

Peak Strategy Financial Analysis

Prepared by: Your Consulting Firm

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EXECUTIVE SUMMARY

General Observations

This is the sections where you would write general observations about the results

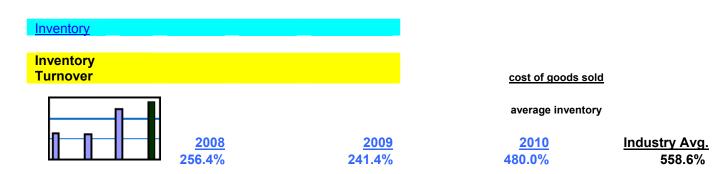
Financial Strengths

This is where you would write about some of the company strengths. We recommend you rather put the items in bullet point form or copy a few of the ratio analysis from the spreadsheet to illustrate your point.

Areas to Consider Further Analysis

In this section you would describe some of areas where the company is underperforming based on the results of the financial analysis.

For Illustrative Purposes Only, We Include Two Ratios Examples The Worksheet Contains Over <u>75</u> You Can Choose From



measures the number of times a company sells its inventory during the year

should be done by inventory categories or individual product

a high turnover indicates that the product is selling well



a low turnover indicates a lack of demand for the product

a high turnover may indicate that the company is not keeping enough stock on hand to meet demands

INVENTORY

For Illustrative Purposes, We Included A Section Of The Solutions Concerning Inventory. There Are Close To 200 More Pages Of Additional Solutions To Financial Problems

Failure to turn over merchandise will result in higher carrying costs and obsolescence. Tying up money in inventory balances sacrifices a return on the money. On the other hand, inadequate stocking will result in lost sales and may cause customers to switch to other suppliers. Failure to control inventory ordering and storage costs will adversely affect profitability. Inadequate internal controls will result in inventory theft. Inaccurate inventory records and miscounts will fail to reveal how much inventory actually exists. If production or supplier schedules are not adhered to, facilities may be idle and cause improper inventory balances. This may mean that the firm is frequently out of certain items and loses sales. Poor-quality goods will be reflected in product returns and discounts as well as in loss of customer satisfaction and loyalty. A lack of inventory storage space will fail to have the "right" balances on hand.

The following problems are addressed in this chapter:

- o Low Turnover of Merchandise
- Deficient Inventory Balances
- Excessive Inventory Ordering and Carrying Costs
- Ordering Incorrect Quantities of Inventory
- High Rate of Inventory Stockout
- Theft of Inventories
- Miscounted Inventory
- o Inaccurate Inventory Records
- High Rate of Product Obsolescence
- Manufacturing Schedules Missed

- o Poor Quality Goods Produced
- Lack of Inventory Storage Space
- Delayed Receipt of New Inventory

PROBLEM: LOW TURNOVER OF MERCHANDISE

IDENTIFYING SYMPTOMS

- Slow sales.
- Unusual buildup of inventory either at the plant or at the wholesale or retail level. A buildup is indicated when inventory increases faster than sales.
- Lack of demand for products.
- Deficiencies in the product line.
- Technological obsolescence.

CAUSES. The usual reason is lack of demand. This may be due to:

- High prices
- Poor marketing efforts
- Increased competition
- Inventory purchases that exceed production and sales requirements
- Ineffective advertising
- Negative publicity

Additionally, previously written-off inventory, still on hand, may have been included in the count of ending inventory.

MEASUREMENT AND ANALYSIS. Determine the inventory turnover by inventory category as well as by department. The inventory turnover ratio is calculated as follows:

Cost of goods sold

Average inventory

A seasonal business should determine the inventory turnover rate on a monthly or quarterly basis.

Example: The Fremont Corporation presents the following information for the year 20XX:

Cost of goods sold = \$4,500,000Beginning inventory 1/1/XX = 1,000,000Ending inventory 12/31/XX = 800,000

The inventory turnover would be 5 times, calculated as follows: Average inventory:

Beginning inventory
$$1/1/XX$$
 = \$1,000,000
Ending inventory $12/31/XX$ = \$00,000
Beginning plus ending inventory = \$1,800,000
Average inventory for year = $\frac{\$1,8020,000}{2}$ = \$900,000

$$\frac{\text{Cost of goods sold}}{\text{Average inventory}}$$
 = $\frac{\$4,500,000}{\$900,000}$ = 5

The inventory turnover measures the number of times a company sells its average inventory during the year. A high turnover indicates a product that is selling well, whereas a low turnover indicates a lack of demand for the product. But a high inventory turnover may not necessarily be the best situation. It may instead indicate that the company is not keeping enough inventory on hand to meet sales and production demands. Having insufficient inventory on hand can mean lost production time and lost sales. Also, the turnover rate may be unrepresentatively high when the firm uses its "natural year-end," since at that time the inventory balance will be exceptionally low.

In some cases, a low turnover rate may be appropriate, as when higher inventory levels occur in anticipation of rapidly rising prices, or when a new product line has been introduced for which the advertising effects have not yet been felt.

The inventory turnover ratio varies from industry to industry. It indicates how quickly a company is selling its inventory and whether the inventory is readily marketable. By comparing the turnover ratio with other companies in the same industry, financial management can determine whether the inventory on hand is reasonable and sufficient to meet sales and production demands.

A sharp decline in the ratio over a long period mandates corrective action by management.

The number of days inventory is held should also be computed. The age of inventory should be compared to the industry norm as well as to the firm's experience.

Determine the percentage of inventory that is comprised of slow moving, obsolete, and out-of-favor merchandise.

A decline in raw materials, coupled with an increase in work-in-process and finished goods, may indicate a future production slowdown.

REPAIR

- Compare the company's inventory turnover with other companies in the same industry and with industry averages.
- Question the sales force about why sales appear to be declining.
- Determine whether the company's advertising campaign is effective.
- Identify and discard damaged or obsolete inventory.
- Cancel purchase commitments of additional quantities of similar items.
- Check for errors in the inventory records.
- Count all items on hand prior to calculating their turnover.
- Ascertain the ideal inventory turnover number and adjust the inventory balances on hand to meet this number.

- Determine whether previously written-off inventory may still be on hand and counted in ending inventory.
- Correct the records where required.

PREVENTION TECHNIQUES

- Establish a standard of management performance by product line and compare these standards to other companies in the same industry. If the ratio is an average involving many types of goods, it may be difficult to determine which goods are selling and which are not.
- Break down all items into different categories and calculate the turnover for each category.
- Compare the company turnover amounts with other companies in the industry and with the industry average.

SPILLOVER EFFECTS. Low inventory turnover increases the possibility of inventory obsolescence, lost sales, and theft. Excess inventory increases the costs of insurance, storage, and payroll, resulting in a drop in net earnings. Excess inventory also ties up funds that could be invested elsewhere for a return.

PROBLEM: DEFICIENT INVENTORY BALANCES

IDENTIFYING SYMPTOMS

- Production cutbacks
- Inability to satisfy customers

CAUSE. Failure to use an inventory model or a computerized inventory system, resulting in orders at the wrong time and in the wrong amount.

MEASUREMENT AND ANALYSIS. The reorder point (ROP) tells you the level of inventory at which a new order should be placed. However, to use ROP you must know the lead time from placing to receiving an order:

Reorder point = lead time x average usage per unit of time

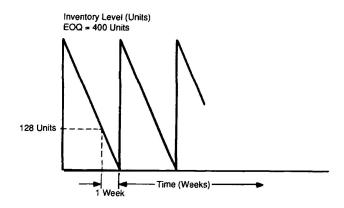
NOTE: If you need a safety stock, then add this amount to the ROP model.

Example: Assume usage of 6400 units evenly throughout the year, and constant lead time of one week. There are 50 working weeks in the year. Reorder point is computed as follows:

Reorder point = 1 week x
$$\frac{6,400}{50 \text{weeks}}$$
 = 1 x 128 = 128 units

When the inventory level drops to 128 units, a new order should be placed. Figure 3.1 shows this inventory system when the order quantity equals 400 units.

FIGURE 3.1 BASIC INVENTORY SYSTEM



REPAIR. Use an inventory model to determine when a reorder should be placed.

PREVENTION TECHNIQUES. Examine previous shortages, how long it usually takes to get a delivery from a supplier, seasonal demands of customers, what the usage has been, and the condition of manufacturing facilities.

SPILLOVER EFFECTS

- Losing existing and prospective customers
- Manufacturing delays
- Inactivity in productive resources
- Lower earnings

The See Also Section (found in may sections) Of The Report Tells You Some Other Sections Within The Solutions Book You Should Consider Looking At Which May Or May Not Be Appropriate To Show The Client.

See also DELAYED RECEIPT OF NEW INVENTORY, EXCESSIVE ORDERING AND CARRYING COSTS, HIGH RATE OF INVENTORY STOCKOUT, and ORDERING INCORRECT QUANTITIES.

PROBLEM: EXCESSIVE ORDERING AND CARRYING COSTS

IDENTIFYING SYMPTOMS

- Carrying costs are high because of a buildup in inventory. Carrying costs include warehousing, handling, property tax, and insurance.
- High costs per order prompt a higher order quantity each time. Order costs include
 the costs of preparing a purchase order and receiving goods, freight, and processing
 payments.
- Overstocking of inventory may result in inventory obsolescence and theft.

CAUSES

- Improper inventory management, planning, and control
- Excessive inventory balances and a lack of cost control
- Inefficient purchasing department

MEASUREMENT AND ANALYSIS. A trade-off exists between order size and the carrying cost. The higher the order quantity, the higher the carrying cost, but the lower the ordering cost.

Total number of orders =
$$\frac{S}{EOO}$$

where S = total usage

EOQ = economic order quantity: the optimum amount to order each time to minimize total inventory costs (ordering and carrying)

Total order cost =
$$\frac{S}{EOQ} \times O$$

where O = cost per order

Total carrying cost =
$$\frac{EOQ}{2} \times C$$

where C = carrying cost per unit

$$\frac{EOQ}{2}$$
 = average inventory quantity for the period

Total inventory cost =
$$\frac{\text{(SO)}}{\text{EOQ}} + \frac{\text{(EOQ x C)}}{2}$$

Compare the trend in carrying costs and ordering costs over time. Determine the ratio of carrying cost to inventory, carrying cost to sales, ordering cost to inventory, and ordering cost to sales. Higher ratios may signal problems.

Inventory levels are also influenced by short-term interest rates. As interest rates increase, it costs more to finance and hold inventory.

REPAIR

- Hold less physical inventory.
- Place fewer orders.
- Determine the optimal inventory level necessary to minimize related costs by using inventory models.
- Reduce production until the proper inventory levels are reached.
- Use the just-in-time (JIT) system of managing inventory, in which the company buys
 and produces in very small quantities just in time for use, so as to reduce inventory
 costs.
- Purchase large volumes to get greater purchase discounts.
- Streamline clerical operations.
- Hold lower inventory balances and rent cheaper storage space.
- Move to a lower-taxed locality.
- Reduce insurance costs by altering the deductible, changing policy limits, or switching to a new insurance carrier.
- Place stringent internal controls over inventory to guard against theft.

PREVENTION TECHNIQUES

- Establish policies to achieve the optimal inventory balance to reduce costs.
- Use the reorder point model (ROP) to know when to order.
- Compute average sales volume per square foot of shelf space, and replace products whose sales are grossly below the average.
- Redesign packaging to save costs.

SPILLOVER EFFECTS. High costs associated with inventory will result in lower profit margins. Deficient inventory planning will cause inventory losses due to oversupply, obsolescence, perishability, and so on.

See also DEFICIENT INVENTORY BALANCES, HIGH RATE OF INVENTORY STOCKOUT, and ORDERING INCORRECT QUANTITIES.

PROBLEM: ORDERING INCORRECT QUANTITIES

IDENTIFYING SYMPTOMS

- Overstocking
- Obsolescence
- Shortages
- Back orders
- Production slowdowns
- Inventory theft

CAUSES

- The wrong amount of inventory is ordered because of poor inventory management and control.
- Inventory models are not in use.

MEASUREMENT AND ANALYSIS. One technique that can be used to order the right amount is the EOQ model. It determines the order size that minimizes the sum of carrying and ordering costs. The EOQ model is suitable for a pure inventory system; that is, for single-item, single-stage inventory decisions for which joint costs and constraints can be ignored. (EOQ does not consider quantity discounts, which may be unrealistic. Typically, the more you order, the lower the unit price you pay.)

EOQ assumes that demand is known with certainty and will remain constant throughout the year. Order cost and unit carrying costs are also assumed to be constant. Since demand and lead time (time interval between placing an order and receiving delivery) are assumed to be determinable, no shortage costs exist.

EOQ is computed as follows:

$$EOQ = \sqrt{\frac{2 \text{ (annual demand) (ordering cost)}}{\text{carrying cost per unit}}}$$

Total inventory costs = carrying cost per unit x $\frac{EOQ}{2}$ + order cost x annual demand

Total number of orders per year =
$$\frac{\text{annual demand}}{\text{EOQ}}$$

Example: Oakman, Inc. buys sets of steel at \$40 per set from an outside vendor. Oakman will need 6400 sets evenly throughout the year. Management desires a 16 percent return on its inventory investment (cost of capital). In addition, rent, insurance, taxes, etc. for each set in inventory comes to \$1.60. The order cost is \$100.

The carrying cost per set = \$1.60 + 16% (40) = \$8.00.

Thus,

EOQ =
$$\sqrt{\frac{2(6400)(100)}{\$8.00}} = \sqrt{160,000} = 400 \text{ sets}$$

Total inventory costs =
$$\$8.00 (400/2) + \$100 (6400/400)$$

= $\$1,600 + \$1,600 = \$3,200$

REPAIR. Use the EOQ model to determine order size and frequency of orders. Increase order size to take advantage of quantity discounts or lower prices.

PREVENTION TECHNIQUES

- Improve forecasting and recordkeeping.
- Use EOQ formulas.
- Hire an experienced inventory manager.

SPILLOVER EFFECTS. Incorrect order size leads either to an inventory buildup or to inadequate inventory levels. An inventory buildup results in excess carrying costs, drain on cash flow, obsolescence and spoilage, increased theft, and lower profitability. An inadequate inventory balance will result in lost sales and customer dissatisfaction.

See also DEFICIENT INVENTORY BALANCES, EXCESSIVE ORDERING AND CARRYING COSTS, and HIGH RATE OF INVENTORY STOCKOUT.

PROBLEM: HIGH RATE OF INVENTORY STOCKOUT

IDENTIFYING SYMPTOM. No merchandise to fill customer orders.

CAUSE. Poor inventory planning and control due to inaccurate estimates of sales or materials requirements.

MEASUREMENT AND ANALYSIS. When lead time and demand are uncertain, you must carry extra units of inventory, called safety stock, as protection against possible stockouts. Safety stock is the minimum inventory amount needed to serve as a safety buffer against unusual product demand or unanticipated delivery problems.

The optimal safety stock is the one in which increased carrying cost equals the opportunity cost applicable to a possible stockout. The increased carrying cost equals the carrying cost per unit times the safety stock.

Stockout cost = Number of orders (S/EOQ) x stockout units x unit stockout cost x probability of a stockout

Example: You use 250,000 units per year. Each order is for 25,000 units. Stockout is 4000 units. The tolerable stockout probability is 25 percent. The per-unit stockout cost is \$4. The carrying cost per unit is \$8.

Stockout cost =
$$\frac{250,000}{25,000}$$
 250,000 x 4000 x \$4 x 0.25 = \$40,000

Amount of safety stock needed =
$$\frac{\text{Stockout cost}}{\text{Carrying cost per unit}}$$

= $\frac{\$40,000}{\$8}$ = 5000 units
EOP = SL + F $\sqrt{\text{S(EOQ)(L)}}$

where L = Lead time

F = Stockout acceptance factor

A stockout cost is estimated at \$12 per set. The carrying cost is \$8 per set. The reorder point is 128 sets without considering safety stock. Computation of safety stock is shown in the table below.

The table shows that total costs are minimized at \$1200 when a safety stock of 150 sets is maintained. Thus, ROP = 128 sets + 150 sets, or 278 sets.

Safety					Total		
stock	Stockout	Average	Average		annual		
levels in	and	stockout	stockout	No. of	stockout	Carrying	
units	probability	in units	costs	orders	costs	costs	Total
0	50 with .2	35*	\$420+	16	\$6720+	0	\$6720
	100 with .1						
	150 with .1						
50	50 with .1	15	180	16	2880	400§	3290
	100 with .1						
100	50 with .1	5	60	16	960	800	1760
150	0	0	0	16	0	1200	1200

*50(.2) + 100(.1) + 150(.1) = 10 + 10 + 15 = 35 units

35 units x \$12.00 = \$420

\$420 x 16 times = \$6,720

\$50 units x \$8.00 = \$400

REPAIR

- Order additional inventory of selected items to guard against stockouts.
- Introduce computerized systems, such as material requirements planning (MRP), which involves having enough materials on hand to meet expected future demand.

PREVENTION TECHNIQUES. Use the above formulas to determine the stockout cost, safety stock, and reorder point.

SPILLOVER EFFECTS

- Lost sales
- Reduced profits
- Disgruntled customers
- Idle machines
- Disrupted production scheduling

See also DEFICIENT INVENTORY BALANCES, and EXCESSIVE ORDERING AND CARRYING COSTS.

PROBLEM: THEFT

IDENTIFYING SYMPTOM. Inventory on hand is less than what is indicated in the accounting records.

CAUSES

- Lack of physical safeguards
- Improper internal control
- Inaccurate accounting records
- Failure to record inventory purchases
- Ineffective or inaccurate method of counting inventory

MEASUREMENT AND ANALYSIS. Management and outside auditors have performed a physical count of the inventory and have determined which inventory is actually owned by the company and which is held in a custodial capacity for other companies. The amount per books does not reconcile with the amount actually on hand. Inventory shortages may require immediate purchase of the missing items to meet urgent customer demands, thereby exposing the purchasing company to higher prices plus premium transportation costs for rush delivery of the goods. Thus, the thefts create additional unnecessary expense.

REPAIR

- Review all internal control procedures.
- Conduct training programs for each inventory procedure.
- Have each inventory item assigned to a different area with a specific person in charge.
- Lock up all merchandise.
- Install a lock system permitting limited access to low-cost inventory by one authorized individual and a two-key system requiring two or more authorized employees for higher-value inventory.
- File insurance claims to recover the cost of stolen inventory.
- Carefully mark, "Do Not Inventory," and segregate, if possible, all material that was sold before the end of the accounting period to avoid inclusion in the ending inventory count.

PREVENTION TECHNIQUES

- Install proper internal control procedures.
- Inspect all inventory purchased and received by the company to check whether it actually received the amount indicated on the vendor's bill.
- Establish a system whereby different employees accept purchased goods; transfer the
 goods to the warehouse, other storage area, or production line; keep inventory
 records; and ship merchandise to customers.
- Make unannounced spot counts of the inventory on hand.
- Make the employee in charge explain any discrepancies.

- Change locks or security codes in storage areas periodically.
- Make theft-awareness everyone's responsibility, so that any employee can furnish information without fear of reprisal.
- Encourage employees to report possible weaknesses in the inventory security system.
- Bond all employees associated with the inventory's physical storage and recordkeeping.
- Maintain a well-prepared perpetual computerized inventory system to enable the company to better control inventory.
- Determine whether all inventory purchases have been validly authorized.
- Go back and physically recount a percentage of all major balances of inventory and a small percentage of the lower value items.
- Question management and employees about goods held by others on consignment or in a warehouse at another location.
- Use a "commonsense test" if the count looks suspicious.
- Make out a zero-quantity tag for items with an assigned location but no parts.
- Consolidate all similar items to expedite accurate control and count.

PREVENTION TECHNIQUES

- Prepare an inventory policy. This policy should contain lessons on the purpose of the inventory program, responsibilities in the chain of command, a brief discussion of the reasons why an accurate inventory count is important, and examples of errors, their causes, and their negative impact on the company's financial status.
- Define the role of the inventory coordinator. This individual should have experience in creating inventory policy and writing inventory procedures, including the counting of ending inventory.
- Review the status of ending inventory balances; check the accuracy of the number of parts received; appraise employee performance in the periodic counting of inventory; and monitor inventory balances for discrepancies.
- Use a uniform inventory ticket for listing the actual amount on hand. Use one tag for each inventory item. Number all tags and account for missing ones at the end of the count. Have employees initial the ticket.
- If tag corrections make tags illegible, mark them "VOID," write a new tag, and give voided and unused tags to the inventory coordinator. Number all inventory sheets and account for all missing sheets at the end of the count. Double-count all high-value items.
- Be sure employees understand inventory instructions. Review the results of the final inventory count for unusual deviations from what is considered a normal ending balance for a specific part or selection of parts.
- Supervise inventory counts carefully. No requisitions should be permitted without special permission of the inventory coordinator. Make sure that inventory that must be moved during the counting period is not counted twice. No movement of material within an area should be done without authorization by the area supervisor.
- Post instructions for calibration and weigh counting directly on the scales.

SPILLOVER EFFECTS. Theft of inventory can cause a serious decline in profits and possible insolvency and bankruptcy. The company will lose customers if management tells potential purchasers that they have certain inventory on hand when in fact it is missing. Management could be sued by the stockholders for incompetence and negligence regarding inventory, a major asset on the balance sheet. The disclosure of employee fraud will increase audit fees.

PROBLEM: MISCOUNTED INVENTORY

IDENTIFYING SYMPTOMS

- Unusually large balances in obsolete goods.
- Small balances in current inventory parts.
- No balances for parts that are usually in stock at all times.
- Inventory held in a custodial capacity for other owners and counted as part of the ending inventory.

CAUSES

- Inexperienced help
- Lack of training in counting of inventory
- Improper inventory identification procedures
- A shortage of qualified personnel
- Improper entries
- Math errors

MEASUREMENT AND ANALYSIS

- Assign an experienced and reliable inventory counter to review all inventory tickets and forms for accuracy in describing and counting the items on hand.
- Have another experienced employee double-check all inventory tickets for correct quantities.
- Correct any tickets found to contain errors.

REPAIR

- Establish a definite procedure for classifying and counting inventory.
- Employ only experienced people familiar with the raw materials used in production to count the inventory.

SPILLOVER EFFECTS. If ending inventory is incorrect, the company's understanding of its profits, balance sheet, tax liabilities, current ratio, and working capital will also be incorrect.

PROBLEM: INACCURATE INVENTORY RECORDS

IDENTIFYING SYMPTOMS

- Inability to meet delivery promises
- Uneven production due to lack of inventory
- Excessive machine downtime because of material shortages
- Incomplete records
- Duplication of effort
- Unproductive recordkeeping time
- Theft of inventory
- An increase in audit fees
- Confusion caused by inventory held for another company and erroneously included with the company's own ending inventory
- Overlapping accounting functions

CAUSES

- Incompetent or inexperienced accounting staff
- Shortage of qualified employees
- Lack of internal controls and audits
- Deficient organizational structure
- Failure to keep up-to-date records
- Failure to identify inventory consigned to the company for resale that belongs to other companies

MEASUREMENT AND ANALYSIS. Inaccurate inventory records affect management decisions and net income. Management must analyze the composition of the inventory in terms of inventory items on hand, the service level-that is, the percent of the time that inventory will be on the shelf to meet a customers requirements-and the incidence and dollar amount of inventory theft. Recordkeeping errors misstate inventory.

REPAIR

- Institute internal controls to safeguard assets and assure the integrity of the accounting system.
- Improve unsatisfactory procedures.
- Check for inconsistencies in the inventory procedures.
- Undertake internal and external audits to confirm the accuracy of the inventory records. Any accounting errors discovered should be corrected immediately.
- Ask an independent CPA firm to evaluate the accounting system and make written recommendations for improvement.
- Install computerized inventory software packages and a bar code system to improve the accuracy and timeliness of the records.

PREVENTION TECHNIQUES

- Implement in-house training programs to assure that the accounting staff' understands how to operate the computer program and the bar-code system.
- Ensure employee honesty and competency.
- Institute a clear separation of duties to ensure proper internal control.
- Make sure all accounting procedures are properly authorized.
- Make sure that all transactions are properly documented and reviewed. This should include specific authorizations for certain individual transactions.
- Establish adequate control over physical assets and records.
- Create safeguards to prevent misappropriation of inventory.
- Have independent checks by both internal and external auditors to ensure that inventory balances on hand agree with accounting records.
- Assign designated items of inventory to specific areas for easy identification. The
 person responsible for a particular inventory storage area must be able to explain any
 discrepancies.

SPILLOVER EFFECTS. If the inventory accounting system is inadequate or inefficient, it will not generate reliable information. The result will be faulty financial decisions based on inaccurate data. The cost of goods sold and ending inventory, major components of both the balance sheet and income statement, will be wrong. As a result, misstatements may exist in the financial position and operating results of the company. This will lead to poor decisions, audits and review by various governmental agencies, and lawsuits by stockholders, investors, and creditors. These actions will negatively affect the market price of the company's outstanding shares and subsequent public offerings.

See also RECORDKEEPING ERRORS.

PROBLEM: HIGH RATE OF PRODUCT OBSOLESCENCE

IDENTIFYING SYMPTOMS

- Low inventory turnover
- Slow sales despite large markdowns
- New competing models with advanced features

CAUSES

- Perishable, specialized, faddish, or high-tech products
- Excess purchasing without specific production goals
- Errors in production requirements
- Sudden lack of demand for the product
- Purchase of a large amount of goods because of advantageous purchasing terms

MEASUREMENT AND ANALYSIS. Evaluate the age and writedowns of older and less desirable merchandise.

REPAIR

- Create an advisory group familiar with the manufacturing requirements of the business to advise top management on policy-making decisions.
- Set a specific inventory level for production and sales purposes.
- Determine a proper level of inventory based on the company's turnover and production objectives.
- Determine the existence of damaged, slow moving, overstocked, out-of-style, and obsolete inventories, looking for commitments of additional quantities of similar items. If advisable, cancel these commitments.
- Sell off obsolete inventory at the market price. If the inventory has no value, donate it to a local charity to generate goodwill and favorable publicity. Its disposal will allow the company to reduce the costs of storage, warehousing, insurance coverage, and payroll incurred in recordkeeping and safeguarding the obsolete inventory.
- Determine whether the recent shipments of obsolete inventory can be returned to vendors for partial or complete credit.

PREVENTION TECHNIQUES

 Determine a proper inventory level. An excellent method to use is the targeted inventory method, under which the total inventory issues in dollars for the prior year are divided by the inventory turnover desired by management. The result is the inventory target amount, which is then compared to the actual inventory on hand. If the actual amount exceeds the targeted inventory amount, the excess is deemed excess inventory, subject to possible obsolescence.

Example:

Total inventory purchases last year = \$5,000,000 Turnover desired by management = 25 Actual inventory at year-end = \$ 222,000

The excess inventory on hand at year-end subject to possible obsolescence would be \$22,000, calculated as follows:

Inventory target (\$5,000,000 = 25) = \$200,000 Actual inventory at year-end = 222,000 Excess inventory subject to possible obsolescence = \$22,000

- Establish an inventory reduction group that will review all areas and activities
 affecting the factory and warehouse inventory levels. Have the group review and
 analyze inventory management problems and suggest immediate and obvious steps
 to reduce inventories.
- Classify inventory target categories into desirable, permissible, and nondesirable levels.
- Carefully reduce inventory levels to a predetermined minimum without affecting production or the service level to customers.

- Allow management to determine which level is preferable for maintaining a proper production schedule and service level to customers.
- Study industry trends in product changes, supplies of raw materials, and manufacturing processes.
- Attempt to negotiate a liberal return policy on inventory purchases with suppliers.

SPILLOVER EFFECTS. The writedown of obsolete inventory will increase the cost of goods sold and will lower earnings.

PROBLEM: MISSED MANUFACTURING SCHEDULES

IDENTIFYING SYMPTOMS

- Production quotas and schedules are not met.
- Sales orders are not filled because completed inventory is not available for immediate shipment.
- Sales are declining.
- The company is getting a reputation for unreliability.
- Raw materials are delayed, resulting in significant downtime, with both workers and machines idle.
- Production facilities are obsolete.
- Workers are inexperienced and unproductive.

CAUSES

- Inexperienced personnel
- Product technological innovations requiring retraining
- Introduction of new production machinery and methods
- Failure to forecast inventory requirements and keep purchases at a correct level
- Stockouts of required parts
- Excessive employee absences and turnover
- High rate of customer turnover and order cancellations
- Theft of vital materials

MEASUREMENT AND ANALYSIS. Efficient companies review their production proficiency every three months because of technological changes in the marketplace, the introduction of new production equipment, the availability of raw materials, and changes in the availability of experienced personnel. The review should consist of an appraisal of the organizational structure, production objectives, inventory control methods, effectiveness of the various production departments, and the accuracy of the accounting records.

REPAIR

- Determine the weaknesses in each sector of the company associated with the production process.
- Evaluate the performance of production managers, supervisors, and workers.

- Establish safety stock levels.
- Make sure that rejected material purchases are quickly returned to vendors or reprocessed.
- Monitor employee absenteeism and turnover.
- Evaluate all personnel performance associated with inventory management.

PREVENTION TECHNIQUES

- Establish production goals by division or product lines to meet customer needs.
- Develop methods for efficient purchase procedures.
- Make sure that engineering changes in production facilities are quickly implemented.
- Define production responsibility and lines of authority.
- Standardize inventory parts and production procedures where possible.
- Adjust salaries and increase employee benefits where necessary.
- Seek suggestions for improvements in manufacturing procedures from production personnel and shop supervisors.
- Make sure that materials in inventory are available and are properly identified.
- Institute quick inspection and rejection procedures for all materials-receiving departments.
- Ensure that vendors are paid on time, so that they will respond quickly to future company purchase requests.
- Establish procedures for protecting inventory from theft.
- SPILLOVER EFFECTS
- Inventory stockouts Inability to meet customer sales
- Increased insurance, storage, and administrative costs
- Decline in net earnings

See also HIGH RATE OF PRODUCT OBSOLESCENCE, INACCURATE INVENTORY RECORDS, and LOW TURNOVER OF MERCHANDISE.

Problem: Poor-Quality Goods

IDENTIFYING SYMPTOMS

- Excessive returns of merchandise
- Discounts given to customers to keep goods
- Declining sales and market share
- A reputation for shoddy quality and workmanship

CAUSES

- Obsolete production facilities
- New, inexperienced, or unproductive workers
- Poor-quality materials

- Scheduling problems
- Cutting corners on materials and workmanship
- Failure to inspect materials prior to their introduction into the manufacturing process
- Poor quality control and lack of inspection procedures
- Substitution of improper parts Ignorance or violation of federal, state, and local regulations governing the application of product safety standards
- Failure to investigate consumer complaints Improper packaging of goods, causing damage to products while in transit to customers
- Mislabeling of goods, causing customers to expect a better-quality product than the item actually purchased
- Arrogance or complacency toward the purchasing public

MEASUREMENT AND ANALYSIS

- Determine the trend in sales returns and allowances to sales. An increasing trend indicates quality problems and unhappy customers.
- Compare returns to industry norms and those of competing companies.
- Create a group familiar with the manufacturing operations of the business to advise top management on quality control.
- Set specific standards of quality control.
- Evaluate the product inspection process. Review packaging techniques.

REPAIR

- Determine the weaknesses in each sector of the company associated with the production process.
- Evaluate the performance of production managers, supervisors, and workers.
- Formulate and announce a stated policy of quality control.
- Inspect goods at key points during processing.
- Establish a program to replenish parts if they fall below a predetermined level.
- Update production facilities that are obsolete.
- Retrain and motivate workers regarding the need for quality workmanship.
- Change suppliers if a vendor's materials are inferior or contain inordinate defects.
- Set reasonable production timetables.
- Eliminate the cutting of corners on materials and workmanship.
- Inspect raw materials before their introduction into the manufacturing process.
- Seek the advice of legal counsel and product engineers about safety standards that the product must meet.
- Respond to consumer complaints.
- Redesign the packaging of goods and select a new delivery company, if necessary.
- Change misleading labels on goods.
- Discontinue products associated with low quality or unreliability.
- Create and promote new products with a reputation for high quality and reliability at an affordable price.

PREVENTION TECHNIQUES

- Review production proficiency and quality control every three months. The review should consist of an appraisal of the organizational structure, production objectives, and inventory control methods.
- Evaluate all personnel performance associated with production.
- Establish a committee to review consumer complaints.
- Redesign the packaging of goods.
- Monitor the performance of the delivery company for complaints regarding customers' receipt of damaged goods.
- Hire product engineers to review safety standards in the product manufacturing process.
- Standardize the labels on goods.
- Establish an advertising campaign to improve the image of the product in the minds of the consuming public.
- Make all employees aware that consumer approval of the company's products is vital to the company's economic survival.

SPILLOVER EFFECTS. Poor-quality goods will cause sales and net earnings to decline and seriously damage the company's image. Competitors will take away market share. Violating product safety standards can lead to government intervention and high legal costs.

See also HIGH RATE OF PRODUCT OBSOLESCENCE, INACCURATE INVENTORY RECORDS, and LOW TURNOVER OF MERCHANDISE.

Problem: Lack of Storage Space

IDENTIFYING SYMPTOMS

- Decrease in production efficiency
- Missed production deadlines
- Missing parts
- Theft and damage to inventory
- Storage space far from production facilities, resulting in delays and excessive transportation and handling costs

CAUSES

- Incorrect sales forecasts
- Improper production planning
- Obsolete facilities
- Lack of money to buy or build additional storage facilities
- Rental storage space unavailable
- High rental cost of storage space
- Failure to define managerial responsibility for the control and storage of inventory

MEASUREMENT AND ANALYSIS

- Prepare a forecast of storage requirements based on production schedules.
- Analyze storage bottlenecks, how materials are transported from storage areas to the production line, the distance they have to travel, and their weight and size.
- Study how the inventory is safeguarded while in storage.
- Ascertain the frequency of emergency customer orders, so that extra inventory can be kept on hand.
- Determine the storage space needed to accommodate production schedules.

REPAIR

- Analyze the warehouse facilities to document all physical characteristics.
- Determine the quantity and effective capacity of storage containers and bins currently in use.
- Draft a detailed layout of the storage facilities, noting all movable and immovable objects.
- Observe how storeroom employees stock and pull goods.
- Investigate access and security to storage area.
- Identify problems in the handling of goods.
- Determine how much of the inventory is obsolete or damaged and dispose of it at once to create additional storage space.
- Define managerial responsibility for the control and storage of inventory.

PREVENTION TECHNIQUES

- Purchase adjustable shelves that slide on floor rollers for smaller parts to save space.
- Install carousel-type racks to lessen square-footage space requirements.
- Use all open space at the top of the room by installing taller racks.
- Standardize package size.
- Rent storage space to best serve consumer markets.
- Stock products at appropriate locations.
- Determine the proper level for all inventory parts and set up a computer system that gives immediate warning of both understocking and overstocking.
- Set up procedures that safeguard the inventory and prevent damage.

SPILLOVER EFFECTS. Insufficient storage space will create shortage of materials, production downtime, inventory stockouts, theft, and an inability to meet emergency customer orders. These problems will cause declining sales and net earnings.

See also INACCURATE INVENTORY RECORDS.

Problem: Delayed Receipt of New Inventory

IDENTIFYING SYMPTOMS

- Lack of critical information regarding production requirements and goals.
- Continuous stockouts, shortages of materials, and missed production goals.
- Above-industry costs for placing inventory orders.
- Lack of management knowledge of the type and quantity of materials held at the company's various storage sites, causing confusion and materials shortages at key areas.

CAUSES

- Inadequate inventory distribution system
- Untrained or inexperienced personnel
- Lack of interface between manufacturing and purchase order systems
- The generation of irrelevant and confusing information regarding purchase requirements
- s with suppliers
- Lost or unclear orders

MEASUREMENT AND ANALYSIS

- Analyze the efficiency of the existing inventory purchase system.
- Establish a chart of managerial responsibility for the acquisition and inspection of goods.
- Determine which suppliers are honest and reliable.
- Establish when specific items of inventory must be reordered.

REPAIR

- Design and implement a new inventory acquisition system.
- Reduce the number of employees involved in the reordering process to prevent overlapping of functions.
- Retrain current employees in correct purchase methodology.
- Select the best supplier and eliminate those vendors who ship damaged inventory or fail to deliver the requested goods on time.
- Select suppliers closer to the company's manufacturing facilities to promote quick delivery of ordered goods.
- Set up a system of quotes that obtains the goods quickly at the best prices.
- Analyze all inventory parts according to predetermined classes of period usage. Use this data to set up a system of automatic reordering.
- Study shipment procedures to determine which trucking companies are reliable and deliver the ordered goods on time.
- Renegotiate contracts with suppliers to penalize them for late
- deliveries.

PREVENTION TECHNIQUES

- Install a purchasing structure utilizing the economic ordering quantity (EOQ) system.
- Maintain a computerized database for all inventory parts. Use it to standardize
 ordering requirements, amounts usually ordered, and the average amount of usage
 for all materials during a given
- production period.
- Where feasible, implement a computerized purchasing system that automatically requests the purchase of a part when supplies fall below a specific amount. Consolidate all similar goods at one location to promote an efficient reordering system.
- Define employee responsibilities for purchases. An updated purchasing system should reduce inventory-related paperwork, facilitate the implementation of coordinated purchasing, reduce the time it takes to receive ordered goods, and improve communication among all company personnel involved in production.
- Give vendors a list of trucking companies that are deemed reliable and demand that these companies be used when shipping goods to the purchaser.

SPILLOVER EFFECTS. Delayed receipt of new inventory will cause scheduling problems in manufacturing, as well as inventory stockouts, inability to meet customer sales requests, production downtime, and declining sales. Net earnings will decline.

See also INACCURATE INVENTORY RECORDS, LOW TURNOVER OF MERCHANDISE, and POOR-QUALITY GOODS.

ADDITIONAL QUESTIONS TO CONSIDER

Depending On The Nature Of Your Engagement, You May Want To Include These Questions In The Write Up, Use Them For Further Analysis, Or Verbally Ask the Client

Questions	never	rarely	occasionally	often	always
Inventory					
Sales are slow.					
Raw materials, work in process or finished goods inventory has increased.					
Inventory has increased faster than sales.					
There is a lack of demand for the products the business sells.					
There are production line bottlenecks and shortages.					
The business product is subject to obsolescence.					
There has been a cutback in production.					
The business is unable to satisfy customers.					
Inventory carrying costs are high because of increased inventory.					
There is a high cost per supply order.					
Inventory is perishable.					
Inventory is subject to obsolescence.					
Inventory is vulnerable to theft.					
The business has experienced inventory overstocking.					
The business has experienced inventory shortages.					
The business had to backorder goods.					
There have been slowdowns in production.					
There has been theft of inventory.					
The business has experienced a shortage of stock on hand to fill orders.					
Actual inventory is lower than the amount indicated by accounting records.					

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There are unusually large balances of obsolete goods.			
There are small balances in current inventory sections.			
The books show no balance for some inventory items that are usually in stock.			
Inventory held in a custodial capacity is counted as ending inventory.			
The business has been unable to meet delivery promises.			
There is uneven production due to lack of inventory.			
Material shortages have caused excessive machine downtime.			
There are incomplete inventory records.			
There is a duplication of effort in inventory counting or recording.			
Audit fees have increased.			
There are overlapping accounting functions regarding inventory recording.			
There is a low turnover of inventory.			
Sales are slow despite large markdowns.			
Competing products offer advanced features.			
Production quotas and schedules are not met.			
The business is getting a reputation for unreliability.			
The business has experienced downtime due to raw material shortages.			
Production facilities are obsolete.			
Workers are inexperienced and unproductive.			
The business has experienced excessive returns of merchandise they sold.			
Discounts have been given to customers to get them to keep goods.			
There is a decline in sales and market share.			
The business has a reputation for shoddy quality and workmanship.			
There has been a decrease in productivity.			
The business has missed production deadlines.			
There are missing parts or raw materials.			
There has been damage to inventory.			
The business has excessive transportation or handling costs from plant to storage.		<u> </u>	
The business has storage space removed from its production facilities.			
There is a lack of critical information regarding production goals and needs.			
The business has had several stockouts and has missed production goals.			
The cost of placing inventory orders is above the industry average.			
Management lacks knowledge of the typre and quantity of inventory.			
Management lacks knowledge of which site the inventory is held.			

Recommendation

Insert any specific recommendations that would make to the client.