Get Control of Your Inventory

Inventory management is key to bigger and better margins

To a CFO, inventory is often a line item on the balance sheet that measures inventory turns against the income statement (cost of goods sold). This COGS analysis provides an overall view of how much inventory is held across the company’s supply chain. What it doesn’t provide, however, are the reasons why the inventory is there in the first place or whether the return on each inventory dollar is sufficient. Is there too much inventory at the store? Is there too little at the warehouses? Answers to these questions begin with understanding what drives inventory levels.

Are you losing sales and margins because your products are not in the right place at the right time and in the right amounts? Does settling on the exact quantities needed to fill demand seem uncomfortably like guesswork? To minimize errors, retailers usually count on their business managers to manage inventory levels. Business managers are, or should be, pretty good at analyzing sales figures, reviewing customer data, forecasting demand and using their well-honed retail skills and judgment to align inventory levels with consumer demand.

Yet for every business manager who correctly manages inventory levels, there are many more who do not. That’s because it is an enormously complex job. Some retailers must track hundreds of thousands of SKUs from thousands of suppliers, and distribute them to hundreds or even thousands of stores and distribution centers (DCs). And they must differentiate the products based on consumer demand in local, regional, national and global markets. Internal processes and systems such as warehouse management and automated ordering, although designed to improve efficiency, often add to the complexity.

Retailers could manage their inventory better if they had a clear understanding of what drives inventory levels, and metrics to track the key drivers. Although the accounting drivers of inventory are well documented and understood, the true business drivers of inventory are often lost in a maze of misinformation.

Determining Inventory Levels

Inventory decisions in a complex retail environment are determined by five key business drivers: consumer demand, lead time variability, pack mix, merchandising presentation requirements and visibility. Yet for each driver there is a margin of error, which means determining inventory
levels based solely on these drivers can lead to severe miscalculations and a subsequent loss of sales and increased costs (see figure). That’s why leading retailers set up processes and metrics to fine-tune their decision-making and correct for error. Let’s examine the solutions for each business driver in turn.

Forecasting consumer demand.
Most retailers determine their base inventory levels by using demand forecasting software to predict consumer demand. The software takes into account different demand patterns and distribution methods for various markets, as well as the seasonal, geographic and competitive position of stores.

The slightest error in demand forecasting can have a detrimental effect—either increasing the inventory unnecessarily (and raising costs) or reducing it below demand and losing sales. For example, a retailer may forecast demand for Russell T-shirts to be at seven and eight units for the two weeks beginning a month from today. The supply chain group places an order for 27 units (after factoring in lead time, lead time variability and package size constraints). If, instead, the retailer sells nine units total (+67 percent error) during the two weeks, the system is left with 18 extra units. On the other hand, if the demand turns out to be 35 units instead of 27 (-30 percent error), the retailer could have sold eight more units than it had in stock. Indeed, any inaccuracy in the forecast will cascade down through the supply chain.

Relying exclusively on demand forecasting software and forecast error percentages can sometimes produce poor results. The trick is to focus also on the processes that support such software. A tightly run and integrated sales and operations planning (S&OP) process across merchandising, supply chain and store operations can enhance retailers’ ability to tweak forecasts and reduce forecast errors. The key is to align metrics across processes and tailor these processes to specific demand and profitability characteristics. For example, items with stable demand, such as bread, deserve a monthly review of forecasts, while more volatile or promoted categories such as cereal or fashion apparel require more frequent review.

Reducing lead time variability.
Every retailer wants to maintain a safety stock of inventory as a buffer against unreliable deliveries. Often, the more time it takes a retailer to receive an order, the less reliable

FIGURE: Inventory drivers can push the inventory far above ideal levels

<table>
<thead>
<tr>
<th></th>
<th>Potential excess inventory (96%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer demand</td>
<td>100%</td>
</tr>
<tr>
<td>Lead time variability</td>
<td>15%</td>
</tr>
<tr>
<td>Pack mix</td>
<td>11%</td>
</tr>
<tr>
<td>Merchandising</td>
<td>11%</td>
</tr>
<tr>
<td>Visibility</td>
<td>2%</td>
</tr>
</tbody>
</table>

Illustrative

Source: A.T. Kearney
suppliers are in meeting delivery requirements. According to our analysis, safety stock for an average retailer accounts for 30 to 40 percent of excess inventory.

So how does a retailer reduce safety stock without risking sales? Leading retailers use ruthless supplier management programs to de-list suppliers with erratic lead times or find an alternate and more reliable delivery channel. Such programs begin with internal controls to support supplier performance. Examples of best practices range from providing periodic feedback on late deliveries to setting penalties for missing agreed-upon order windows or delivering uncoordinated orders. External supplier management programs include monitoring detailed service level agreements to include allotments for lead time and lead time variability, and offering bonuses for continuous improvement. Also, leading retailers perform semiannual or even quarterly reviews of suppliers’ performance, examining the percent of orders they filled and delivered on time, the standard deviation of lead times, and whether suppliers took requested corrective actions.

Managing pack mix. Although most retailers prefer to place orders based on exact quantities determined by lead time and demand, this is not always possible due to pack sizes. A retailer might only be able to purchase an item in packs of nine because of transportation and packaging economics. For example, even if the optimal order quantity is 21 units of Russell T-shirts, the buyer would still place an order for 27 units since the buy-packs come in counts of nine. The result is an excess inventory of six units.

The pack-mix issue can be managed in two ways. First, merchants can work with suppliers to alter the pack mix. However, with complex demand patterns, this approach often results in too many pack sizes, which adds more complexity to the supply chain.

Alternately, retailers are exploring opportunities to “break-pack” the item at the distribution center. Although this also adds costs to the system, it improves inventory deployment. Some retailers use advanced inventory flowpath techniques at the store-item-week level to determine the best stocking and flowpath strategies. Such techniques, when based on a solid business case, provide advanced distribution capabilities with multiple tiers of facilities and handling techniques. For example, a portable radio with varying demand across geographic markets would be case-picked in some warehouses where the required inventory level is near the same quantity as a case, and break-packed where the storage and handling costs are too high to send a case to the store. Additionally, in slow-moving regions, this high-value product could be stored in a stocking-only central warehouse that serves multiple geographic markets. Leading retailers are already implementing such capabilities.

Managing merchandising presentations. Visual presentation of products is key to capturing consumers’ attention. Merchants use creative techniques to ensure their shelves are full and to present products in attractive ways, often using planograms to define minimum presentation (facings) quantities at the shelf for each SKU.

Yet such presentations can lead to excess inventory. In fact, our analysis found that pack and presentation quantities can increase inventory over a base level by 15 to 25 percent for an average retailer. For example, if a minimum presentation is five facings, four deep, the minimum presentation quantity is 20 units. These numbers can be compounded if not aligned with either pack mix or order quantities. Consider: If orders are placed in multiples of nine, the retailer must order 27 units to keep the minimum presentation quantity of 20. Business managers can determine such a rise in inventory levels by using standard inventory algorithms to compare the visual presentation requirements to an ideal inventory level.

Special events and promotions add to the problem as retailers ramp up inventory to prepare for them and have to decide when to start pushing product into the store. This also applies to increasing inventory for seasonal products. For instance, demand for barbecue grills will spike in early spring or summer.

Merchants and supply chains must be flexible and coordinated to handle these situations in a cost-effective manner. Leading companies use advanced inventory flowpath techniques to determine cost and service level trade-offs across merchandising and supply chains. This provides a fact base for supply chain managers to have a healthy discussion with merchants and make the right decisions in terms of revenues and profitability.

Additionally, leading retailers are getting better at managing the complex and dynamic nature of demand, knowing that more flexible product flow and facility capabilities can increase service levels at lower costs. Having facilities that can both
Measuring and tracking inventory accurately. Understanding what drives excess inventory depends on the availability and accuracy of inventory information across the supply chain. For example, customer returns are often monitored manually in each store and each store does its own calculations. This, unfortunately, reduces true visibility into storewide inventory levels and leads to inaccuracies, which can in turn produce significant increases in inventory. The inaccuracies snowball across the system if there is no integrated view of the data from the point-of-sale back to the supplier.

Inventory issues are exacerbated when there is no visibility into on-hand inventory data, consumer demand data and forecast data. Because solving this problem can be an expensive proposition, often requiring new systems and software, many retailers deploy multiple, disparate manual processes. This is not the answer. The solution is an integrated process that captures and disseminates data to managers across the supply chain.

Information flow is key. Stores must communicate with transportation, which communicates with the yard, which communicates with the warehouse, which communicates with the supplier. The goal is to capture a comprehensive view of inventory in transit to and from DCs, on order, and on-hand at DCs and stores. The process should also allow for aggregation at local, regional and national levels so business managers can work with merchants, suppliers and stores to seek out opportunities.

Tracking key metrics—including forecast error percentages, lead time variability versus target, and customer service level percentages—can provide solid insights into inventory. Companies must know what is driving required and excess inventory before they can solve their inventory challenges.

Bridging the Gap
Inventory tends to be a line item on the balance sheet for a CFO, so it is often up to business managers to monitor and sustain inventory levels accurately. Yet the job requires more than simply measuring inventory turns. Business managers must also understand and act on consumer, internal and supplier dynamics. Proper inventory levels can lead to profitability and increased margins, but only when the five drivers of inventory work together to solve the problem.

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