

[16]

AUDITING THE PRODUCTION AND PERSONNEL SERVICES CYCLES

OVERSTATING INVENTORY AND PROFITS

Auditing history abounds with stories of companies that have made material overstatements of inventory and profits. In the 1930s McKesson and Robbins materially overstated its salad oil inventory. This accounting fraud was so significant that generally accepted auditing standards were changed to require inventory observations. Nevertheless, inventory problems have continued.

In recent years, Phar-Mor intentionally overstated its inventory by reallocating losses into inventory. Company employees created fake invoices for merchandise purchases, made unsupported journal entries to increase inventory and decrease cost of goods sold, and overcounted and double-counted merchandise. When this fraud unraveled, the CFO was sentenced to 33 months in prison, the CEO went to jail for five years, and the auditors paid millions to shareholders.

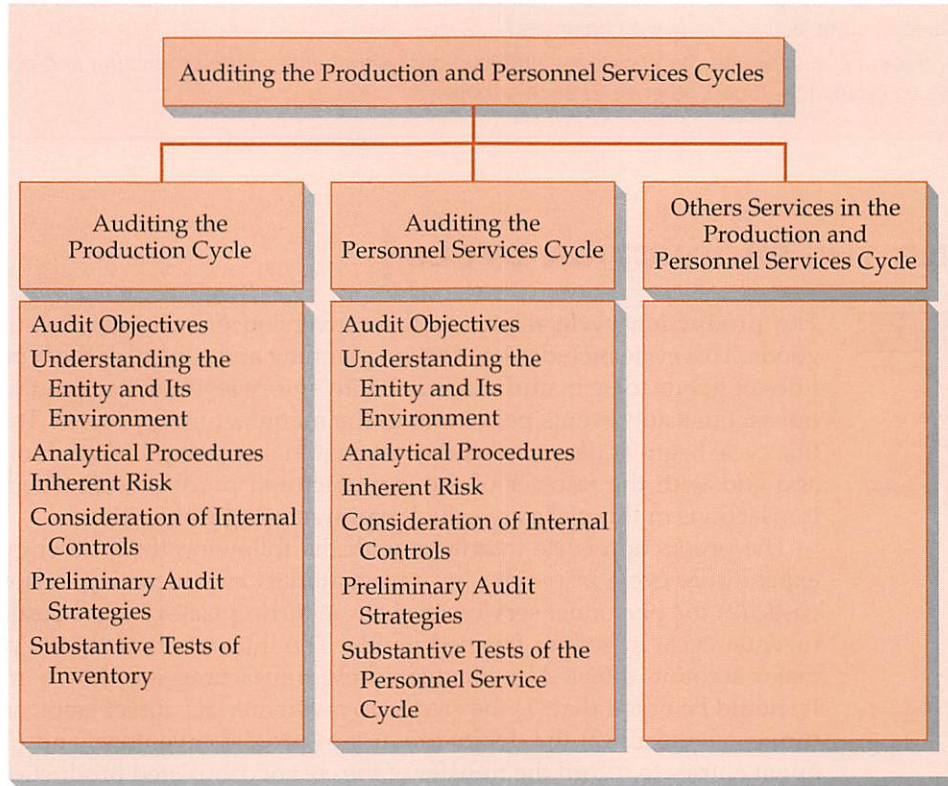
Not all overstatements of inventories are intentional. In November of 2000 the senior management of NCI Building Systems, Inc., began to question its Components Division about high levels of inventory. The purchasing department was instructed to halt steel purchases, and yet inventory levels did not decrease as expected. Ultimately, errors stemmed from a new accounting system that was not adequately tested before being placed in operation and from poor internal controls. In an attempt to "fix" known errors in the accounting system, an employee made unsupported journal entries that resulted in increases in inventory accounts. Then the corporate controller booked a \$2.6 million journal entry to increase inventory and decrease cost of goods sold based on representations from an account manager. The inventory was further overstated owing to inaccurate standard costs that capitalized waste scrap metal as inventory costs rather than expensing costs that were never associated with inventory production. This resulted in inventory being overstated by another \$7.6 million of inventory. In total, internal control breakdowns resulted in restating earnings by approximately \$18 million.

Chapter 16 discusses important audit planning procedures related to inventory audits, the components of a sound system of internal controls over inventory, and steps that should be taken by auditors to audit inventory. In addition, this chapter also explores issues related to the personnel services cycle, which are often an important component of manufactured inventory.

Sources: Joseph T. Wells, "Ghost Goods: How to Spot Phantom Inventory," *Journal of Accountancy*, June 2001, and Accounting and Auditing Enforcement Release 1892, October 9, 2003.

[PREVIEW OF CHAPTER 16]

Chapter 16 continues the discussion of operating activities by focusing on the production process. It first discusses audit planning, internal controls, and substantive tests related to the production of inventory. This is followed by a discussion of payroll costs. The following diagram provides an overview of the chapter organization and content.



Chapter 16 focuses on the following aspects of the auditor's decision process associated with the production and personnel services cycles.

focus on audit decisions

After studying this chapter you should understand the factors that influence the following audit decisions.

- D1.** What is the nature of the production cycle, and how are specific audit objectives developed for the production cycle?
- D2.** What audit planning decisions should be made when developing an audit program for the production cycle?
- D3.** What should be considered in evaluating control activities for the production cycle transactions?
- D4.** What factors are involved in determining an acceptable level of tests of details risk for inventory assertions?
- D5.** How does the auditor determine the elements of an audit program for substantive tests to achieve specific audit objectives for inventory?
- D6.** What is the nature of the personnel services cycle, and how are specific audit objectives developed for the personnel services cycle?

- D7.** What audit planning decisions should be made when developing an audit program for the personnel services cycle?
- D8.** What should be considered in evaluating control activities for personnel services cycle transactions?
- D9.** What factors are involved in determining an acceptable level of tests of details risk for payroll balance assertions?
- D10.** How does the auditor determine the elements of an audit program for substantive tests to achieve specific audit objectives for payroll balances?
- D11.** How does the auditor use the knowledge obtained during the audit of the production and personnel services cycles to support other assurance services?

[AUDITING THE PRODUCTION CYCLE]

Audit Decision 1

■ What is the nature of the production cycle, and how are specific audit objectives developed for the production cycle?

The **production cycle** relates to the conversion of raw materials into finished goods. This cycle includes production planning and control of the types and quantities of goods to be manufactured, the inventory levels to be maintained, and the transactions and events pertaining to the manufacturing process. Transactions in this cycle begin at the point where raw materials are requisitioned for production, and end with the transfer of the manufactured product to finished goods. The transactions in this cycle are called **manufacturing transactions**.

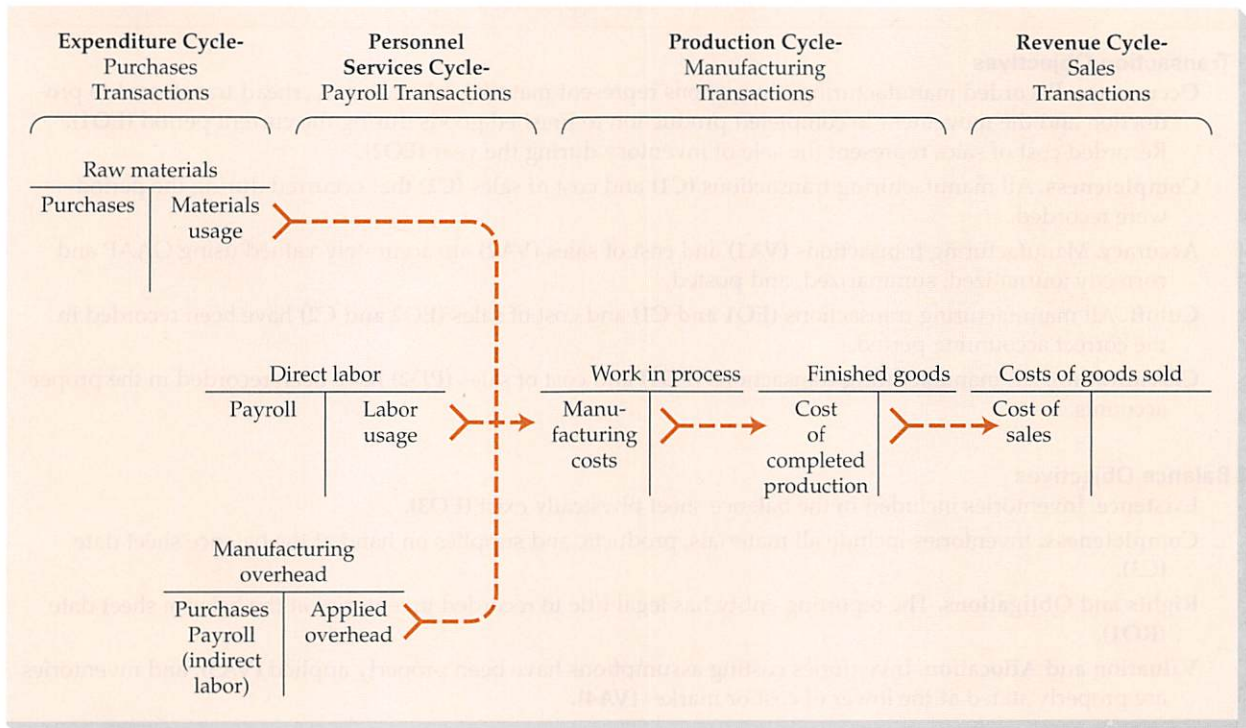
The production cycle interfaces with the following three other cycles: (1) the expenditure cycle in purchasing raw materials and incurring various overhead costs, (2) the personnel services cycle in incurring factory labor costs, and (3) the revenue cycle in selling finished goods. The interaction of these cycles and the major accounts affected by manufacturing transactions are shown in Figure 16-1. It should be noted that (1) the credits to raw materials, direct labor, and manufacturing overhead; (2) the debits to work-in-process inventory; and (3) the subsequent entries to record the transfer of the cost of completed production from work in process to finished goods, result from manufacturing transactions in the production cycle. Finally, although usually considered a revenue cycle transaction, the transfer of costs from manufactured finished goods to cost of goods sold is based on cost data accumulated in the production cycle.

AUDIT OBJECTIVES

The specific audit objectives for the audit of the production cycle are presented in Figure 16-2. Each objective is derived from management's implicit or explicit assertions about investing cycle transactions as they relate to the production of inventory. These objectives are the primary ones for this cycle in most audits. They are not intended to be all-inclusive for all client situations.

Two groups of audit objectives are addressed in this section: (1) transaction class audit objectives pertaining to manufacturing transactions and cost of sales and (2) account balance audit objectives pertaining to inventory. To avoid redundancy, discussion of account balance audit objectives and related audit procedures for purchased inventories was deferred in the expenditure cycle in favor of joint coverage in this chapter with manufactured inventories. Similarly, discussion of audit objectives and related audit procedures for cost of goods sold was deferred

Figure 16-1 ■ Interface of Production Cycle with Other Cycles



in the revenue cycle chapter pending coverage of the origin of such costs through purchases transactions in the expenditure cycle chapter and manufacturing transactions in this chapter. Thus, some of the evidence obtained in connection with objectives related to purchases and sales transactions in Chapters 15 and 14, respectively, is relevant to meeting the account balance audit objectives identified in Figure 16-2.

UNDERSTANDING THE ENTITY AND ITS ENVIRONMENT

Audit Decision 2
 ■ What audit planning decisions should be made when developing an audit program for the production cycle?

Understanding the business and industry assists in developing a knowledgeable perspective about the entity that is used to design an effective and efficient audit program. For many companies manufacturing inventory is a core process, and the ability of the entity to generate earnings and cash flows depends on how well the manufacturing process is managed. For many distribution and retailing companies, the management of inventory and its supply chain is critical to successful performance.

Throughout Part 4 of the text we have followed five industries and the importance of each cycle to the industry. Inventories are immaterial to two of these industries, the hotel industry and the school district. These are service industries, and the audit of inventory is usually insignificant to overall audit strategy for companies in either industry. However, in the audit of the retail grocer, the manufacturer of construction machinery and equipment, and the computer manufacturer, the audit of inventory is a core process that is both material and crucial to

Figure 16-2 ■ Selected Specific Audit Objectives for Inventory

Specific Audit Objectives
<p>Transaction Objectives</p> <p>Occurrence. Recorded manufacturing transactions represent material, labor, and overhead transferred to production and the movement to completed production to finished goods during the current period (EO1). Recorded cost of sales represent the sale of inventory during the year (EO2).</p> <p>Completeness. All manufacturing transactions (C1) and cost of sales (C2) that occurred during the period were recorded.</p> <p>Accuracy. Manufacturing transactions (VA1) and cost of sales (VA2) are accurately valued using GAAP and correctly journalized, summarized, and posted.</p> <p>Cutoff. All manufacturing transactions (EO1 and C1) and cost of sales (EO2 and C2) have been recorded in the correct accounting period.</p> <p>Classification. All manufacturing transactions (PD1) and cost of sales (PD2) have been recorded in the proper accounts.</p> <p>Balance Objectives</p> <p>Existence. Inventories included in the balance sheet physically exist (EO3).</p> <p>Completeness. Inventories include all materials, products, and supplies on hand at the balance sheet date (C3).</p> <p>Rights and Obligations. The reporting entity has legal title to recorded inventories at the balance sheet date (RO1).</p> <p>Valuation and Allocation. Inventories costing assumptions have been properly applied (VA3), and inventories are properly stated at the lower of cost or market (VA4).</p> <p>Disclosure Objectives</p> <p>Occurrence and Rights and Obligations. Disclosed inventory transactions and balances have occurred and pertain to the entity (PD3).</p> <p>Completeness. All inventory disclosures that should have been included in the financial statements have been included (PD4).</p> <p>Classification and Understandability. Production cycle information is appropriately presented and described and information in disclosures is clearly expressed (PD5).</p> <p>Accuracy and Valuation. Inventory information is disclosed accurately and at appropriate amounts (PD6).</p>

the entity's success. When auditing a manufacturing company, the auditor will usually want to understand the capital intensiveness of the manufacturing process, as well as the mix of raw materials and labor that are needed in the manufacturing process. A particularly capital-intensive process, such as the manufacturing of construction equipment, will usually have a significant fixed cost that needs sufficient volume to ensure profitability. Figure 16-3 summarizes some key data for these industries.

ANALYTICAL PROCEDURES

Analytical procedures are cost effective and may alert the auditor to potential misstatements. If the financial statements presented for audit show a trend of increased profit margin combined with an increase in the number of inventory turn days, inventory may be overstated. This will alert the auditor to pay careful

Figure 16-3 ■ Understanding an Entity's Production Cycle

<p style="text-align: center;">Developing a Knowledgeable Perspective about the Entity's Financial Statements (Industry Median)</p>	<p style="text-align: center;">Example Industry Traits</p>	<p style="text-align: center;">Assessing the Risk of Material Misstatement</p>
<p><i>Mfg. of Construction Machinery and Equipment</i></p> <ul style="list-style-type: none"> • Relatively slow inventory turn. • Significant fixed costs are involved in the manufacturing process. 	<p><i>Computer Mfg.</i></p> <ul style="list-style-type: none"> • Moderate inventory turn. • Gross margins depend on the technological superiority of products. • Companies outsource significant aspects of production and assemble more than manufacture products. 	<ul style="list-style-type: none"> • The existence of inventory is a significant risk. • Products are not subject to significant obsolescence risk.
<p>Inventory as a % of Total Assets: 35% Inventory Turn Days: 85 days Gross Margin: 28.7%</p>	<p><i>Retail Grocer</i></p> <ul style="list-style-type: none"> • Very competitive environment and one product may be substituted easily for other products. 	<ul style="list-style-type: none"> • Some inventory on hand may, in economic substance, be consignment inventory due to pricing terms. • The existence of inventory is a significant inherent risk. • The valuation of inventory is a significant inherent risk due to the technical obsolescence issue.
<p>Inventory as a % of Total Assets: 25.3% Inventory Turn Days: 60 days Gross Margin: 34.4%</p>	<p><i>Hotel</i></p> <ul style="list-style-type: none"> • Inventory is generally insignificant for this industry. 	<ul style="list-style-type: none"> • The risk of material misstatement is low due to the immateriality of inventory for this industry.
<p>Inventory as a % of Total Assets: 27.9% Inventory Turn Days: 22 days Gross Margin: 24.7%</p>	<p><i>Local School District</i></p> <ul style="list-style-type: none"> • Inventory is generally insignificant for this industry. 	<ul style="list-style-type: none"> • The risk of material misstatement is low due to the immateriality of inventory for this industry.
<p>Inventory as a % of Total Assets: less than 1% Inventory Turn Days: N/A Gross Margin: N/A</p>		
<p>Inventory as a % of Total Assets: less than 1% Inventory Turn Days: N/A Gross Margin: N/A</p>		

using analytical procedures to spot phantom inventory

In his article, "Ghost Goods: How to Spot Phantom Inventory," Joseph T. Wells, says that ghost goods throw a company's accounting records out of kilter. He suggests the following trends as potential indicators of phantom inventory.

- "Inventory increasing faster than sales."
- "Decreasing inventory turnover."
- "Shipping costs decreasing as a percentage of inventory."
- "Inventory rising faster than total assets."
- "Falling cost of sales as a percentage of sales."
- "Cost of goods sold on the books not agreeing with tax returns."

Source: Joseph T. Wells, "Ghost Goods: How to Spot Phantom Inventory," *Journal of Accountancy*, June 2001.

attention to the existence and valuation of inventory. The auditor might also be alert to cutoff problems that might have resulted in overstating inventory. A trend of decreased inventory turn days and decreased gross margin may indicate a problem with inventory shrinkage. Figure 16-4 presents some example analytical procedures along with an explanation of the problems that they might identify.

Figure 16-4 ■ Analytical Procedures Commonly Used to Audit the Production Cycle

Ratio	Formula	Audit Significance
Inventory Turn Days	$\text{Avg. Inventory Payable} \div \text{Cost of Goods Sold} \times 365$	Prior experience in inventory turn days combined with knowledge of cost of sales can be useful in estimating current inventory levels. A lengthening of the period may indicate existence problems.
Inventory Growth to Cost of Sales Growth	$\frac{((\text{Inventory}_n \div \text{Inventory}_{n-1}) - 1) \div ((\text{Cost of Sales}_n \div \text{Cost of Sales}_{n-1}) - 1)}$	Ratios larger than 1.0 indicate that inventories are growing faster than sales. Large ratios may indicate possible inventory obsolescence problems.
Finished Goods Produced to Raw Material Used	$\text{Finished Goods Quantities} \div \text{Raw Material Quantities}$	Useful in estimating the efficiency of the manufacturing process. May be helpful in evaluating the reasonableness of production costs.
Finished Goods Produced to Direct Labor	$\text{Finished Goods Quantities} \div \text{Direct Labor Hours}$	Useful in estimating the efficiency of the manufacturing process. May be helpful in evaluating the reasonableness of production costs.
Product Defects per Million	$\text{Number of Product Defects as a Percent of Each Million Produced}$	Useful in estimating the effectiveness of the manufacturing process. May be helpful in evaluating the reasonableness of production costs and warranty expenses.

When inventory is material to the financial statement audit, the auditor should not consider that analytical procedures are a substitute for other tests of details, but they may be very effective in focusing audit attention where misstatements are likely. In addition, Figure 16-4 suggests several comparisons of financial measures with underlying measures of business activity; raw materials used, and direct labor hours. If the auditor plans to use this type of data for a substantive analytical procedure, the auditor should test the control system that ensures the reliability of the data used to support an analytic conclusion.

INHERENT RISK

The inherent risk of misstatement in the financial statements arising from inventory transactions for the hotel chain or the school district is relatively low, for inventory is not a material part of the entity's core process. With a manufacturer, wholesaler, or retailer, however, inventory may be assessed at or near the maximum for the following reasons:

- The volume of purchases, manufacturing, and sales transactions that affects these accounts is generally high, increasing the opportunities for misstatements to occur.
- There are often contentious issues surrounding the identification, measurement, and allocation of inventoriable costs such as indirect materials, labor, and manufacturing overhead, joint product costs, and the disposition of cost variances, accounting for scrap, and other cost accounting issues.
- The wide diversity of inventory items sometimes requires the use of special procedures to determine inventory quantities, such as geometric volume of stockpiles, aerial photography, and estimation of quantities by experts.
- Inventories are often stored at multiple sites, adding to the difficulties associated with maintaining physical controls over theft and damages, and properly accounting for goods in transit between sites.
- The wide diversity of inventory items may present special problems in determining their quality and market value.
- Inventories are vulnerable to spoilage, obsolescence, and other factors such as general economic conditions that may affect demand and salability, and thus the proper valuation of the inventories.
- Inventory may be sold subject to right of return and repurchase agreements.

CONSIDERATION OF INTERNAL CONTROLS

As in the case of the revenue and expenditure cycles, aspects of all five components of an entity's system of internal controls are applicable to manufacturing transactions in the production cycle. At this stage we assume that the entity has a strong control environment, sound risk assessment procedures, and effective monitoring of the system of internal control. The following discussion focuses on the accounting system aspects of the information and communication component, and on effective control activities. In addition, the discussion assumes that an entity has good segregation of duties and computer general controls are effective, so that the focus of the discussion is on programmed application control procedures.

Audit Decision 3

■ What should be considered in evaluating control activities for the production cycle transactions?

Common Documents and Records

Following are some of the common documents, records, and computer files used in processing manufacturing transactions. An example accounting system that incorporates these documents is exhibited in Figure 16-5.

- **Production order.** Form indicating the quantity and kind of goods to be manufactured. An order may pertain to a job order or a continuous process.
- **Material requirements report.** Listing of raw materials and parts needed to fill a production order.
- **Materials issue slip.** Written authorization from a production department for stores to release materials for use on an approved production order.
- **Time ticket.** Record of time worked by an employee on a specific job.
- **Move ticket.** Notice authorizing the physical movement of work in process between production departments, and between work in process and finished goods.
- **Daily production report.** Report showing raw materials and labor used during the day.
- **Completed production report.** Report showing that work has been completed on a production order.
- **Standard cost master file.** A computer file containing standard costs.
- **Raw materials inventory master file.** A computer file with both the quantities of raw materials inventory on hand and actual cost of raw materials.
- **Work-in-process inventory master file.** A computer file with both the quantities of work-in-process inventory on hand, and actual cost of work in process.
- **Finished goods inventory master file.** A computer file with both the quantities of finished goods inventory on hand and actual cost of finished goods.

The use of each of these documents and records is explained in the following sections.

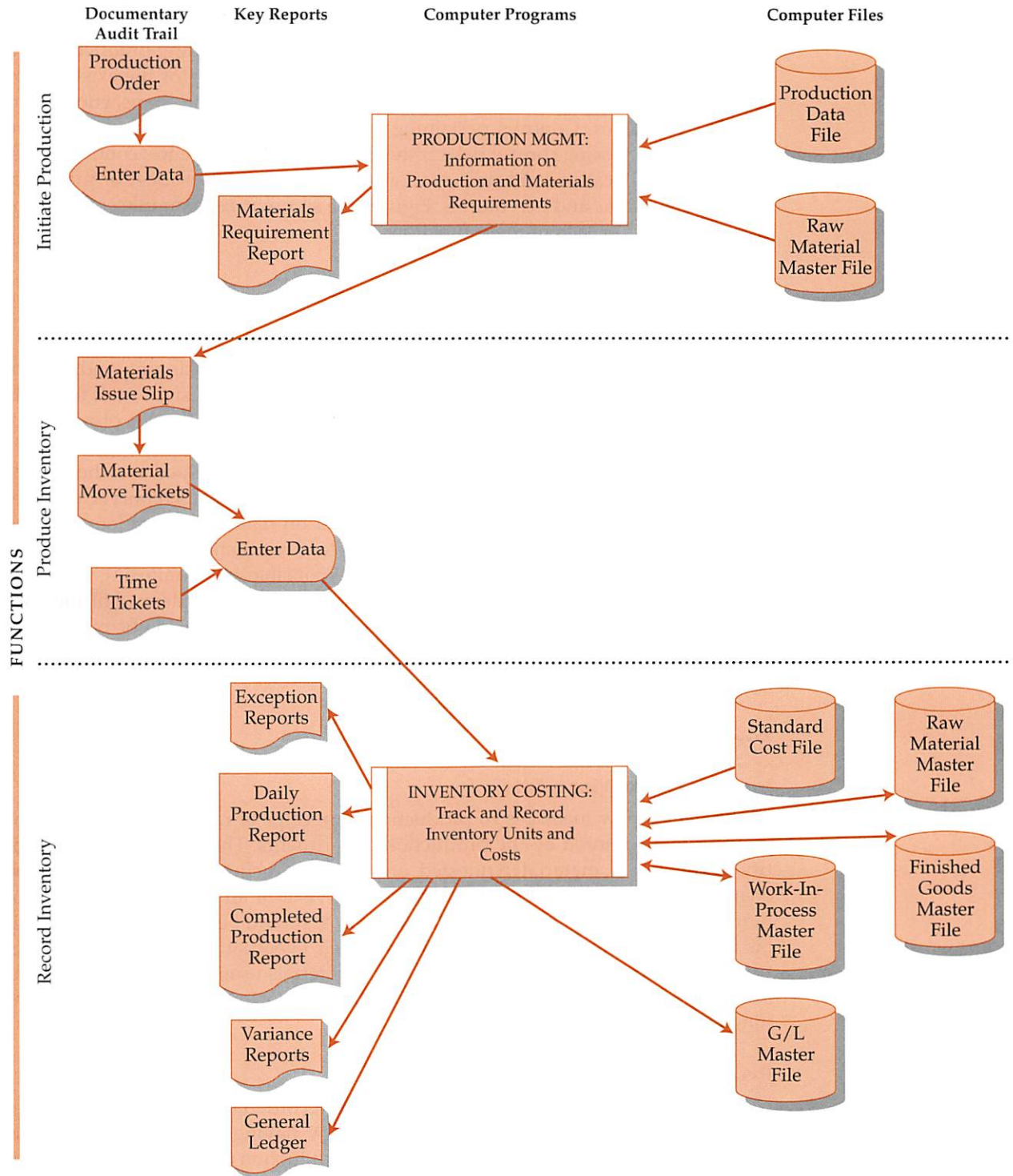
Functions and Related Controls

Executing and recording manufacturing transactions and safeguarding inventories involve the following manufacturing functions:

- Initiating production
 - Planning and controlling production
- Production of Inventory
 - Issuing raw materials
 - Processing goods in production
 - Transferring completed work to finished goods
 - Protecting inventories
- Recording manufacturing and inventory transactions
 - Determining and recording manufacturing costs
 - Maintaining correctness of inventory balances

The performance of these functions involves several departments such as production planning and control, stores (raw materials), the production departments,

Figure 16-5 ■ System Flowchart—Manufacturing Transactions



timekeeping, finished goods, IT, cost accounting, and general accounting. As with each of the other major transaction classes, there should be segregation of duties for executing and recording manufacturing transactions and maintaining custody of the manufacturing inventories. Controls pertaining to initiating production and the movement of goods are relevant in assessing control risk for the existence or occurrence and completeness assertions for manufacturing transactions and related inventories. Controls pertaining to recording inventory transactions are important in assessing control risk for the existence and occurrence, completeness, valuation or allocation, and presentation and disclosure assertions for manufacturing transactions and inventories. Figure 16-6 summarizes example control procedures related to each of these functions.

Initiating Production

Planning and Controlling Production

The authorization of production occurs in the production planning and control department based on orders received from customers or analysis of sales forecasts and inventory requirements. Documentation of the authorizations is provided by issuing prenumbered production orders (EO1). Information technology, or other means, should be used to account for all production orders issued and their eventual recording in manufacturing costs. A material requirements report is also prepared showing materials and parts needed and on hand. When orders must be placed with suppliers, a copy of this report is sent to purchasing (EO1).

Production planning and control is also responsible for monitoring materials and labor usage, and tracking the progress on production orders until they are completed and transferred to finished goods. The review of daily production activity reports and completed production reports is essential in meeting these responsibilities.

Produce Inventories

Issuing Raw Materials

Stores release raw materials to production on receipt of materials issue slips (or requisitions) authored by the production departments. The slips show the quantity and type of material requested and the production order number to be charged. Each slip should be signed by a supervisor or an authorized production worker. Information technology, or other means, should be used to match materials issue slips with production orders and their eventual recording in manufacturing costs (EO1, C1). A daily summary of materials usage is typically prepared as a component of the daily production activity report used in production planning and control (EO1, C1).

Processing Goods in Production

Labor incurred on specific production orders is recorded on time tickets; the timekeeping function may also be accomplished by having employees insert their badges in a computer terminal and key in the production order number whenever they start or stop work on a job. In either case, a daily summary of labor usage is typically prepared from the timekeeping data as a component of the daily production activity report (EO1, C1).

Figure 16-6 ■ Control Risk Considerations—Manufacturing Transactions

Function	Potential Misstatement	Computer Control ^a (Manual Controls in Italics)	C1	EO1	VA1	PD1
Initiating Production						
Planning and controlling production	Excessive production may be ordered.	<i>Approval of production orders in production planning and control.</i>		P		
Issuing raw materials	Use of raw materials is not authorized.	<i>Signed materials issue slips for approved production orders are required for all materials released to production.</i> Computer accounts for prenumbered materials issues slips and reconciles slips with recording in daily production reports.	D	D		
Movement of Goods						
Processing goods in production	Direct labor hours may not be charged to production orders.	Computer compares production hours (or time tickets) to record direct labor hours on daily production reports. Computer accounts for hours worked and hours charged to daily production reports.	D	D	D	D
Transferring completed work to finished goods inventory	Finished goods personnel may claim goods were not received from production.	<i>Signature of finished goods warehouse personnel on final move ticket on receipt of goods.</i> Computer accounts for inventory move tickets and reconciles with recording on completed production report.	D	D	D	D
Protecting inventories	Inventories may be stolen from the warehouse. Work in process may be stolen or misrouted during production.	<i>Use of locked warehouse with access restricted to authorized personnel only.</i> <i>Use of plant surveillance personnel.</i> Signed inventory move tickets to control movement of goods through production department, with tickets reconciled to daily production reports and completed production reports.	D	D		
Recording Manufacturing and Inventory Transactions						
Determining and recording manufacturing costs	Manufacturing costs may be recorded in incorrect amounts. Direct manufacturing costs allocated to work in process may not be recorded or may be recorded at incorrect amounts. Inappropriate overhead rates or standard costs may be used. Costs of completed production may not be transferred to completed goods or be transferred in incorrect amounts.	<i>Use of chart of accounts; timely reporting of manufacturing cost data for management performance reviews including budget comparisons.</i> Computer compares daily production report data with underlying source documents (inventory move tickets and time cards). <i>Management approval of overhead rates and standard costs; timely reporting of manufacturing cost data for management performance reviews and investigation of variances.</i> Computer compares completed production report data with underlying source documents (inventory move tickets and time cards).			P	P
			D	D		
					D	D
					D	D

(continues)

Figure 16-6 ■ (Continued)

Function	Potential Misstatement	Computer Control ^a (Manual Controls in <i>Italics</i>)	C1	EO1	VA1	PD1
Recording Manufacturing and Inventory Transactions (cont.)						
Maintaining the correctness of inventory balances.	Recorded inventory quantities may not agree with inventory owned quantities on hand.	<i>Periodic independent counts of inventories; comparison with records of amounts and ownership.</i>	D	D		D
	Inventory carrying values in subsidiary ledgers or master files may not agree with control accounts.	Computer checks on agreement of subsidiary records and control accounts.			D	
	Inventories may be carried at amounts in excess of market values.	<i>Periodic inspection of inventory condition; periodic inventory activity reports for management performance reviews.</i>			D	
	Management may not be held accountable for management of inventory resources, resulting in a variety of misstatements in the financial statements.	Management Controls <i>An appropriate level of management monitors the level of production, and production costs, and the reasonableness of inventory levels relative to sales volume.</i>	D	D	D	D

^a All computer controls assume that exceptions are either printed on an exception report for followup, or an error message appears during input and the transaction cannot be processed without correction and acceptance.

P = potential control to prevent misstatement or unauthorized use of resources.

D = potential control to detect misstatement or unauthorized use of resources.

When work on a production order is completed in one department and the goods have passed inspection, transfer to the next department is authorized by a move ticket that should be signed by the department receiving the goods. Information technology, or other means, should match time tickets and move tickets with the eventual recording in manufacturing costs (EO1, C1, VA1, PD1).

Transferring Completed Work to Finished Goods

When production of an order is complete and the goods have passed a final inspection, a completed production report is prepared. The goods are then forwarded to the finished goods warehouse, which accepts accountability for the goods by signing the final move ticket (EO1, C1).

Protecting Inventories

Manufacturing inventories are vulnerable to theft and damage. The storage of raw materials and finished goods inventories in locked storerooms with access restricted to authorized individuals is important in safeguarding these assets. The protection of work in process is facilitated through surveillance of production areas by supervisory and plant security employees, the tagging of goods, and the use of prenumbered move tickets to control the transfer of work in process

through the plant (EO1, C1). In addition, the raw materials master file, work-in-progress master file, and finished goods master file should contain a perpetual inventory record in quantities. This recorded accountability should be regularly compared with the physical inventory on hand to ensure the accuracy of inventory records (EO1, C1).

Recording Manufacturing and Inventory Transactions

Determining and Recording Manufacturing Costs

This function involves the following:

- Charging direct materials and direct labor to work in process.
- Assigning manufacturing overhead to work in process.
- Transferring costs between production departments (in a process cost system).
- Transferring the cost of completed production to finished goods.

To ensure that manufacturing costs are properly recorded, the chart of accounts should provide for the many accounts needed to properly classify and track such costs. In addition, the timely reporting of cost data for use in management performance reviews of production activity and cost control provides a useful means of detecting misclassifications in recording manufacturing costs. Such reports normally include comparisons of actual and budgeted data by various cost classifications (EO1, C1, VA1, PD1).

Manufacturing costs may be assigned to work in process based on actual costs or standard costs. When the latter are used, they should be approved by management, and there should be timely reporting of variances from actual or budgeted amounts for investigation and followup as a part of the periodic performance reviews by management. Additional controls over the recording of manufacturing costs include:

- Independent checks on the agreement of entries for the allocation of manufacturing costs to work in process with data on materials and labor usage in daily production activity reports (EO1, VA1, PD1).
- Independent checks on the agreement of entries for the transfer of work in process to finished goods with data in completed production reports (EO1, VA1, PD1).
- A report of all material issue slips, time tickets, and inventory move tickets that are not included in a daily production report (C1).

Independent checks are often accomplished through programmed controls and independent follow-up of exceptions.

Maintaining Correctness of Inventory Balances

Maintaining correct inventory balances involves three activities. First, there should be periodic independent counts of inventory on hand and comparison with recorded quantities per the perpetual inventory records. These comparisons may reveal recorded quantities that no longer exist, incomplete records of quantities on hand, or inventory items that are misclassified in the records. This activity may occur just once a year in connection with the annual audit. However, strong controls result in counting inventory on a more frequent cyclical basis throughout the year. Second, there should be periodic independent checks on the agreement