PKF Antares

Auditing Inventory: Key Concepts, Risks, and Procedures

A comprehensive overview of the 6-step audit approach for inventory, designed to help audit professionals navigate complex inventory assessments and identify material misstatements.

Prepared by: Greg Hambardzumyan

Why Inventory Auditing Matters

Major Asset Category

Inventory typically represents one of the largest assets on a company's balance sheet, often comprising 20-40% of total assets for manufacturers and retailers.

Direct Financial Impact

Inventory valuation directly affects cost of goods sold and net income. Even small errors can materially distort financial statements and mislead stakeholders.

High Risk Profile

Inventory is susceptible to fraud, theft, valuation errors, and obsolescence. These risks make it a critical focus area for every financial statement audit.

The Six-Step Audit Approach

A systematic framework for conducting thorough inventory audits that addresses all key assertions and risk areas.

01

Understand Inventory Management

Document and analyze the client's inventory processes, systems, and flow of goods.

02

Identify Significant Accounts

Determine which inventory accounts and assertions are material to the financial statements.

03

Assess Risk of Misstatement

Evaluate inherent and fraud risks specific to the client's inventory environment.

04

Evaluate Control Design

Review whether internal controls are properly designed to prevent or detect errors.

05

Test Control Effectiveness

Perform tests to determine if controls are operating as designed throughout the period.

06

Perform Substantive Procedures

Execute detailed testing procedures to obtain direct evidence about inventory balances and transactions.

Understanding the Client's Inventory System

Typical Inventory Flow

1. **Purchases**
   Ordering materials and goods
2. **Receiving**
   Inspection and acceptance
3. **Storage**
   Warehousing and tracking
4. **Production**
   Manufacturing (if applicable)
5. **Sales**
   Shipment to customers

Key Distinctions

Retailers typically maintain one inventory category (finished goods) with simpler tracking systems.

Manufacturers manage raw materials, work-in-process, and finished goods, requiring more complex cost accounting.

Critical Documents

- Purchase orders (POs)
- Receiving reports
- Material requisition forms
- Job cost sheets
- Shipping documents

Significant Accounts in Inventory Audits

Inventory Assets

For Manufacturers: Raw materials, work-in-process, and finished goods require separate evaluation and testing.

For Retailers: Merchandise inventory is typically the sole category but may include goods in transit.

Cost of Goods Sold

The direct counterpart to inventory on the income statement. Changes in inventory valuation directly impact COGS and profitability metrics.

Related Accounts

Accounts payable for inventory purchases, obsolescence reserves, lower of cost or market adjustments, and freight-in costs all require consideration.

Why are these accounts almost always significant? Inventory's size, susceptibility to error, and direct impact on both the balance sheet and income statement make it material to virtually every manufacturing or retail company's financial statements.

Relevant Audit Assertions

Auditors must obtain sufficient appropriate evidence for each assertion to form an opinion on inventory balances.

Existence

Inventory recorded in the accounts actually exists and is on hand at the balance sheet date.

Completeness

All inventory that should be recorded has been recorded; nothing is omitted from the accounts.

Valuation

Inventory is recorded at the appropriate amount, applying proper costing methods and considering obsolescence.

Rights & Obligations

The company has legal ownership and title to the recorded inventory items.

Accuracy

Inventory quantities, costs, and calculations are mathematically correct and properly compiled.

Classification

Inventory is properly categorized (raw materials, WIP, finished goods) in the financial statements.

Cutoff

Inventory transactions are recorded in the correct accounting period, especially near year-end.

Inherent Risk Assessment

Inventory presents unique inherent risks that auditors must carefully evaluate when planning their procedures.

Theft Susceptibility

Small, valuable, or easily transportable items face high theft risk from employees, customers, or external parties. Examples include electronics, jewelry, and pharmaceuticals.

Manufacturing Complexity

Complex production processes involving multiple stages, cost allocations, and overhead applications increase the likelihood of errors in work-in-process valuation.

Obsolescence Risk

Technology products, fashion items, and perishables face rapid obsolescence. Slow-moving inventory may be overstated if obsolescence reserves are inadequate.

Fraud Incentives

Management may overstate inventory to inflate assets and net income, or manipulate reserves to smooth earnings. Fictitious inventory and improper cutoff are common fraud schemes.

Market Volatility

Fluctuating commodity prices, currency exchange rates, and supply chain disruptions can significantly impact inventory valuation and require frequent reassessment.

Internal Controls Over Inventory

Preventive Controls

- **Segregation of Duties**

  Separate custody, recordkeeping, and authorization functions to prevent errors and fraud.

- **Pre-Numbered Documents**

  Sequential numbering of purchase orders, receiving reports, and shipping documents ensures completeness.

- **Authorization Procedures**

  Proper approval required for purchases, production orders, and shipments based on established limits.

Detective Controls

- **Physical Safeguards**

  Security cameras, locked storage areas, restricted access, and alarm systems protect inventory assets.

- **Reconciliations**

  Regular comparison of perpetual records to general ledger and periodic physical counts to perpetual records.

- **Variance Analysis**

  Investigation of unexpected differences between actual and standard costs, or physical counts and records.

Evaluating Control Design

Before testing controls, auditors must determine whether controls are properly designed to address identified risks.

1 Prevention vs. Detection

Is the control designed to prevent misstatements before they occur, or detect and correct them after the fact?

2 Personnel Competence

Is the control performed by someone with appropriate authority, training, and expertise to execute it effectively?

3 Documentation Standards

Does the control leave sufficient evidence of performance for audit testing purposes?

4 Risk Alignment

Does the control directly address the specific risks of material misstatement identified in the assessment?

Control Design and Risk: Well-designed controls that operate effectively reduce control risk, allowing auditors to reduce the extent of substantive testing. Poorly designed controls, even if followed consistently, may not adequately mitigate risks.

Testing Controls: Methods and Objectives

Auditors employ various testing methods to gather evidence about whether controls are operating effectively throughout the audit period.

Inquiry

Ask management and staff about control procedures, frequency of performance, and how exceptions are handled. Provides understanding but limited assurance alone.

Observation

Watch employees perform control activities in real-time, such as observing the count and inspection process during receiving.

Inspection

Examine documents and records for evidence of control performance, such as approval signatures and reconciliation sign-offs.

Reperformance

Independently execute the control procedure (e.g., recalculate cost allocations) to verify accuracy and completeness.

Testing Objective: Determine whether controls operated consistently and effectively throughout the period under audit, providing a basis for the level of control risk assessed and the nature, timing, and extent of substantive procedures.

Dual-Direction Testing

Effective inventory auditing requires testing in both directions to detect different types of fraud and misstatement. These complementary approaches provide comprehensive assurance over inventory balances.

Vouching (Existence) - Sheet to Floor

Start with accounting records and trace backward to physical items or source documents. This tests whether recorded inventory actually exists and helps detect overstatement fraud.

Tracing (Completeness) - Floor to Sheet

Begin with source documents or physical items and trace forward to accounting records. This tests whether all inventory is properly recorded and helps identify understatement risks.

Understanding and applying both directions is critical for detecting inventory fraud schemes, whether management is inflating balances to boost earnings or hiding inventory losses.

Examples of Control Tests

01

Document Sequence Testing

Verify that pre-numbered documents are accounted for with no missing or skipped sequences, which could indicate unrecorded transactions or manipulated records.

02

Physical Count Observation

Directly observe inventory count procedures to assess whether employees follow established protocols and whether counts are accurate and reliable.

03

Authorization Review

Inspect approval signatures on purchase orders and shipping documents to ensure proper authorization controls are functioning as designed.

04

Reconciliation Testing

Review management's reconciliation of raw material usage versus scrap production to identify unusual patterns or potential waste issues.

05

Cut-off Procedures

Test year-end cutoff by reviewing receipt and shipment dates around the balance sheet date to ensure transactions are recorded in the correct period.

Substantive Procedures Overview

What Are Substantive Procedures?

Substantive procedures are audit tests designed to detect material misstatements in financial statement assertions. Unlike tests of controls, which evaluate the effectiveness of internal controls, substantive procedures directly examine account balances and transactions.

Two Primary Types

- **Analytical procedures:** Evaluating relationships and trends in financial data
- **Tests of details:** Examining specific transactions, balances, and supporting documentation

Required Procedures

Substantive procedures must be performed regardless of control strength assessments.

Risk-Based Extent

The extent of testing depends on assessed control risk and inherent risk levels.

Primary Purpose

Obtain sufficient appropriate audit evidence to support opinion on financial statements.

Analytical Procedures: Trend Analysis

Trend analysis helps auditors identify unusual patterns that may indicate fraud, valuation problems, or operational issues. By comparing current year data to prior periods and expectations, auditors can detect red flags requiring further investigation.

Scrap Rate Trends

Analyze scrap rates over time to identify unusual increases that might indicate production problems, theft, or inventory valuation issues.

Gross Margin Trends

Monitor gross margin percentages for unexpected fluctuations that could signal inventory mispricing, obsolescence, or cost manipulation.

Inventory Turnover

Calculate inventory turnover ratios and days to sell to assess whether inventory is moving efficiently or becoming stagnant and potentially obsolete.

Unexpected Changes

Investigate any significant deviations from historical patterns or industry norms, which often serve as early warning indicators of fraud or valuation issues.

Analytical Procedures: Relationships

Examining relationships between related accounts and comparing them to expectations helps auditors detect inconsistencies that may indicate misstatements or fraud schemes.

COGS vs Sales Relationship

Compare cost of goods sold to sales revenue to ensure the relationship remains consistent with prior periods and industry standards. Unusual ratios may indicate inventory or revenue manipulation.

Budget vs Actual Usage

Analyze variances between budgeted and actual raw material usage. Significant differences could reveal production inefficiencies, waste, or unauthorized consumption.

Industry Benchmarking

Compare the company's inventory metrics to industry peers to identify outliers that warrant investigation and may indicate accounting irregularities.

Production Stage Analysis

For manufacturers, evaluate relationships between raw materials, work-in-progress, and finished goods. Imbalances may reveal production issues or obsolete inventory not properly written down.

Tests of Details: Transactions

Transaction-level testing provides direct evidence about specific inventory movements and ensures that individual transactions are properly recorded, authorized, and classified.

Occurrence Testing

Procedure: Vouch purchases to purchase orders and receiving reports

Purpose: Verify that recorded inventory purchases actually occurred

Completeness Testing

Procedure: Trace receiving reports to inventory records

Purpose: Ensure all received inventory is properly recorded

Authorization Testing

Procedure: Verify shipping tickets match customer orders

Purpose: Confirm shipments were properly authorized

Cutoff Testing

Procedure: Review transactions around year end

Purpose: Ensure transactions recorded in correct period

Classification Testing

Procedure: Check proper treatment of RM, WIP, and FG

Purpose: Verify accurate inventory category classification

Tests of Details: Account Balances

Balance-level testing directly examines the inventory account itself, providing evidence about existence, completeness, valuation, and rights to inventory items at the balance sheet date.

Perform Test Counts

Select high-value inventory items and physically count them, comparing results to client records.

Assertion: Existence

Observe Physical Inventory

Attend and observe the client's full physical inventory count to assess accuracy and completeness.

Assertion: Completeness

Identify Obsolete Items

Inspect inventory for signs of obsolescence, damage, or slow movement requiring write-downs.

Assertion: Valuation

Confirm External Storage

Obtain confirmations from third-party warehouses holding client inventory.

Assertion: Rights & Obligations

Inspect Consignment Terms

Review consignment arrangements to ensure inventory is properly classified based on ownership.

Assertion: Rights & Obligations

Additional Audit Considerations

1

Cycle Counting Programs

When clients perform multiple inventory counts throughout the year instead of a single year-end count, auditors must evaluate the reliability of the cycle counting process and test the accuracy of counts performed.

2

Third-Party Counters

Companies may hire external inventory counting specialists. Auditors should assess the competence and objectivity of these third parties and review their work to ensure it provides reliable audit evidence.

3

Roll-Forward Procedures

When the physical count date differs from the balance sheet date, auditors must test transactions occurring between these dates to ensure the ending balance is fairly stated.

4

Goods in Transit Cutoff

Carefully evaluate inventory in transit at year-end, applying proper FOB terms to determine ownership and ensure items are recorded in the correct entity's financial statements.

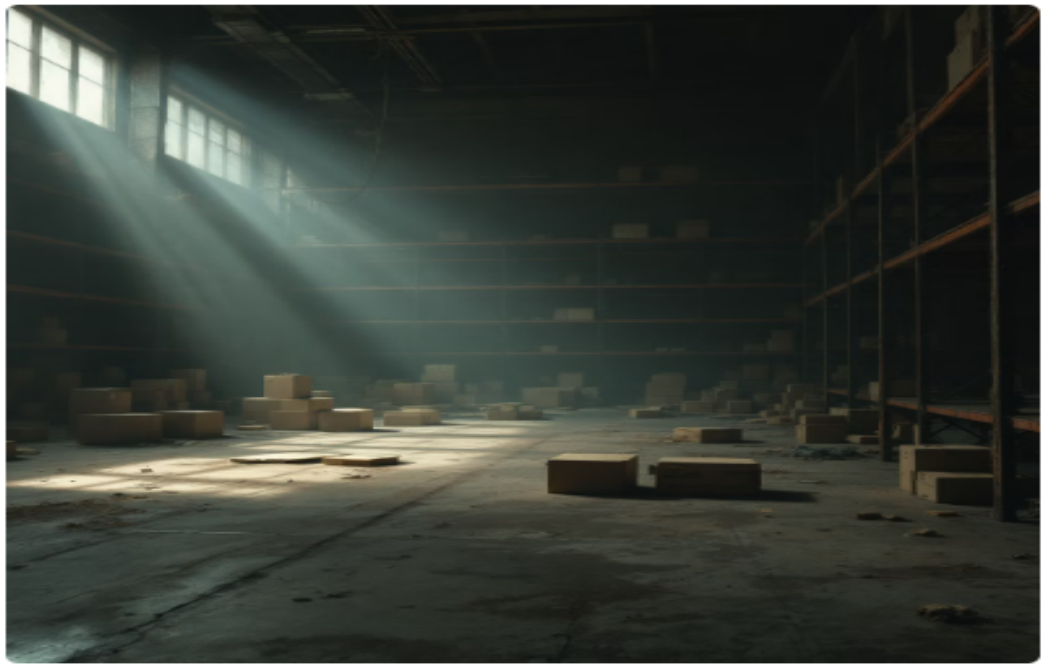
5

Unusual Adjustments

Investigate large or unusual inventory adjustments, which may indicate control deficiencies, counting errors, or attempts to manipulate inventory balances.

Common Inventory Fraud Schemes

Understanding common fraud schemes helps auditors maintain appropriate skepticism and design effective audit procedures to detect inventory manipulation.



- **Fictitious Inventory**

  Recording inventory that doesn't exist to inflate assets and earnings

- **Moving Inventory**

  Shuttling inventory between locations during counts (e.g., FarMor case)

- **Empty-Box Stacking**

  Filling warehouses with empty boxes to create appearance of volume

- **Double-Counting**

  Counting goods in transit twice at both shipping and receiving locations

- **Misclassifying Returns**

  Recording sales returns as new purchases to inflate inventory value

- **Ignoring Obsolescence**

  Failing to write down obsolete or damaged inventory to proper net realizable value

Conclusion

High Skepticism Required

Inventory is susceptible to fraud and error, demanding heightened professional skepticism throughout the audit.

Balanced Approach

Strong controls testing combined with thorough substantive procedures provides comprehensive audit coverage.

Material Impact

Inventory misstatements can significantly distort earnings and financial position, making accurate auditing critical.

Strategic Planning

A well-designed audit plan balances efficiency with effectiveness, ensuring adequate evidence collection.

Questions?

Thank you for your attention. I'm happy to address any questions about inventory auditing procedures, fraud detection techniques, or specific audit considerations.