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Inventory: Is It Really an Asset?

by David Rubin, Principal

While accounting rules define inventory as an asset, the broader definition of "an asset" is an advantage or resource. Yet, as many organizations struggle to optimize associated costs and customer service levels, operations and financial managers may often question whether inventory is indeed an asset. Keeping too little inventory often results in both lost sales and lost customers, while too much inventory increases costs, and adversely affects cash flow.

Excess inventory is a significant issue for many U.S. businesses right now—particularly in the manufacturing and distribution sector. According to the U.S. Department of Commerce, the average investment in all U.S. business inventories in 2011 increased eight percent over 2010 to their highest point since the third quarter of 2008.

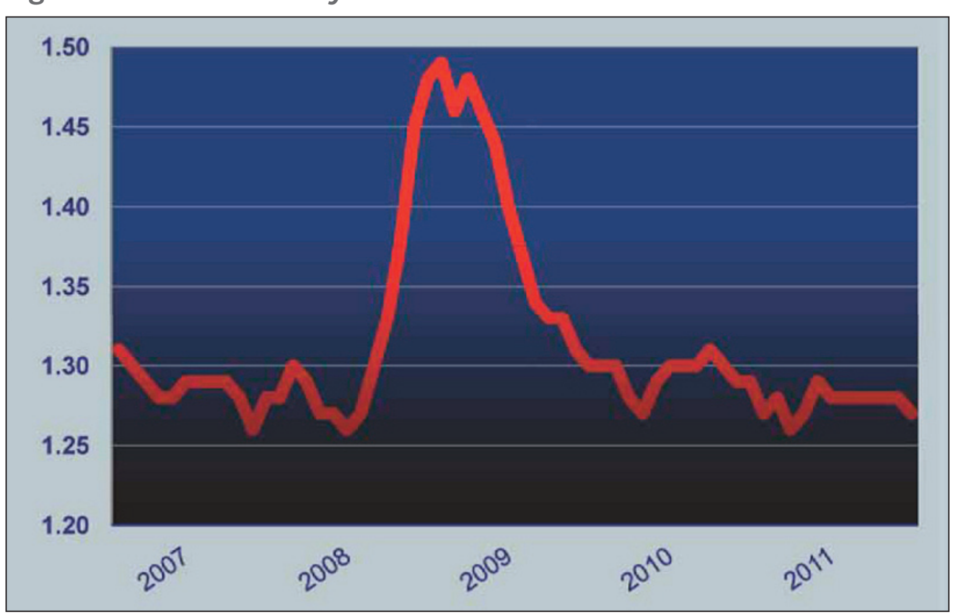
Within the overall increase in inventories, manufacturer and distributor inventories increased significantly while retail inventories remained relatively flat. *(See Figure 1 – Private Business Inventories.)*

The slight overall increase in retail inventories during the last five years, demonstrated in Figure 2, can be attributed to nominal strengthening of retail sales, as the retail inventory to sales ratio was relatively flat during 2011. *(See Figure 2 – Retail Inventory to Sales Ratio.)*

Figure 1: Private Business Inventories

Source: CSCMP 2011 Annual State of Logistics Report/U.S. Department of Commerce/Census Bureau

Figure 2: Retail Inventory to Sales Ratio



Source: CSCMP 2011 Annual State of Logistics Report/U.S. Department of Commerce/Census Bureau

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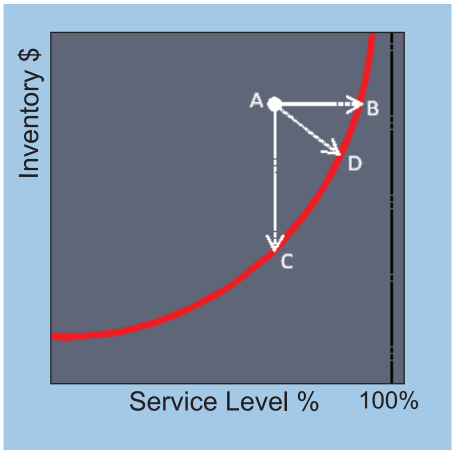
Figure 3: Inventory Investment vs. Service Level



After a spike in 2009, retailers leaned their own inventory levels. Essentially, many manufacturing and distribution companies are challenged as their retail customers have reduced or eliminated their safety stocks while pressuring their suppliers to maintain service levels. For companies in the manufacturing and distribution sector, the ability to maintain service while leaning their own supply chains may differentiate EBITDA leaders and laggards across industry groups.

Customer Service vs. Cost

The single most important component of customer service for a manufacturer or distributor is inventory availability: is the product available when the customer needs it? An essential part of managing a business that sells tangible products is determining when and how much inventory to stock; this determination seeks to balance customer service with cost.
The relationship between inventory investment and service level is often expressed in terms of a theoretical inventory curve. *(See Figure 3 – Inventory Investment vs. Service Level.)* A ready observation about the inventory curve is that it represents incremental investments in inventory improving service levels—sometimes significant increments, and sometimes, as service approaches 100 percent, by very small increments.

Key Takeaways

- Inventory is often a company's single largest asset, while inventory availability is often the single most important component of customer service.
- Inventory is a significant issue for many U.S. businesses right now—particularly for manufacturing and distribution companies as they hold higher levels of inventory which pressures their cash flows and earnings.
- For companies in the manufacturing and distribution sector, the ability to maintain service while leaning their own supply chains may clearly differentiate EBITDA leaders and laggards.
- Inventory cost and service performance may be readily measured and benchmarked to provide a fact-based, data-driven analytical framework for improvement. Carrying costs are an important means to evaluating and managing inventory investment.
- Opportunities for optimizing inventory for earnings improvement often hinge on supply chain strategy, planning processes, coordinating internal operations, collaborating with trading partners, and insuring that information management systems support the needs of the business.

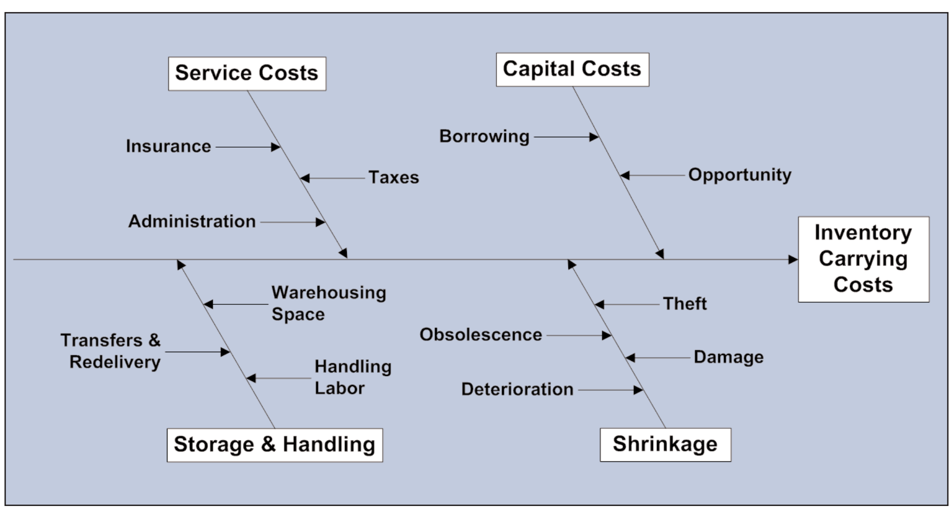
Operations and financial managers know that often significant investment in the wrong inventory is made, yielding little or no service improvement which leads to the belief that the company needs to operate "inside the curve." At Point A in Figure 3, for example, this case investment in inventory has not yielded the expected level of service. The negative impacts on earnings include lost revenue via substandard service levels coupled with the higher costs associated with slow moving inventory.

The benefits for the company in moving toward the curve include improving service levels with the same level of investment (Point B), offering the same service level at a lower inventory level (Point C), or simultaneously improving service while reducing investment (Point D).

Measuring Inventory Performance

As with all business activities, performance measurements provide a fact-based, data-driven analytical

Figure 4: Inventory Carrying Costs



framework. Inventory performance measures focus on availability and cost. A standard measure of availability is order fill rate (percentage shipped versus ordered). Large retail customers also often directly measure and report their supplier's product availability to them via fill rate or in-stock scorecard metrics.

Objective measurements of company's inventory management efficacy typically include asset, liquidity, and ROI ratios. The benefits of utilizing these performance ratios include:

- The underlying data can be accessed directly from balance sheets and income statements.
- The impact on earnings can be readily understood.
- They may be readily benchmarked to assess both performance and improvement potential.

The downside of relying on financial ratios is that they assume inventory value as the cost basis. Beyond the actual cost of the inventory, the costs to carry inventory are significant and often not measured or managed. Carrying cost is actually an amalgamation of a number of different expense items. *(See Figure 4 – Inventory Carrying Costs.)*

Carrying costs are typically expressed as a percentage of the average value of inventory held on an annual basis. For most companies, these costs range from 25 to 40 percent of average inventory value.

Typical Areas of Opportunity

Service and cost measurements provide the means to point toward areas where costs and earnings are particularly impacted. Evaluating the associated processes, tools, and policies provides the ready means to devise improvement strategies.

Based on our experience working with client companies of all sizes across many industry groups, following are some of the typical contributors to lagging inventory performance:

- Performance Measurement: Inventory carrying costs are not measured or managed. Financial ratios are not tracked or benchmarked. Likewise, service performance isn't measured or managed effectively.

Case Study

Client Industry	Medical Products Manufacturing
Functional Areas	Demand Planning, Forecasting, Inventory Management, Production Strategy
Challenges	The company's private equity owner sought assistance to turn around the operations of a medical products manufacturing company. Our immediate objectives included addressing high inventory levels and low order fill rates.
Our Approach and Findings	We gathered relevant cost and volume information, reviewed processes and tools, interviewed staff, and prepared our findings, which included: ■ The client's enterprise resource planning system provided poor demand forecasting support. ■ Product proliferation, long lead times, and minimum order quantities, together with poor forecasting functionality, all contributed to low inventory turnover and low fill rates.
Actions Taken	■ We identified a demand forecasting application and assisted the Planning Group in implementation. While increasing forecast accuracy significantly, a benchmark against the existing method indicated a $500,000 lower investment in inventory in the first month. ■ We implemented a means to compress lead times by planning components on a group basis and postponing the final decision of finished goods built until final assembly. While reducing lead times from two months to one week, we were able to significantly lower safety stock levels of finished goods. ■ We developed a strategy and assisted in implementation of a packaging process within the distribution center to allow the client to finish low-demand products to order. This resulted in the ability to pack slow moving items to order, allowing drawdown and elimination of inventories of approximately 200 slow-moving items. ■ We worked with the Design, Marketing, Planning, and Production teams to review the product program and identify opportunities to reduce SKU proliferation. Our analyses resulted in identifying product differentiations which impacted costs, but were not valued by customers. A single component standardization reduced manufacturing set-up requirements, lowered lead time overall, and permitted a 20 percent reduction in finished goods SKUs within a single product line.

- Strategy: The company's supply chain management strategy has not evolved to adequately address the needs of the business or to external factors.
- Process: Processes for managing demand and inventory either have not been clearly established or optimized to support business requirements.
- Coordination and Collaboration: The company does not take advantage of opportunities to coordinate supply planning activities internally or with suppliers and customers.
- Information Technology: The systems used to plan, forecast, and manage inventory do not adequately support business requirements. For many companies, the ability to track, monitor, and synchronize supply chain processes with trading partners is also vitally important; lack of supply chain visibility is readily associated with higher inventory levels. ■

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