

ANALYZING INVENTORY CARRYING COST ELEMENTS

While the total costs of carrying inventory are found by adding up the cost elements in the above list, some of these elements may not vary with the amount of inventory carried. That is, some costs will remain relatively "fixed" in the short run, regardless of variations in levels of inventory stock. To the extent that storage space is available and cannot be used for other productive purposes, for example, the costs related to the space occupied will not fluctuate much with changes in inventory levels. If any inventory space is rented (*item 8*); or, if the space could be used for other profitable purposes; or, if additional storage facilities are needed, then space costs (*items 1 through 8*), may be directly affected by the amount of inventory on hand.

Depreciation on (handling) equipment (*item 9*) continues whether the equipment is used or not. But the amount of the expense may depend on the magnitude of inventory held. Items 10 through 24 differ from one firm to another, but for the most part, these costs vary with the quantity of inventory on hand. It should also be noted that an increase in inventory on hand may cause a proportionally **greater increase** in some of these costs due to duplication of handling as a result of **inefficient placement and crowding**.

Some wholesale-distributors might make the mistake of thinking that cash tied up in inventories (*item 25*) **costs nothing**, especially if the funds used to finance the inventory are generated internally, through retained earnings or depreciation. The inference is that if cash were not invested in inventory, it would sit idle and earn nothing for the company. But, in any well-run business, **surplus cash should be invested** in other income-producing assets.

The rate of interest expense or cost on a dollar of cash invested in inventory depends on the financial policy of the particular wholesale-distributor firm. It may be based upon the rate that the company is currently paying for external sources of funds, such as bank loans or mortgage loans. In some cases, however, the rate a company would have to pay for additional money to acquire inventory may be different from what it currently is paying for capital for other purposes. In these instances, the rate of interest costs on cash invested in inventory should be based on the cost the firm would **have to pay for more money**. Inventory not only comprises a large part of the total assets of the average wholesale-distributor firm but it is also the least liquid of the current assets. In general, to compensate for the risks in-

volved, it is reasonable to assume that a wholesale-distributor firm's interest rate or cost assigned to money invested in inventory normally should be slightly higher than its usual interest costs. This may explain why the consensus opinion of the wholesale-distributors in Exhibit #2, third column, was 7%.

The most dangerous thing about inventory carrying costs in wholesale-distribution is that **these costs are never itemized** on a profit and loss statement. They are too seldom calculated and watched. Thus, their effect on profits, although often great and direct, is seldom realized.

INVENTORY TURNOVER AND CARRYING COSTS

The potential magnitude of the costs of carrying inventory in a wholesale-distributor firm provides management with a strong incentive to improve inventory turnover by reducing "*stock*" in relation to sales. Indeed, one of the most important **benefits** of a relatively **high inventory turnover rate** is that **expense items** that have to do with owning a stock of goods **are decreased**.

This may be made clearer perhaps, by examination of the purely hypothetical example in Figure #1, which is designed merely to illustrate the effect of turnover on inventory carrying costs and not to suggest what the turnover rate of any wholesale-distributor firm is, or should be. As illustrated here, if only one turnover is secured on an annual sale of goods costing \$1,000,000, the total cost of carrying inventory amounts to \$200,000 per year (using the earlier-determined 20% carrying cost). When the turnover rate is increased to two turns a year, an annual savings of \$100,000 is effected in carrying costs as only 50% as much inventory must be carried. Each successive increase in the turnover rate further reduces these costs when the carrying-cost rate is assumed to remain static.

BALANCING ACQUISITION COSTS WITH CARRYING COSTS

While a high rate of stock turnover decreases the expenses that are directly associated with owning or carrying inventory, a **too high turnover rate** often has an **adverse effect** upon the cost of **acquiring stock**. When skeleton stocks are carried and small quantities are ordered more frequently, more expense and time is spent in performing the buying function. Thus, a very slow turnover tends to increase the carrying cost and a very rapid turnover increases the acquisition cost. This is clearly illustrated by the hypothetical example in