

Face the strain — it's all going

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Tom Rafferty wants to introduce you to CoVM®. It has a whole heap of uses — but the easiest to explain is in relation to inventory management, so here goes...

CoVM is a four-step program that can help a company recover from addictive or dysfunctional behaviours. It is a lot quicker than the traditional 12-steps, so it has the potential to be more efficient — after all, you can try this three times and still be on the booze!

First, you have to admit that you are powerless over variability and your business is in danger of becoming unmanageable. If you can control variability please contact me immediately. We can make millions or alternatively, I know a really good psychologist that can help with Messianic complex. No really, the first step is to carry out a Pareto Analysis, see the article from November 2004 if you don't know how to do this (Vol 13, No. 6). The second step has absolutely nothing to do with believing that a power greater than ourselves could restore us to sanity ... oh no, this is no place for wives or girlfriends! The second step is to create the CoVM Classification. We stratify the data and bang it into a CoVM Matrix (any consultant worth his/her salt needs a matrix, this one's mine!)

The CoVM Strata I use are:

- Cov a ≤ 33 percent
- Cov b > 33 percent ≤ 50 percent
- Cov c > 50 percent ≤ 75 percent
- Cov d > 75 percent ≤ 100 percent
- Cov e > 100 percent

They may look like they are chosen at random, but they're not. The first stratum, 33 percent means that the coefficient of variation (the mean divided by the standard deviation — for more see the article in Vol 13, No 5, Sep 2004) of the data is at or below 0.33. At 33 percent (or 0.33) there is not a great deal of variation in a data set.

If we were looking at inventory demand data, the peaks and troughs should not be very large. Therefore, they should be easier to manage. In fact, if the coefficient is at or below 33 percent it means that the data are likely to be normally distributed. This is helpful, it means we can use traditional inventory theory and forecasting algorithms to get pretty good results.

This is one of the main reasons that CoVM Analysis was developed. The

traditional mathematical approaches to forecasting and inventory management are excellent, except that for the most part, they assume that the data are normally distributed. If the coefficient of variation of a data set is above 33 percent, the chances that the data are normally distributed are small. As the coefficient increases, the variability increases and the chances the data being normally distributed approach your chances of winning first division in the Lotto ... you get the picture.

When you take this into account and the fact that many companies have a one-size-fits-all approach to inventory management, it's got to end in tears. Furthermore, if one size fits all, we all get to walk around with those big-fat-ass-elasticated-jeans. So, if one size fits all, not only is it unhelpful in terms of inventory levels and cash flow, it's not very elegant either, is it?

What you now have is the ability to create a CoVM Matrix. Every stock keeping unit (SKU) in your inventory catalogue will have a Pareto Class (denoted by capital letters A to E) and a CoVM class (denoted by lower case letters a to e). So let's enter the matrix, Neo!

Figure 1: CoVM Matrix — Class & Characteristics



The first matrix in Figure 1 indicates where the various classes should be placed, the second briefly describes their characteristics. The matrices in Figure 2 indicate typical application outcomes and suggest potential management tactics.

SKUs with a lower-case 'a' show STEADY demand with little variation, regardless of the volumes sold (or used). They are eminently amenable to forecasting. They should respond well in a make-to-forecast environment. Should you choose to make-to-stock, setting a high service level should not result in large safety stock levels or in large stock

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to change

holdings because the variability is low. Typically STEADY SKUs can represent about 5 percent of total sales but only 1 percent of SKUs. I have seen situations where they have represented over 20 percent of sales value and sales volume but rarely more than 1 percent of SKUs. The lesson here is that they are easy to manage, regardless of their relative importance. If you choose to make-to-forecast, and I recommend that you do, the easiest way to manage them is with a tight tracking signal. In other words, change nothing until the tracking signal 'bleeps' and then keeping doing nothing until it 'bleeps' again.

Those SKUs labelled 'variable' typically represent about 5 percent of SKUs and as much as 65 percent of sales. These items need to be managed with some vigour. A Min-Max approach is likely to cause as many problems as it solves, especially with the 'Ac' and 'Bc' SKUs. Here is the classic inventory dilemma — either increase safety stock (and therefore inventory levels and costs) or gamble on the probability of a stock out (lost sales, lost revenue and lost customers). If it is possible, differentiate the service levels on these products (especially the 'Ac' and 'Bc' SKUs).

The 'Erratic' SKUs are likely to be the cause of greatest angst and I recommend that you actually start here. Why? Well, typically, these SKUs can represent about 5 percent of total SKUs and about 15 percent of sales. The heartburn comes from the fact that you sell large quantities of these lines, but the sales levels will vary quite dramatically. The key to managing these products is to understand the cause of the variability. Fortunately, they usually are not random events.

Figure 2: CoVM Matrix — Apply and Manage



The best solution is to figure out who's buying these products and what is driving their demand. Again, typically, you will find that only a small number of your customers buy these products. They generally buy them in very big licks. So as a starting point, I suggest you ask them why.

The reason could be as simple as inappropriate order quantities that you have set (I have seen this I kid you not!). It could be that they are buying six months of their requirement at a time and a simple change on your part could turn these from 'Erratic' into 'STEADY', but first you need to understand why they are so erratic.

At this point, we have now covered off 85 percent of sales. We are well and truly into the 'tail' of most organisations catalogues and this is usually where the fun really begins. As Tom Jones would say, it's not unusual to be mad with anyone! What is likely to drive you around the bend at this point is the complete inability of your colleagues, especially those in sales and marketing, to accept that most of the products you sell are dogs ... no make that dogs-with-fleas!

Let's take a look at those SKUs that I have labelled 'Irregular' and suggest that they be 'Vendor Managed'. I call them irregular, because they are usually purchased in small quantities, irregularly! Typically they will be no more than 5 percent of sales and be about 10 percent of SKUs. Please, compare these to the other categories we have already covered — about the same number of SKUs but 85 percent of sales. My guess is in most organisations these critters are sitting around gathering dust.

As a group, you might be getting two to four stock turns per year out of these. This is not good. It's bad. In my experience, if you're bad at something and you can't figure out a way to be good at it, you should stop doing it! The most frequent excuse I hear to justify doing something that you're not good at usually goes like this: 'our customers demand a full range'.

Now, I have no problem with the

customer demanding a 'full range', I just have a problem when they don't actually buy the 'full range' on a regular basis. Those of you selling into the big food retailers please note, they so don't want a full range from you ... they are actively delisting brands and developing their own private labels. So, if you genuinely must or simply insist on stocking these products, is there an easier way? Could you get your supplier to manage the inventory for you? If you make this stuff, would it be easier to out source the manufacturing to someone smaller — your small irritating quantity might be a big earner to a small company!

We now get on to the old-dogs-with-fleas-but-we-still-love-them category. I call these 'Lumpy' for short. Lumpy is a technical term but given that it is also fairly graphic do we need to say anymore. Typically, these products can be 70 percent or more of total SKUs, sales can be typically as low as 5 percent and rarely ever gets above 7 percent of total sales.

Very many organisations will give you very many reasons as to why they should keep making, stocking and (trying) to sell these lines. It will be all touchy-feely and zero data.

The bottom line is this, most managers in these roles lack the intestinal fortitude to admit this fact; sadly, they also lack the testicular fortitude to do anything about it. Remember, in the absence of fact, everyone is right.

So, if your organisation insists on carrying on with the foolishness, what can you do? One idea is to try and push the problem back to a supplier; can you turn this stuff into consignment stock? Do you have to take a hit and start to write-off?

Whatever you do, please make sure you develop a plan that ensures that this situation does not develop again!

The final category is the well and truly dead items in stock. If you have not sold something in at least a year (make sure it is not an insurance spare first) it is probably dead, get rid of it and take it off the catalogue, otherwise someone just might buy another one! ■