes in accounts receivable follows the same logic as that for inventory. It is not covered here as it would simply duplicate the inventory discussion. After reading the text supporting Exhibit 7, feel free to kick the tires of Appendix A to ensure that Graphs 3–6 are correct.

ROA Denominator—The calculation of the denominator is a lot simpler than for the numerator, so allow the author to get it out of the way first. When either inventory or accounts receivable is reduced, the firm’s investment level—total assets—does, indeed, decrease. In the case of Mountain View, which has \$2,500,000 in inventory (Line 7), a 10.0% reduction would reduce inventory by \$250,000 (Line 9). The total assets base would decrease by the same amount, from \$6,250,000 to \$6,000,000 (Line 10).

So far it appears that ROA really should explode. The denominator has fallen. When the numerator rises at the same time, things will really take off.

Exhibit 6
The Relationship Between an Investment Reduction
and Return on Assets
Mountain View Distributing, Inc.



ROA Numerator—On the profit side, the reduction in investment (\$250,000 less inventory) will cause expenses to go down. The magnitude of the expense reduction is based on what is called the Inventory Carrying Cost (ICC). In simplest terms, these are the expenses that arise because the firm has inventory. More importantly, they are the expenses that will go away as inventory is reduced.

The problem is that the ICC is not a single line item, but is hidden within a lot of individual line items on the income statement. Specifically it is in factors such as interest, obsolescence and a few other miscellaneous things. In short, the ICC is a legitimate metric, but has to be estimated from a lot of individual items.

The ICC is expressed as a percentage of the inventory value. In Exhibit 7, an ICC of 20.0% is assumed (Line 4). This means that every time inventory is reduced by \$1.00, that reduction causes total expenses in the firm to be reduced by \$0.20. This is an outrageously high ICC factor.⁹ A high ICC is used to give inventory reductions every possible advantage they can have. This means that the ROA line for inventory is as steep as it could possibly be.

With the 10.0% reduction, inventory fell by the \$250,000 as noted above (Line 3). A 20.0% ICC means that expenses are reduced and profit is increased by \$50,000 (\$250,000 times 20.0%, shown in Line 5). The new profit is equal to the old profit of \$500,000 plus the cost savings from reducing inventory of \$50,000, resulting in a new profit of \$550,000 (Line 6).

ROA Calculation—Finally! The numerator is up and the denominator is down. *I am inventory, hear me roar in ROA numbers too big to ignore.* The new ROA of 9.2% is equal to \$550,000 (new profit) divided by \$6,000,000 (new total assets) (or 9.166666% for purists). That is exactly what good old Exhibit 6 indicates at the 10.0% inventory reduction point. It is an improvement, but it sure isn't much of one.

To be redundant (the author's specialty), Exhibits 6 and 7 assume that reductions in inventory do not cause other factors to change unless those changes are automatic. In point of fact, reducing either one of these could cause a significant reduction in sales. That assumption is very realistic, but still arbitrary.

⁹ The ICC calculation and the fact that it is almost always overstated are discussed in Appendix B. It detracts from the narrative to cover it here. The Accounts Receivable Carrying Cost (ARCC not covered in the discussion above) is thrown in for good measure in Appendix B.

Exhibit 7
The Impact on ROA of a
10% Reduction in Inventory
Mountain View Distributing, Inc.

Numerator of the ROA Calculation

1	Profit Before Taxes		\$500,000
2	Inventory		\$2,500,000
3	10% Decrease in Inventory	[2 x 10%]	\$250,000
4	Inventory Carrying Cost		20.0%
5	Increase in Profit	[3 x 4]	\$50,000
6	New Profit	[1 + 5]	\$550,000

Denominator of the ROA Calculation

7	Inventory	[2]	\$2,500,000
8	Total Assets		\$6,250,000
9	Decrease in Inventory	[3]	\$250,000
10	New Total Assets	[8 - 9]	\$6,000,000

ROA Calculation

11	New Profit	[6]	\$550,000
12	New Total Assets	[10]	\$6,000,000
13	New ROA	[11 ÷ 12]	9.2%

As every Sales Manager has opined (or whined) to every CFO, “You can’t sell apples from an empty cart.” Reducing inventory by simply slashing the investment for every SKU provides an unprecedented opportunity to reduce sales volume. Since the slope of Exhibit 4 (sales) is a lot steeper than the slope of Exhibit 6 (inventory), *any* reduction in inventory that causes sales to decline even slightly sends the firm on a trip to an unpleasantly warm place in a small, but well-appointed, hand-basket.

It is worth noting from a historical perspective that over the course of the last decade, many firms have made reducing their investment in inventory and accounts receivable a top priority. This has been a major contributor to the ROA rut. Sisyphus would have been proud.

Finalizing Profit Priorities

Based upon their impact on profitability, the CPV priorities for distributors should be nothing other than:

1. Gross Margin
2. Expenses
3. Sales Volume
4. Investment Levels (Inventory and Accounts Receivable)

Sometimes simply looking at the impact on profitability does not tell the whole story (the author had to bite his tongue while writing that sentence). It is entirely possible that factors that have a very large impact on profitability, such as gross margin, may be extremely difficult to improve.

It is also possible that there may be absolutely no enthusiasm within the organization for making some of the potential improvements. To experience this firsthand, run expense reductions up the old flagpole at the next manager's meeting and watch grown men and women cry.

Any profit improvement plan must consider both the highly analytical (bang for the buck) and the subjective (degree of difficulty). What no distributor should do, though, is allow the degree of difficulty to serve as a roadblock for taking action. Firms that don't at least try to improve gross margin or expenses are passing on an incredibly large profit opportunity.

CPV Trade-offs

So far the analysis has been limited to one CPV at a time. Raise sales, for example, and see what happens to ROA. Exhibits 3–7 were all handicapped by the one-at-a-time limitation.

The fun (or what financial analysts call fun) starts when the trade-offs between the different CPVs are examined. Life, as every economist will boringly tell you, is about trade-offs. Should you buy the Lamborghini or the Maserati? Wait, that decision only comes after you utilize what is in this book.

Back to the matter at hand. All of the CPVs can be evaluated in relationship to each other. This will be the sum and substance of much of the remainder of this book. To start, it is useful to understand how these trade-offs will be approached.

A great example is provided by examining the relationship between sales and inventory that was introduced earlier in this chapter. Since it was stated that sales had a large impact on profits while inventory had a small one, it would be nice to find out if that is really true when one is played against the other.

Exhibit 8
The Break-Even Point:
The Sales Decline That Will Exactly Offset
a Reduction in Expenses
Mountain View Distributing, Inc.

Current Profit	+	Fixed Expenses	-	Expense Reduction
Gross Margin % - Variable Expense %				
=				
\$500,000	+	\$3,500,000	-	\$50,000
25.0%		-		5.0%
=				
\$3,950,000				
20.0%				
=				
\$19,750,000				

Exhibit 8 takes the information for inventory and places it in the context of a sales change. The exhibit utilizes the classic break-even formula, a tool that will prove handy in later chapters.

For readers not conversant with the break-even formula, Exhibit 8 looks like a mess of random numbers. For now, just assume the analysis is correct and follow it through to the conclusion. At some point the break-even-challenged reader should peruse Appendix C which walks through the basic process and its wide range of applications.

In Exhibit 7 a 10.0% reduction in inventory caused profit to increase by \$50,000. It was suggested that possibly the inventory reduction would come at the expense of sales as the firm might be out of stock more often. The break-even formula in Exhibit 8 provides a precise look at how much sales would have to fall to destroy everything that was gained by reducing inventory.

The numerator in Exhibit 8 adds the current profit and the fixed expenses together for Mountain View. It then subtracts the expense reduction that was generated by lowering the investment in inventory. That expense reduction (profit increase) is actually subtracted because the goal is to see how far sales will have to fall to wipe out the expense improvement.

Again, if this doesn't make any sense, just keep following the discussion to its conclusion. After that, plan to curl up with Appendix C and a glass of tawny port to read about the structure of the break-even formula and how it works.

The denominator indicates that each dollar generated is not actually worth a dollar. For every \$1.00 generated, \$0.75 immediately goes to the suppliers of the merchandise that was sold (the gross margin is 25.0%). In addition, to paraphrase the nursery rhyme, everywhere that sales went, variable expenses were sure to follow. They continue to be 5.0% of sales. This leaves 20.0% to cover the fixed expenses and generate a profit.

In the exhibit, the firm has to cover \$3,950,000 in expenses and profit with dollars that are only worth \$0.20. With this set of numbers the formula demonstrates how far sales can fall before the profit improvement from lower inventory is wiped out. The answer is \$19,750,000. Converting to a percentage decline, it only takes a 1.25% decline in sales to offset the profit generated by a 10.0% reduction in inventory.

The trade-off analysis is like almost every other precise financial tool. It doesn't say jack about what to do. All it can do is provide the trade-off relationship which management can then interpret as it sees fit.

That said, a 1.25% decline in sales is pretty small. The smart money leans towards the fact that inventory reductions might not be all they are cracked up to be if they are associated with *any* decline in sales.

The remaining chapters of this book deal with similar examples of trade-offs. Is it good to cut price and drive more sales volume? Should the firm provide cash discounts to customers to encourage prompt payment? Many thrilling examples will unfold in the remaining chapters. Try not to hyperventilate in anticipation.

A Brief Sojourn into the World of GMROI: A Case Study in Bad Metrics

Gross Margin Return on Inventory (GMROI) is by far the most widely used metric for evaluating inventory profitability in distribution. It is also the dumbest.

Sometimes the author is not entirely clear, so let's try again. GMROI is utterly without redeeming social value. It is the kudzu of financial metrics and needs to be eradicated. It is also the most widely-used inventory *profitability* metric in distribution. Houston, we have a problem.

GMROI is a very complicated subject. The details can't be discussed here without destroying what little flow this chapter still has. Consequently, the current discussion will follow the time-honored consultant's tradition of viewing the topic from 30,000 feet. The discussion will center on two ways in which GMROI brilliantly helps firms lower profits rather than raise them.¹⁰

Before jumping in, it should be noted that many readers of this book probably have never heard of GMROI (for example, branch managers and salespeople). For readers in that camp, review this section as a warning note regarding other, equally-poor metrics that you may employ. Other readers (such as buyers, department managers and merchandisers) use GMROI every day in their decision making. For you nice folks: take copious notes.

GMROI (including its evil twin, the Turn and Earn Ratio) is being discussed here as a case study because it illustrates two serious deficiencies in the way traditional analysis approaches profitability:

- **Limited Scope**—GMROI, like many other financial metrics, examines only part of an issue (for GMROI, the issue is inventory profitability) when the ability to examine the entire issue is at hand.
- **Improper Trade-offs**—GMROI makes the classic mistake of equating, and making a trade-off between, two variables that are not close to equal.

These two subjects may be a little opaque at present. That problem should be eliminated shortly.

It is worth mentioning from the start that GMROI was not designed by some financial malcontent dedicated to inflicting pain on distributors. It is a well-intentioned concept that simply does not work. It is absolute proof once again that the road to Hades really is paved with good intentions.

GMROI was designed to provide a return on investment perspective in managing inventory. That is, if ROA is really important at the total firm level, then something akin to ROA would be great for looking at individual items or suppliers. Conceptually, a great idea. The problem is that conceptual brilliance doesn't necessarily translate into functional brilliance.

The total-firm results for Mountain View can be used to illustrate the GMROI calculation. At that point it can be dissected to discern the problems. As a reminder, the firm generated (according to Exhibit 2) \$5,000,000

¹⁰ Folks who want to know all of the sordid details can download the white paper, *Saying Goodbye to GMROI*. It is more than a little technical. It is also as long as most chapters of this book. Be prepared for some really fun reading. It is available at profitplanninggroup.com. Go to the Seminar Materials tab and use the pull-down screen to find the white paper.

in gross margin with an inventory investment of \$2,500,000. This means it had a GMROI of 200.0%. It was able to produce \$2.00 of gross margin for each \$1.00 invested in inventory. It is kind of like ROA in that higher is better than lower.

The Limited-Scope Problem—The limited-scope issue is that GMROI, like a lot of other metrics, only looks at a couple of aspects of a specific financial issue. Using only those aspects leads to a conclusion and a series of management actions. The use of additional information might have led to an entirely different conclusion and different management actions.

To demonstrate this, let's consider (at the total firm level) a wonderful new opportunity the firm faces. A key supplier has agreed to carry inventory for the distributor and provide it on a just-in-time basis. This will lower the distributor's total inventory investment by 10.0%. However, the supplier will charge a (fair and reasonable) fee for this service so the firm's gross margin dollars will fall by 2.0%. Rather than looking at one supplier, let's consider the entire firm.

Doing the GMROI calculation involves two factors. The firm's gross margin falls to \$4.9 million (\$5.0 million times 98.0%). At the same time, inventory falls to \$2.25 million (\$2.5 million times 90.0%). Bingo Bob! GMROI soars from 200.0% to 217.7% (\$4.9 million divided by \$2.25 million). The classic GMROI approach would strongly favor this idea.

However, at the total company level there is a lot more going on than just the changes in gross margin and inventory. As only one example, there is the issue of the cost of carrying the inventory. The gross margin decline of \$100,000 is a clear loss. Using an ICC of 20.0% introduced in all its splendor and glory previously means that expenses would fall by \$50,000. That is the inventory reduction of \$250,000 times the 20.0% ICC.

Overall, profit has actually declined by \$50,000. However, the GMROI increased, implying it was a good deal. This is not a random example. In point of fact, suppliers and distributors have developed such inventory-shifting programs thousands of times over the last decade. They have almost never proved profitable, but they have increased the old GMROI.

Improper Trade-offs—The GMROI concept suggests that the firm has two *equally-good* options to drive profitability: (1) generate more gross margin dollars or, (2) lower the investment in inventory. This is so incredibly important it must be stated again. With GMROI, lowering inventory appears to be just as good as increasing gross margin. If these actions were equally strong, then either would be appropriate. However, they are decidedly different in their financial strength.

Assuming the reader did not nod off while looking at Exhibits 3 and 6, it should be abundantly clear these CPVs are not even close to equal potency. An inventory reduction, as a financial lever, is an 80-pound weakling having sand kicked in its face at the beach. Gross margin is an 800-pound gorilla about to carry Fay Wray off into the night. The difference in the relative strength of these two prongs of the GMROI tool is critical.

In summary, GMROI leads distributors away from the profitability promised land. It is diametrically opposed to managing the firm based on CPV performance. If firms are going to improve profitability, they must evaluate potential trade-offs properly.

GMROI is but one of the multitude of metrics used to evaluate performance for all, or part of, a distribution business. While it is worse than most, the underlying problems associated with GMROI exist in a multitude of other metrics, ranging from sales per employee to the bad-debt loss ratio.

In analyzing performance, firms need to look at as many aspects of a decision as they can (such as the profitability of a product line). They also need to understand and utilize the CPV trade-off process properly.

Moving Forward to Chapter Three

Individual managers may love the hierarchy of CPVs presented here or they may hate it. That love/hate relationship is immaterial. All that is required for success is for managers to understand the hierarchy and employ it properly.

Firms that don't accept the (1) gross margin, (2) expenses, (3) sales volume, and (4) investment hierarchy are more likely to fail the profitability final exam. Firms that don't expand the analysis to consider the trade-offs between the CPVs move from "likely to fail" to "doomed to fail." Firms that use metrics that distort the CPV trade-offs, such as GMROI, deserve to fail.

The next chapter will start the process of looking at the specific actions that can be taken to utilize the CPVs effectively. It will do so by providing a two-for-one bonus. It will look at sales and expenses simultaneously.

Talking Points from Chapter Two

- Distribution companies that try to get around the CPVs are essentially waving a red cape at a bull. They do so at great risk to their financial health.
- The CPV priorities for almost every distributor should be:
 1. Increase the gross margin percentage
 2. Get control of the expenses, especially payroll

3. Plan for reasonable sales growth
 4. Monitor—but don't necessarily lower—the investment factors
- Profitability is always about trade-offs. No firm can maximize all of the CPVs simultaneously.
 - CPV trade-offs must be based upon financial realities, not the ever-popular conventional wisdom.