
February 1997

Defense Inventory Management





**United States
General Accounting Office
Washington, D.C. 20548**

**Comptroller General
of the United States**

February 1997

The President of the Senate

The Speaker of the House of Representatives

In 1990, the General Accounting Office began a special effort to review and report on the federal program areas its work identified as high risk because of vulnerabilities to waste, fraud, abuse, and mismanagement. This effort, which was supported by the Senate Committee on Governmental Affairs and the House Committee on Government Reform and Oversight, brought a much-needed focus on problems that were costing the government billions of dollars.

In December 1992, GAO issued a series of reports on the fundamental causes of problems in high-risk areas, and in a second series in February 1995, it reported on the status of efforts to improve those areas. This, GAO's third series of reports, provides the current status of designated high-risk areas.

This report describes our concerns about the Department of Defense's management of supplies that support the military services. It focuses on the need for the Department to be more aggressive in changing its management culture by taking advantage of new management practices, technologies, and logistics systems so that inefficiencies can be eliminated.

Copies of this report series are being sent to the President, the congressional leadership, all other Members of the Congress, the Director of the Office of Management and Budget, and the heads of major departments and agencies.

A handwritten signature in black ink that reads "James F. Hinchman". The signature is written in a cursive style with a large initial "J" and a long, sweeping underline.

James F. Hinchman
Acting Comptroller General
of the United States

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Overview

The Department of Defense (DOD) uses its secondary inventory—spare and repair parts, clothing, medical supplies, and other items—to support its operating forces. In September 1995, DOD reported that it had a secondary inventory valued at \$69.6 billion. Based on DOD data, we estimate that about half of the inventory includes items that are not needed to be on hand to support DOD war reserve or current operating requirements.

The Problem

In 1992, we reported that DOD had wasted billions of dollars on excess supplies. We reported that the problem resulted because inherent in DOD's culture was the belief that it was better to overbuy items than to manage with just the amount of stock needed. Had DOD used effective inventory management and control techniques and modern commercial inventory management practices, it would have had lower inventory levels and would have avoided the burden and expense of storing excess inventory.

In 1995, we reported that managing DOD's inventory presented challenges that partially stemmed from the downsizing of the military forces. We reported that DOD needed to move aggressively to identify and implement viable commercial practices and to provide

managers with modern, automated accounting and management systems to better control and monitor its inventories.

Progress

DOD has clearly had some success in addressing its inventory management problems, but much remains to be done. DOD has implemented, in a limited manner, certain commercial practices such as direct vendor delivery for medical and food items. However, these initiatives address only about 3 percent of the items for which this concept could be used. DOD is in the midst of changing its inventory management culture. Also, it has reduced its inventory since our 1995 high-risk report. However, we believe that much of the reduction was the result of reduced force levels, which reduced overall demands on DOD's logistics systems.

DOD has also made little progress in developing the management tools needed to help solve its long-term inventory management problems. It has not achieved the desired benefits from the Defense Business Operations Fund (DBOF), and the Corporate Information Management (CIM) initiative has not produced the economies and efficiencies anticipated. In December 1996, the Defense Comptroller

dissolved DBOF and created separate Army, Navy, Air Force, and Defense-wide working capital funds. The four funds will continue to operate under the revolving fund concept—using the same policies, procedures, and systems as they did under DBOF.

DOD also abandoned its initial strategy to deploy a set of integrated systems across all inventory control points and has embarked on a strategy to deploy the systems individually at selected sites without taking the steps necessary to ensure that the effort will bring positive results.

As a result of the lack of progress with some of the key initiatives, it has become increasingly difficult for inventory managers to manage DOD's multibillion-dollar inventory supply system efficiently and effectively. Large amounts of unneeded inventory, inadequate inventory oversight, overstated requirements, and slowness to implement modern commercial practices are evidence of the lack of progress.

Outlook for the Future

Unless DOD takes more aggressive actions, its inventory management problems will continue into the next century.

In the short term, DOD needs to emphasize the efficient operation of its existing inventory systems. This includes ensuring the accuracy of inventory requirements to preclude the acquisition of unneeded inventory. It also needs to make greater use of proven commercial practices where more immediate savings can be achieved.

In the long term, DOD must establish goals, objectives, and milestones for changing its culture and adopting new management tools and practices. These solutions include (1) setting aggressive milestones for substantially expanding the use of modern commercial practices and (2) providing managers with the tools—critical to managing inventory efficiently—that it had planned to provide through the DBOF and CIM initiatives. DOD must also continue to explore other alternatives, such as using business case analyses to identify opportunities for outsourcing logistics functions.

At the same time, continued close congressional oversight is key to helping to ensure that financial resources are not wasted through the acquisition of additional inventories that are not needed and that DOD obtains the tools necessary for efficient and effective inventory management.

Managing DOD's Inventory Presents Challenges

Between 1989 and 1995, DOD's forces decreased significantly. Active duty soldiers, sailors, marines, and airmen and airwomen decreased from 2.1 million to 1.5 million; attack and fighter aircraft dropped from 2,800 to 1,784; ships decreased from 570 to 372; and active Army divisions decreased from 18 to 12. For the near future, DOD is predicting less drastic decreases.

Between 1989 and 1995, the inventories being held to support DOD's forces decreased from \$92.5 billion to \$69.6 billion.

Parallel to the force and inventory decreases, DOD's total budget also decreased, from \$291 billion in 1989 to \$252 billion in 1996. Part of the decrease was directly related to reductions in funds available for the purchase of inventory. Between 1989 and 1996, the Congress reduced DOD's procurement and operations and maintenance budgets by about \$7.5 billion to prevent the acquisition of unneeded inventory and to encourage DOD to improve its inventory management practices. For example, in 1992, the Congress rescinded \$1 billion of fiscal year 1992 operations and maintenance budget authority due to excessive on-hand inventory. Also, in 1992, the Congress reduced DOD's fiscal year 1993

operations and maintenance budget requests for purchases of supplies and materials by \$2.9 billion because of excessive inventories.

DOD has spent billions of dollars on inventory that is not needed to be on hand to support war reserve or current operating requirements and burdened itself with managing and storing the unneeded inventory. Much of DOD's unneeded inventory was acquired because of outdated and inefficient inventory management practices. While downsizing of the military forces contributed to some of DOD's excess inventory, both downsizing and congressional budget reductions were also factors in reducing the inventory.

DOD has begun to modernize its inventory management culture. However, cultural changes, by their nature, are slowly achieved. Managing DOD's multibillion-dollar inventory during this period of cultural change, budget reductions, and force downsizing presents a tremendous challenge to DOD's logistics managers. The challenge of supporting a high level of readiness is made more difficult by outdated and inefficient practices, unsolved working capital fund problems, and the shift in CIM strategy.

Further Changes Are Needed in DOD's Inventory Management Practices

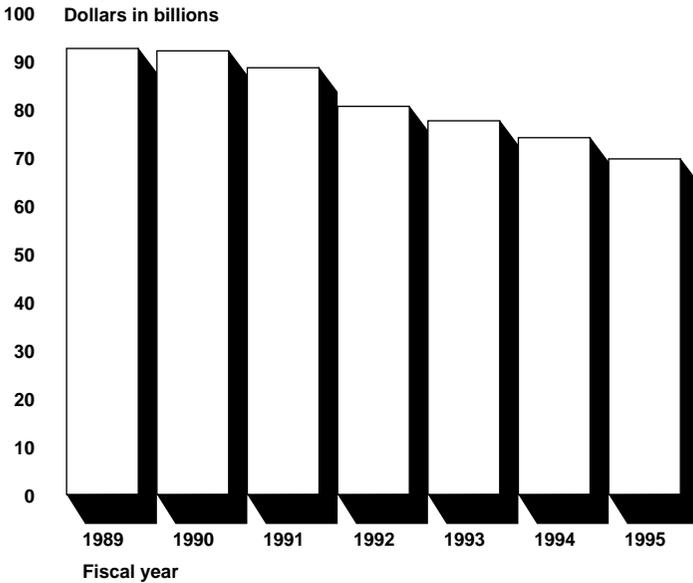
DOD has made tremendous progress in reducing its inventory since 1989. However, virtually all the problems that contributed to billions of dollars of unneeded inventory still exist. For example, DOD still lacks adequate oversight of its inventory, financial accountability remains weak, and requirements continue to be overstated. DOD has not been as aggressive as possible in implementing modern commercial practices; operations using working capital funds continue to be hindered by DOD's inability to correct problems; and the CIM initiative currently is not likely to provide the benefits originally anticipated.

DOD Continues to Store Large Amounts of Unneeded Inventory

As shown in figure 1, DOD reduced its inventory from \$92.5 billion in 1989 to \$69.6 billion in 1995, a \$22.9 billion reduction.

**Further Changes Are Needed in DOD's
Inventory Management Practices**

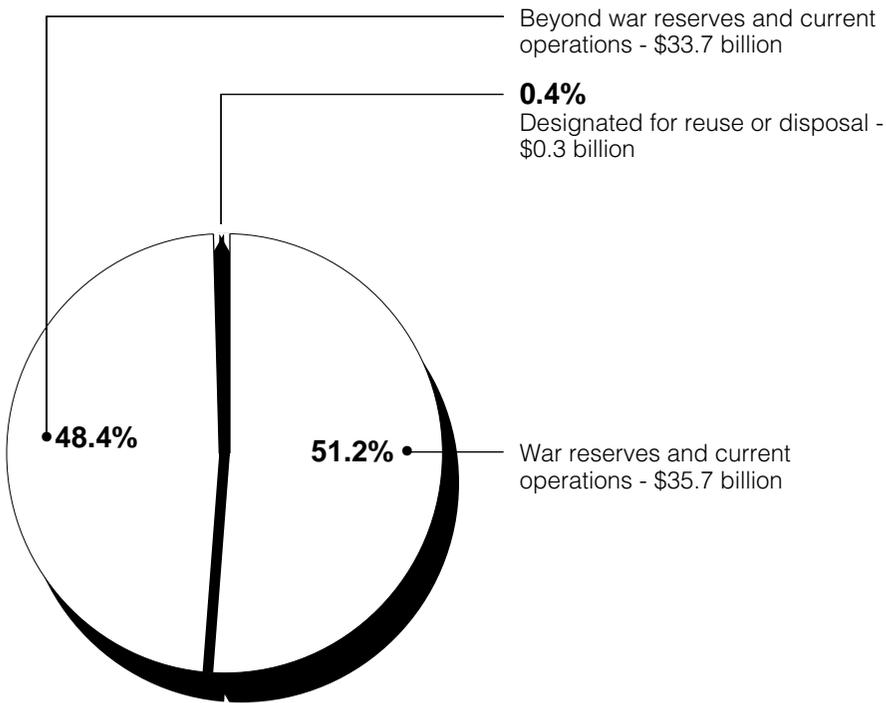
Figure 1: DOD's Inventory (fiscal years 1989-95)



However, as in 1992, about half of the \$69.6 billion inventory is beyond what is needed to support war reserve or current operating requirements. Included in the inventory beyond what is needed to support war reserve or current operating requirements is \$299 million in inventory that DOD designated for reuse and disposal that had an acquisition cost of about \$12 billion. (See fig. 2.)

**Further Changes Are Needed in DOD's
Inventory Management Practices**

Figure 2: DOD's Inventory (as of Sept. 30, 1995)



**DOD's Inventory
Management
Culture Is Slowly
Changing**

We previously reported that DOD had acknowledged the necessity to change its inventory management culture but was slow in taking steps to do so.

In 1990, DOD initiated an inventory reduction plan to meet the challenge of resizing its

inventories while maintaining high levels of readiness. Some of the objectives of the 1990 plan are articulated in DOD's current logistics strategic plan. The continuity of DOD's inventory reduction plans indicates that top management has made a long-term commitment to change the Department's inventory management culture and provide an efficient and effective supply system. To some extent, the large inventory reductions that have taken place since 1989 can be attributed to DOD's change in culture.

Some of DOD's logistics objectives have been implemented; others have not and will not be for many years to come. In 1992, we reported that academic experts and business executives generally agreed that a culture change is a long-term effort that takes at least 5 to 10 years to complete. Although a change in DOD's management culture is underway, continued support of its top managers is critical to successful completion of the cultural change.

**Adequate
Inventory
Oversight Has Yet
to Be Achieved**

In 1995, we reported that DOD's 1994 strategic plans for logistics called for improving asset visibility in such areas as in-transit assets, retail-level stocks, and automated systems. The asset visibility plans were to be

completely implemented by 1996. According to DOD's current plan, the total asset visibility initiative will not be completely implemented until 2001.

The lack of adequate visibility over operating materials and supplies substantially increases the risk that millions of dollars will be spent unnecessarily. For example, in August 1996, we reported that Navy managers did not have adequate visibility over \$5.7 billion in operating materials and supplies on board ships and at 17 redistribution sites. We estimated that because of the lack of oversight in the first half of 1995, item managers ordered or purchased items in excess of operating level needs and that as a result, the Navy will incur unnecessary costs of about \$27 million.

**Requirements
Continue to Be
Overstated**

In 1992 and 1995, we reported that DOD had problems in accurately determining how much inventory it needs to buy. Our recent work shows that continues to be the case.

In recent work, we reported that DOD had made limited progress in reducing acquisition lead times because its initiatives had not been evenly implemented by the military services and Defense Logistics

Agency (DLA). We reported that DOD could reduce its lead time by 25 percent over a 4-year period and save about \$1 billion. DOD could achieve this reduction by renewing its emphasis on prompt implementation of its 1990 lead-time reduction initiatives, periodically validating and updating old data for long lead-time items, and considering lead-time reductions as a factor in deciding whether to continue purchasing spare parts from the prime contractor or to purchase them from the actual manufacturer.

In January 1995, we reported that the Navy and the DLA stock millions of dollars of unnecessary "insurance items" (parts that are not expected to fail through normal usage). The unnecessary inventories accrued because the DOD components do not periodically review insurance items to ensure that they are mission essential and stocked in appropriate quantities. Additionally, DOD spends millions of dollars each year to manage and maintain these unnecessary inventories.

In March 1996, we reported that the Air Force and the Navy budgeted \$132 million more than was needed for aviation spare parts because of questionable policies concerning the determination of

requirements and the accountability for depot maintenance assets. The Air Force did not consider \$72 million of on-hand assets, and the Navy counted \$60 million in depot maintenance requirements twice.

In a September 1996 report on the fiscal year 1997 DOD budget, we identified potential reductions of \$723 million in the inventory management area. The potential reductions were based on (1) reclaiming spare parts from excess aircraft; (2) considering parts on hand at the depot maintenance facilities as an offset to spare and repair parts requirements; (3) eliminating duplicated depot maintenance requirements; (4) reducing requirements that were overstated due to inaccurate lead times, demand rates, and due-out quantities; and (5) correcting inaccurate budget data.

**Financial
Accountability
and Control
Remain Weak**

In 1992 and 1995, we reported that DOD lacked financial accountability and control over its inventory but that it was taking corrective actions. Improvements, however, have been minimal, and accountability and controls remain weak. In his February 1996 annual statement of assurance required by the Federal Managers' Financial Integrity Act, the Secretary of Defense summarized

the status of high-risk areas relative to inventory management.

Regarding DOD's financial accounting process and systems, the Secretary identified inadequate internal controls and other significant deficiencies such as the

- use of a variety of nonintegrated systems;
- inability of current systems to respond rapidly to change;
- lack of automated indicators that measure, or are linked to, costs, performance measurements, or other output measurements;
- difficulties with consistently valuing and reconciling physical inventories to financial account balances; and
- inaccuracies in the valuation of property, plants, and equipment.

**DOD Can Make
More Use of
Commercial
Practices**

In 1992 and 1995, we reported that DOD could save millions by implementing private sector practices that streamline logistics operations and reduce layers of inventory.

DOD's large inventory levels reflect the management practice of buying and storing supplies at both wholesale and retail locations to ensure they are available to

customers—sometimes years in advance of their need. DOD often stores inventories in as many as four different layers between suppliers and end users. These practices result in inventory that turns over slowly and produce large amounts of old, obsolete, and excess items.

In contrast, the private sector logistics philosophy includes (1) using “just-in-time” business practices that shift responsibilities for storing and managing inventory to suppliers, (2) shifting responsibility for managing items to suppliers through the use of long-term agreements with only a few key suppliers, (3) using direct delivery practices that bypass the need for intermediate handling and storage, and (4) eliminating paperwork and speeding up ordering by using electronic ordering systems and bar coding.

While DOD has begun to move toward modern commercial practices, its initiatives have generally been limited in scope and represent only a small portion of DOD's overall operations. For example, in July 1996, we reported that while the Navy was working to improve its logistics system, it was not taking the opportunity to incorporate the airline industry's best

practices, which have the potential to save hundreds of millions of dollars. Specific practices that have enabled companies to save money include (1) repairing items promptly after they break; (2) reorganizing the repair process to bring all resources required—tooling and support equipment, personnel, and inventory—together in one location; (3) using local distribution centers and integrated supplier programs to improve consumable item support and reduce “just-in-case” inventory; and (4) using third-party logistics providers to manage logistics functions.

Also, in February 1996, we reported that the Air Force had begun a reengineering program aimed at redesigning its logistics operations. While the effort includes testing some leading-edge private sector practices, the Air Force could include additional practices such as the greater use of third-party logistics services, closer partnerships with suppliers, the use of local distribution centers, the use of centralized repair facilities, and the modification of repair facilities to accommodate these practices.

DLA's use of best inventory practices is best exemplified for personnel (medical, food,

and clothing) items. Since 1993, DLA has taken steps to use prime vendors to supply personnel items directly to military facilities. However, this initiative represents only about 3 percent of the items for which this concept could be used.

DLA can do more to achieve substantial savings. It continues to store large amounts of hardware items, such as bolts, valves, and fuses, that cost millions of dollars to manage and store. DLA inventories of hardware items existing in 1992 are expected to decrease only 20 percent by 1997. Even then, hardware inventories could last for more than 2 years.

To date, DLA has not tested the most innovative commercial practices GAO has seen used by companies to reduce inventories and costs, such as using "supplier parks" and other techniques that give established commercial distribution networks the responsibility to manage, store, and distribute inventory on a frequent and regular basis directly to end users. If DLA adopted these practices, hardware inventories and related management costs could be significantly reduced.

DOD Is Exploring Outsourcing Options

According to DOD's logistics strategic plan, outsourcing—drawing on the abilities of the commercial sector—is a key tool for streamlining logistics business processes. The plan calls for developing outsourcing initiatives for functions currently carried out by DLA's Defense Reutilization and Marketing Service, distribution depots, and inventory control points. By drawing on the private sector's abilities to do logistics activities, DOD hopes to provide more efficient and effective support for its military forces.

Key Initiatives Languish

DBOF and CIM were key to improving inventory management. DBOF accounted for most of DOD's inventory, while the CIM initiative was to provide simplified and reengineered computer systems for distribution and logistics.

In 1992, we reported that DOD had begun these two key initiatives. In 1995, we reported that DBOF operations had been hindered by DOD's inability to correct problems, such as inaccurate financial reports, and that little progress had been made in implementing the CIM initiative. Currently, neither of the initiatives is providing the benefits—gains in efficiency and effectiveness—originally anticipated,

and benefits will not be realized until far in the future, if they are realized at all.

In March 1995, we reported that DBOF faced serious problems and that after 3 years of operations little had changed in the DBOF's day-to-day operations. Specifically, we reported the following:

- DOD did not have a systematic process in place to ensure that DBOF's policies were implemented consistently, and managers lacked necessary guidance to execute day-to-day operations.
- DOD had selected most of DBOF's interim computer systems without first determining the total estimated cost to enhance and implement these systems across DBOF's business areas.
- DOD was having difficulty preparing accurate financial reports.
- DOD had returned control of cash to the individual components, which was a major departure from the benefit of a single cash balance.

The 1997 Defense Authorization Act required DOD to conduct a comprehensive study of DBOF and to present an improvement plan to Congress for approval. Pending the results of this study, the Defense Comptroller, in

December 1996, dissolved DBOF and created separate Army, Navy, Air Force, and DOD-wide working capital funds. The four funds will continue to operate under the revolving fund concept—using the same policies, procedures, and systems as they did under DBOF.

Regarding the CIM initiative, we reported in September 1996 that DOD had determined that its goal of developing nine standard integrated systems to improve aspects of inventory management, such as requirements determination, would cost more than originally estimated. DOD abandoned the strategy of implementing the standard systems across all inventory control points. It now plans to deploy each system at a selected site as the system is developed. DOD has embarked on this new strategy without taking steps to ensure that the additional millions of dollars to be spent on logistics systems, as well as money already invested, will bring positive results. Specifically, DOD did not conduct economic and risk assessments, did not justify the change in strategy through its own oversight process, and proceeded to deploy new systems without testing them.

What Needs to Be Done

In 1992, we reported that major changes were needed in all levels of DOD's inventory management system. We noted that top managers needed to take long-range actions to (1) change the organizational culture to eliminate the overstocking of items, (2) increase the use of commercial practices, (3) establish and monitor improved performance measures that stress cost-effectiveness and inventory reductions, and (4) improve the computer systems used in inventory management.

In 1995, we reported that DOD needed to avoid burdening its supply system with the management problems and costs associated with accumulating, storing, and maintaining large unneeded inventories.

While we continue to see pockets of improvement, DOD has made little overall progress in correcting systemic problems that have traditionally resulted in large unneeded inventories. DOD top management needs to continue its commitment to changing its inventory management culture so that it provides its forces with necessary supplies in a timely manner while avoiding the accumulation of unneeded materials.

In the short term, DOD needs to continue emphasizing the efficient operation of its existing inventory systems. As previously reported, this includes

- committing to improved inventory management by top management's emphasis on (1) inventory indicators that highlight reduction and disposal of unneeded inventory, (2) implementation of efficient and effective inventory management practices, and (3) training personnel in those practices and rewarding the right behavior;
- improving the accuracy of data such as requirements and the quantity, condition, and value of inventory items managed through current logistics and financial systems; and
- aggressively enforcing existing policies and procedures that will minimize the acquisition and accumulation of unnecessary inventory.

In the long term, overall solutions include

- mapping a strategy for completing DOD's initiatives for changing its culture;
- setting aggressive goals, objectives, and milestones for identifying and implementing viable and more cost-effective commercial practices for supplying its forces;

- establishing goals, objectives, and milestones for determining where outsourcing logistics functions represents a cost-effective and efficient alternative to traditional methods; and
- providing inventory managers with the automated, integrated accounting and management systems necessary to manage its inventory in a world-class manner.

Close congressional oversight will continue to be a critical element as DOD establishes plans, goals, objectives, and milestones for addressing its inventory management processes.

Related GAO Products

1997 DOD Budget: Potential Reductions to Operation and Maintenance Program
(GAO/NSIAD-96-220, Sept. 18, 1996).

Defense IRM: Critical Risks Facing New Materiel Management Strategy
(GAO/AIMD-96-109, Sept. 6, 1996).

Navy Financial Management: Improved Management of Operating Materials and Supplies Could Yield Significant Savings
(GAO/AIMD-96-94, Aug. 16, 1996).

Inventory Management: Adopting Best Practices Could Enhance Navy Efforts to Achieve Efficiencies and Savings
(GAO/NSIAD-96-156, July 12, 1996).

Defense Logistics: Requirement Determinations for Aviation Spare Parts Need to Be Improved (GAO/NSIAD-96-70, Mar. 19, 1996).

Best Management Practices: Reengineering the Air Force's Logistics System Can Yield Substantial Savings (GAO/NSIAD-96-5, Feb. 21, 1996).

Inventory Management: DOD Can Build on Progress in Using Best Practices to Achieve Substantial Savings (GAO/NSIAD-95-142, Aug. 4, 1995).

Best Practices Methodology: A New Approach for Improving Government Operations (GAO/NSIAD-95-154, May 1995).

Defense Business Operations Fund: Management Issues Challenge Fund Implementation (GAO/NSIAD-95-79, Mar. 1, 1995).

High-Risk Series: Defense Inventory Management (GAO/HR-95-5, Feb. 1995).

Defense Supply: Inventories Contain Nonessential and Excessive Insurance Stocks (GAO/NSIAD-95-1, Jan. 20, 1995).

Defense Supply: Acquisition Leadtime Requirements Can Be Significantly Reduced (GAO/NSIAD-95-2, Dec. 20 1994).

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