
BY THE COMPTROLLER GENERAL

Report To The Congress

OF THE UNITED STATES

Major Defense Issues Being Addressed By The General Accounting Office

As the Congress reviews the fiscal year 1986 defense budget and programs, it will focus on ways to make defense more efficient and effective.

This report summarizes the defense issues within which GAO will do its work over the next few years and discusses some of GAO's completed and ongoing work on the issues. GAO sees this report as one means to assist the Congress in identifying defense issues and questions which it may wish to address and for which GAO will be prepared to make a contribution.



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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON D.C. 20548

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To the President of the Senate and the
Speaker of the House of Representatives

Between 1980 and 1985, defense budgets have almost doubled and continued growth is programmed. With increasing public and congressional concern over rising federal deficits, the Congress faces the difficult challenge of containing federal budget growth and, at the same time, ensuring that necessary federal programs are maintained and operated efficiently and effectively.

This report summarizes the types of defense issues and questions we will address over the next few years, and it discusses some of our completed and ongoing work on the issues. We see this report as one means to assist the Congress in identifying defense issues and questions which it may wish to address and for which we will be prepared to make a contribution.

Chapters 2 through 4 discuss issues related to acquisition, logistics, and military personnel, respectively. Chapter 5 discusses the cost and impact of the services' modernization and expansion programs. Chapter 6 discusses international security issues. Chapter 7 discusses issues involving (1) the military role in space, (2) command, control, and communications systems, (3) the cost and quality of DOD health care, and (4) financial management.

A draft of this report was provided to key DOD officials for their reaction. Overall, DOD officials were concerned that the draft overemphasized the problems the Department experienced in the past and did not recognize recent initiatives and accomplishments. These views and comments relating to more specific items in the draft were considered and changes made, where appropriate.

We do not intend this report to be an overall assessment or scorecard on how well DOD is meeting its goals and objectives or managing its operations. Nor is the raising of these issues intended to suggest that DOD has ignored them or that it does not have initiatives under way to address them. In fact, most of the issues raised and questions asked in this report are quite fundamental to the effective and efficient management of the Department's programs. Many are the type that DOD officials frequently ask themselves. And some are enduring; that is, they will always need to be addressed. Finally, this report is not intended to capture all of the defense issues. It is merely an attempt to identify the major issues as we see them.

There is no doubt that the sizable increases in the defense budgets over the past few years were also accompanied by an increased awareness on the part of DOD officials that additional efforts were needed to ensure that the funds were spent efficiently and effectively. And specific directions and initiatives have emanated over this period from the Secretary of Defense and other top DOD officials.

However, where public funds are spent, our system of government requires that there be accountability. It is in the asking and answering of questions on the efficacy of public programs that efficiency and effectiveness are judged and accountability is achieved. This report raises some of the issues and questions which we believe need to be addressed. For our part, we have initiated or plan to initiate audit work on important aspects of each issue, which will include an assessment of DOD's initiatives and progress on them. As the Congress exercises its oversight responsibilities, it can look to us for assistance on the issues and questions in this report and on other defense issues.

We are also sending this report today to the Speaker of the House of Representatives. Copies are being sent to the Director, Office of Management and Budget; the Secretaries of Defense, the Army, the Navy, and the Air Force; and cognizant congressional committees.

Sincerely yours,


Comptroller General
of the United States

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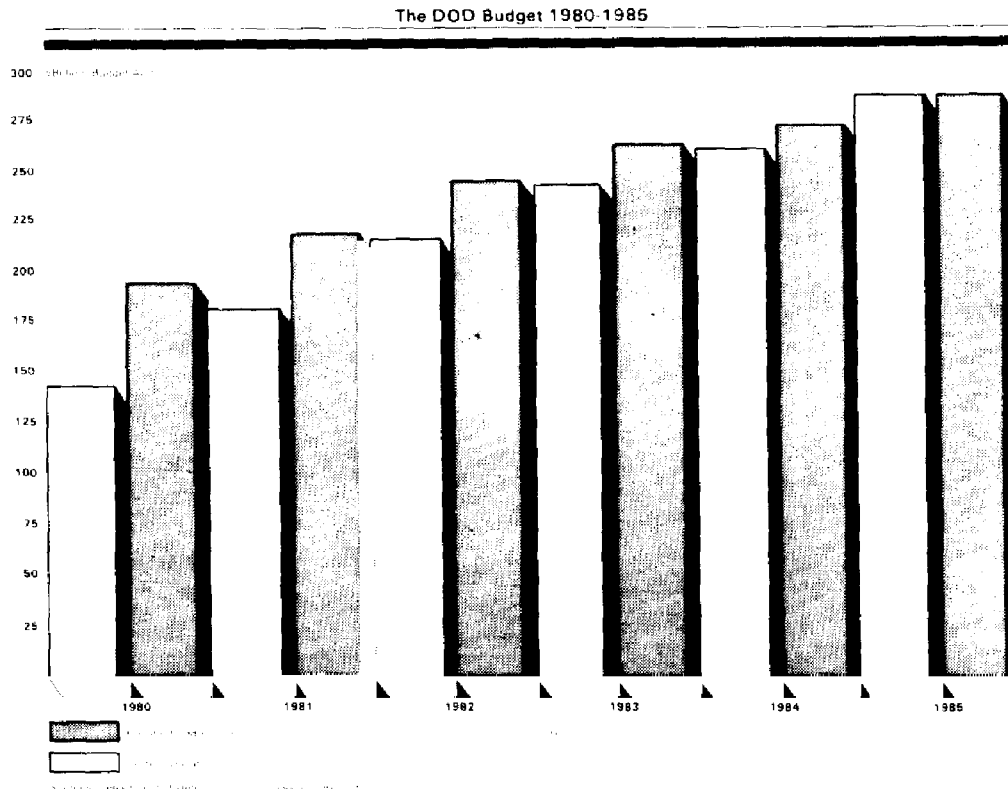
ABBREVIATIONS

C3	command, control, and communications
C3I	command, control, communications, and intelligence
CHAMPUS	Civilian Health and Medical Program of the Uniformed Services
DOD	Department of Defense
FMS	foreign military sales
FYDP	Five-Year Defense Program
GAO	General Accounting Office
NATO	North Atlantic Treaty Organization
OSD	Office of the Secretary of Defense
SAR	Selected Acquisition Report
UNITREP	Unit Status and Identity Report

CHAPTER 1

INTRODUCTION

Between fiscal years 1980 and 1985, the Department of Defense's (DOD) budget authority almost doubled from \$143 billion to \$284 billion, as shown in the following chart:



These defense budget increases come amid a backdrop of rising deficits and public concern with the ways defense moneys are being spent. With increasing pressures to reduce the federal deficit, the challenge facing the Congress is how to contain defense cost growth while still maintaining the military strength to protect this Nation's national security interests.

GAO fully supports the need for a strong defense, and it believes that the strongest defense is an efficient defense. Given limited resources, this Nation can maximize its military strength by ensuring that those resources are used most efficiently.

PURPOSE OF THIS REPORT

The purpose of this report is to summarize the types of defense issues and questions GAO will address over the next few years, as well as to discuss some of GAO's completed and ongoing work on the issues. GAO sees this report as one means to assist the Congress in identifying defense issues and questions which

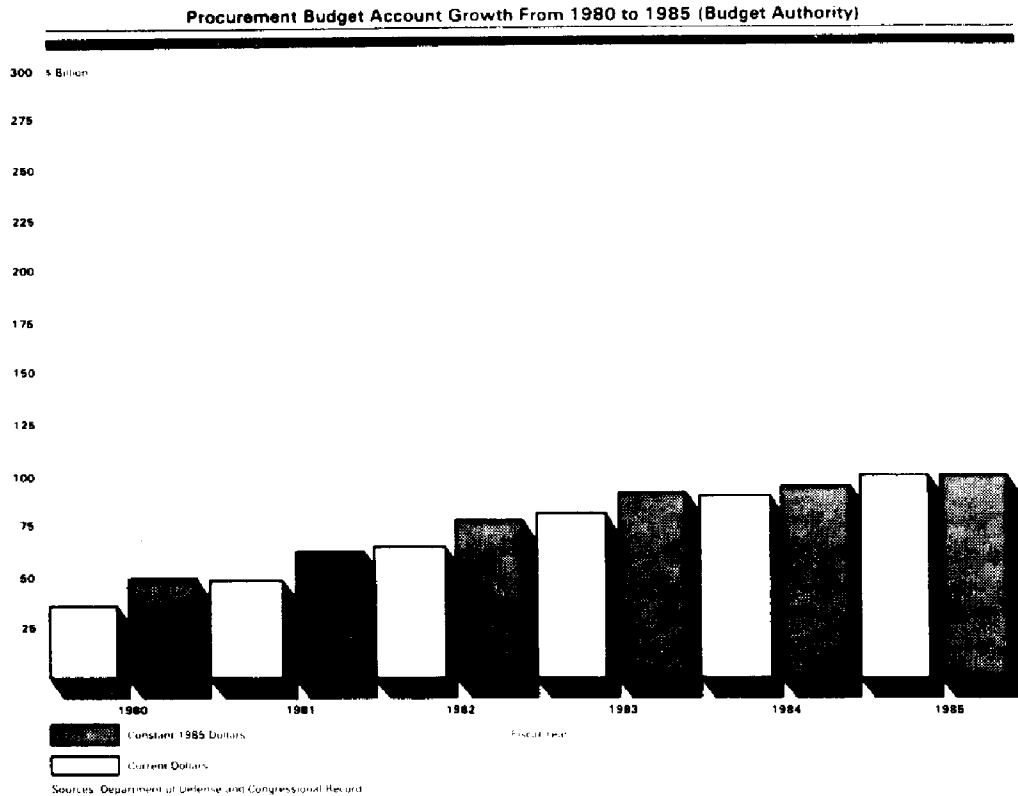
it may wish to address and for which GAO will be prepared to make a contribution.

Chapters 2 through 4 discuss issues related to acquisition, logistics, and military personnel, respectively. Chapter 5 discusses the cost and impact of the services' modernization and expansion programs. Chapter 6 discusses international security issues. Chapter 7 discusses issues involving (1) the military role in space, (2) command, control, and communications systems, (3) the cost and quality of DOD health care, and (4) financial management.

CHAPTER 2

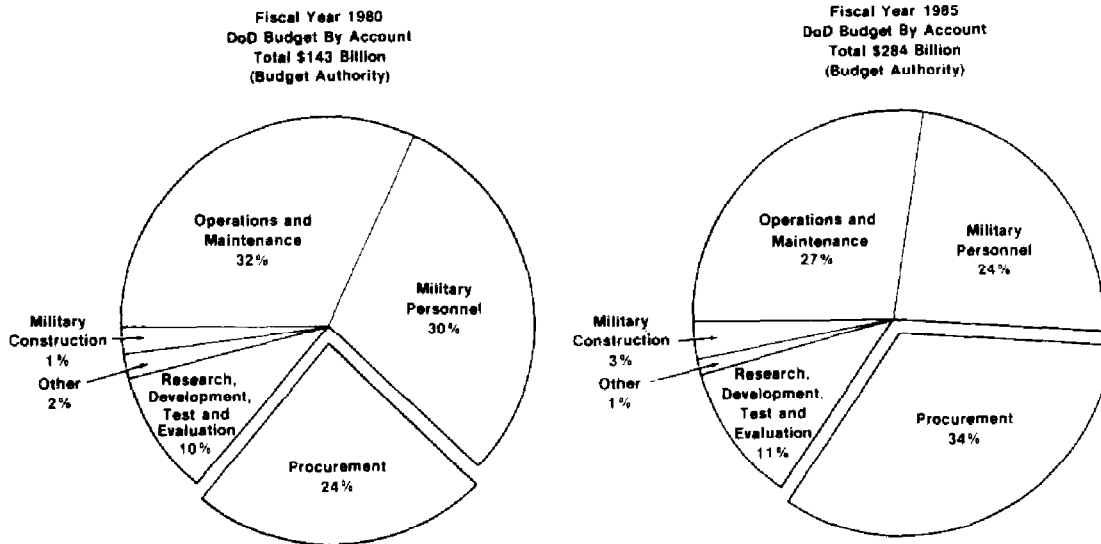
ACQUISITION

Each year a sizable portion of the defense budget is used to buy new weapon systems and other defense-related items. DOD's fiscal year 1985 budget, for example, includes \$97 billion in the procurement account, as shown in the following chart.



The procurement account has grown substantially in recent years. Between fiscal years 1980 and 1985, it increased by 177 percent, compared with an overall DOD budget increase of 99 percent. In fiscal year 1980, the procurement account represented 24 percent of DOD's budget; in fiscal year 1985, it represented 34 percent, as shown in the following chart. Additional billions of procurement-related dollars are included in the military construction and in the research, development, test, and evaluation budget accounts.

**PROCUREMENT ACCOUNT
TAKES AN INCREASING SHARE
OF THE DoD BUDGET**



Note: Fiscal Year 1980 Percentages Do Not Add to 100 Due to Rounding.
Sources: Department of Defense and Congressional Record.

The Congress has expressed increasing concern over the way DOD buys goods and services. Given this, along with reported inefficiencies in the defense acquisition process, GAO will, over the next few years, continue to address ways to improve the acquisition process; testing and evaluation of weapon systems; contracting policies, procedures, and practices; and cost estimating on major weapon systems.

IMPROVING THE ACQUISITION PROCESS

In recent years, there has been increasing concern about the way DOD acquires major weapon systems. There is a perception that the acquisition process does not ensure the selection and development of the most cost effective weapons. Cost growth, prohibitively long and growing acquisition times, plus program stretch-outs resulting in less efficient production rates have been common problems in the past. These factors, plus others, increase concerns about the current efficiency and effectiveness of DOD's acquisition policies, procedures, and practices.

Sound threat assessment is where the acquisition process starts

A key factor in developing requirements for many new weapon systems is the assessment of the threat. GAO is now examining

--how the threat is assessed and validated,

- how the process is supposed to function and actually functions,
- how DOD and the services use threat data, and
- how the services manage responses to the threat to ensure a coordinated effort.

Major weapon systems acquisitions

GAO also annually reviews key weapons development programs and their ability to meet stated requirements and goals. These reviews have identified problems in areas such as

- the adequacy of early planning to ensure that systems can be supported when fielded,
- the adequacy of testing and evaluation of developing systems,
- the ability of systems to meet their performance goals and user needs,
- the sufficiency of systems' reevaluation as the threat changes, and
- the accuracy and sufficiency of program information provided the Congress.

Among the systems GAO most recently reported on were the B-1B bomber,¹ the Trident II submarine,² the Pershing II³ and Peacekeeper (MX)⁴ missile systems, and the High Mobility Multipurpose Wheeled Vehicle.⁵

GAO will continue to provide the Congress and DOD management with evaluations of key weapon system acquisitions. Examples of systems currently being reviewed include the Army's M1 A1 tank and Sergeant York gun; the Navy's Submarine Advanced Combat System and E-6A aircraft, and the Air Force's F-15E and F-16C/F aircraft.

Transition-to-production problems need attention

GAO also reviews systemic issues which cut across individual weapon systems. For example, GAO recently reviewed six weapon systems to identify causes of early production

¹See appendix for numbered footnotes used throughout this report.

problems and to outline actions which could minimize their occurrence in future programs. The systems reviewed were the Army's Copperhead projectile and Black Hawk helicopter, the Navy's High Speed Anti-Radiation Missile and Tomahawk cruise missile, and the Air Force's F-16 fighter and Air-Launched Cruise Missile.

GAO found that transition-to-production problems occurred when production planning and efforts to show that planned production processes will work received lower priority than design and test activities. Overcoming transition-to-production problems, GAO concluded, will require the support of the Congress and the conviction of DOD to fully fund production preparations, even if it means starting fewer programs and deferring production of weapon systems or refusing to produce them when production capabilities are inadequate or unknown. Recent DOD instructions are intended to address past problems with systems' transitioning to production.

Multiyear procurements require case-by-case analysis

Another issue receiving GAO attention is DOD's use of multiyear procurement. DOD has pointed to multiyear procurement as a way to significantly reduce the cost of acquiring weapon systems. With the 1982 Defense Authorization Act (Public Law 97-86), DOD received increased multiyear contracting authority. GAO supports this increased authority, and its past work shows that multiyear procurements can result in substantial savings. For example, the multiyear contract for the Army's Black Hawk helicopter should save the government about \$37 million.⁶

However, while the concept can offer significant savings, it is not universally applicable. GAO's past work has demonstrated the need to review the costs and benefits of proposed applications on a case-by-case basis. The Congress, recognizing this, established five criteria that must be met before multiyear procurements can be justified. GAO analyzed⁷ the 12 multiyear procurement candidates proposed in DOD's fiscal year 1985 budget request against these criteria and found that five had not clearly met the criteria or undergone enough program budget change to warrant a revised justification. GAO found no problems with the remaining seven candidates.

GAO is continuing to examine the reasonableness of DOD's application of the multiyear contracting authority to selected programs and to examine the extent to which its multiyear procurement strategy is achieving the benefits possible.

Defense Acquisition Improvement Program

In an attempt to improve the weapon systems acquisition process, DOD has initiated the Defense Acquisition Improvement

Program, also known as the "Carlucci Initiatives." Program goals include increasing stability in weapons acquisition, encouraging competition, providing more realistic budgeting, and taking advantage of benefits from multiyear procurements and economic production rates. DOD believes that this program has successfully addressed many of the acquisition problems identified in this chapter. It contends, for example, that over the last 3 years there has been dramatic improvement in the cost growth rates of major weapon systems, with a resulting decrease in the number of unit cost increases requiring congressional notification. GAO is currently evaluating DOD's acquisition improvement initiatives and the results achieved.

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In summary, as GAO addresses DOD's systems acquisition process over the next few years, it will focus on the following questions.

- Are individual weapon systems being acquired which can meet cost, schedule, performance, and supportability objectives?
- Are alternatives to buying new systems, such as modernizing existing systems, being adequately considered?
- Can improvements be made in program management that will promote a more effective systems acquisition process?
- Are efforts to increase program stability and reduce program stretch-outs working?
- How can the acquisition cycle be shortened without significant adverse effects on performance and costs?
- Is the information provided congressional decision-makers sufficient and credible?

TESTING AND EVALUATION OF WEAPON SYSTEMS

Test and evaluation results are one of several key considerations in deciding whether to advance multi-billion-dollar weapon systems from one acquisition phase to another. Test and evaluation results identify (1) weapon systems performance and risk levels and (2) the need for weapon design modifications.

GAO has issued numerous reports over the years on problems in weapon system testing and evaluation. In addition, GAO has issued other reports on individual weapon

systems, many of which included issues dealing with testing and evaluation.

These reports have identified problems, such as,

- the tendency to move systems into the production phase without sufficient test and evaluation,
- major weapon systems not meeting technical and operational requirements,
- inaccurate and untimely test results provided decision-makers and reported to the Congress,
- weaknesses in planning and management of test resources, and
- limited oversight of the test and evaluation process by the Office of the Secretary of Defense.

One recent report⁸ pointed out that DOD had not been able to realistically test weapon systems because it did not have simulators or aerial targets comparable to the capability of the Soviet Union's deployed weapons. GAO concluded that these shortcomings were caused, among other reasons, by the use of inaccurate or incomplete intelligence data and insufficient support for testing and test resources within the DOD weapons development community. DOD initiated steps to increase the realism of testing.

GAO also reported⁹ that because many Army organizations were involved in evaluating weapon system testing, evaluation results often reached acquisition managers at critical decision points in a fragmented fashion. Also, seldom did the evaluations adequately interpret the test results in terms of potential operational consequences. GAO concluded that one principal evaluation agency (1) should be designated that would have access to the information prepared separately by the respective evaluation agencies and (2) should be knowledgeable enough to interpret this information, integrate it into one comprehensive evaluation, and provide it to decision-makers. DOD replied that the Army had begun taking steps to have the Army Operational Test and Evaluation Agency assume this principal evaluation agency role.

In an effort to deal with continuing problems in weapon systems testing and evaluation, the Congress, in 1983, passed legislation to reorganize DOD's testing office and established a Director of Operational Test and Evaluation who reports directly to the Secretary of Defense and the Congress. GAO is monitoring the activities of this Office in overseeing the conduct and reporting of operational test and evaluation results.

Determining how much testing and evaluation of developing systems is needed is a difficult process. Important trade-offs are involved. Too much testing and evaluation may delay the fielding of needed systems and increase system costs; on the other hand, insufficient testing and evaluation can result in significant operational problems when the system is fielded.

GAO will soon be reporting on (1) the adequacy of the reporting of test results and their use in decisionmaking and (2) the effect that concurrent development and production can have on the adequacy of testing and evaluation prior to deployment. It is also currently (1) evaluating test and evaluation reports issued over the past several years to identify systemic problems and trends and (2) reviewing selected deployed weapon systems and assessing whether any existing deficiencies in capabilities, reliability, or maintainability are related to systemic problems identified during the system's operational test and evaluation.

CONTRACTING POLICIES, PROCEDURES, AND PRACTICES

DOD's procurement activities involve millions of contract transactions totaling billions of dollars each year. In fiscal year 1983, for example, DOD processed about 15 million procurement actions totaling \$140 billion. Continuous monitoring is required to ensure compliance with the many laws, regulations, policies, and procedures governing the contracting process, as well as to ensure that safeguards against fraud, abuse, waste, and mismanagement are adequate and are working.

Key questions that GAO will address over the next few years are as follows:

- Is DOD negotiating fair and reasonable contract prices?
- Are federal agencies effectively implementing the Competition in Contracting Act of 1984?
- Is there an effective system for assuring that DOD's profit policies produce fair and equitable results which ensure a strong industrial base?

Negotiating fair and reasonable prices

DOD's policy is to purchase supplies and services from responsible sources at fair and reasonable prices calculated to result in the lowest overall cost to the government. The preferred method for obtaining fair and reasonable prices is competition. However, when competition is not possible,

contracts are negotiated with the sole source and cost and pricing data are analyzed to approximate the effects of competition. A wide array of complex laws, policies, regulations, procedures, and practices is relied upon to help ensure that noncompetitive negotiation results in fair and reasonable prices.

GAO is now reviewing the issue of spare parts pricing and the growth of such prices with a focus on DOD's actions to better manage spare parts price growth. GAO also testified¹⁰ on how DOD could improve its use of computer technology to provide more information to buyers so that they could better obtain fair and reasonable prices for spare parts.

GAO is increasing its efforts to determine whether DOD and contractor negotiations result in fair and reasonable prices. This involves increased work at contractor plants to evaluate contractor costing and pricing systems, evaluate federal agencies' reviews and approvals of systems and outputs, and identify overpriced or defectively priced contracts.

The Competition in Contracting Act of 1984

Passed in July 1984, this act is intended to increase the use of competition in federal procurements. Among its more important provisions, the act (1) removes the strong statutory preference for sealed bidding and substitutes provisions that require full and open competition, (2) limits the use of non-competitive awards, and (3) codifies and strengthens GAO's bid protest procedures.

GAO is reviewing the implementation of the act by federal agencies. It will evaluate whether (1) changes to acquisition regulations accurately reflect congressional intent, (2) implementation is timely and allows for a public comment period, and (3) agencies are taking reasonable steps to prepare for implementation. GAO will also report to the Congress on its plans to implement the act's bid protest provisions.

DOD contract profit policy

The appropriate level of profit on defense contracts has long been a subject of debate. It is generally accepted that adequate profit is a prerequisite to contractors' investing shareholder resources to perform government contracts. And it is generally agreed that profits earned under defense contracts can have a positive impact on the capability of the defense industrial base to support sustained military operations.

In May 1975, the Deputy Secretary of Defense initiated a major study of capital investment, profit, and productivity. This study, known as Profit '76, resulted in adjustments to

the guidelines used by contracting officers to establish government negotiating positions.

Because of the significant increase in defense spending in recent years and rising concern about contractor profits, GAO, along with others, recommended that DOD conduct another comprehensive review of its profit policy. Such a study was announced by the Deputy Secretary of Defense in December 1983. This study, called the Defense Financial and Investment Review, is intended to identify needed improvements in DOD policies, and, in turn, strengthen the industrial base. GAO is currently evaluating this effort.

COST ESTIMATING ON MAJOR WEAPON SYSTEMS

If the Congress is to effectively oversee DOD's acquisition program for major weapon systems, it needs good information on their costs.

Cost estimates are reported to the Congress through the Selected Acquisition Reports (SARs), unit cost exception reports, and the budget process. SARs compare DOD's current estimates of weapon systems costs, which should reflect the total acquisition cost of the latest approved program, with the development estimate, established when the program entered the full-scale engineering development phase of acquisition. The unit cost report focuses on weapon systems unit cost increases and must be submitted to the Congress when certain thresholds are breached.

Concerns have been expressed by the Congress for some time over the accuracy, timeliness, and completeness of DOD reporting. GAO reviewed¹¹ DOD's cost estimating process on seven selected weapon systems. It found that SARs did not always (1) reflect the latest anticipated program acquisition costs, (2) show total planned acquisition objectives, and (3) report important cost categories. It also found that SARs did not always report costs consistently and that unit cost exception reports had not fully resolved the problem of the lack of current data reported to the Congress.

Comparing the SARs with other budgeting and accounting reports provided to the Congress is difficult. For example, the B-1 bomber baseline SAR estimate excludes certain costs, such as \$300 million for flight simulators for pilot training, normally included in aircraft estimates.

We reported that DOD could improve its cost estimating and reporting on the systems GAO reviewed by (1) improving its guidance and basic data used for estimating and ensuring stricter implementation of the guidance, (2) introducing more realism into weapon systems cost estimate reports provided to

the Congress, and (3) making fuller use of the recommendations of its independent estimating groups.

For the B-1B bomber, the Congress required the Secretary of Defense to certify the validity of DOD's cost estimates. Such certification should give the Congress greater assurance that the estimates it receives are the most complete and realistic projections available. GAO recommended that the Congress expand this concept and require the Secretary to certify that DOD's cost estimates on all major systems are prepared according to sound cost-estimating guidelines and represent the programs' full costs.

DOD believes that certification is unnecessary and redundant. It contends that the President's budget, by implication, meets these criteria and the reporting of significant changes in the costs of major systems is already required by unit cost reporting.

DOD also does not agree with the results of GAO's review of DOD's cost-estimating process. It believes that its reports to the Congress are consistent with long-standing agreements with the congressional committees.

ISSUES FOR CONGRESSIONAL CONSIDERATION

As the Congress reviews DOD's procurement budget request and programs for fiscal year 1986, it may wish to focus on

- how well efforts to improve the acquisition process are working;
- whether the risks and benefits of advancing weapon systems through the acquisition process are adequately assessed;
- whether DOD's contracting policies, procedures, and practices need strengthening; and
- whether the Congress is receiving sufficient and credible information on major weapon systems for its oversight purposes.

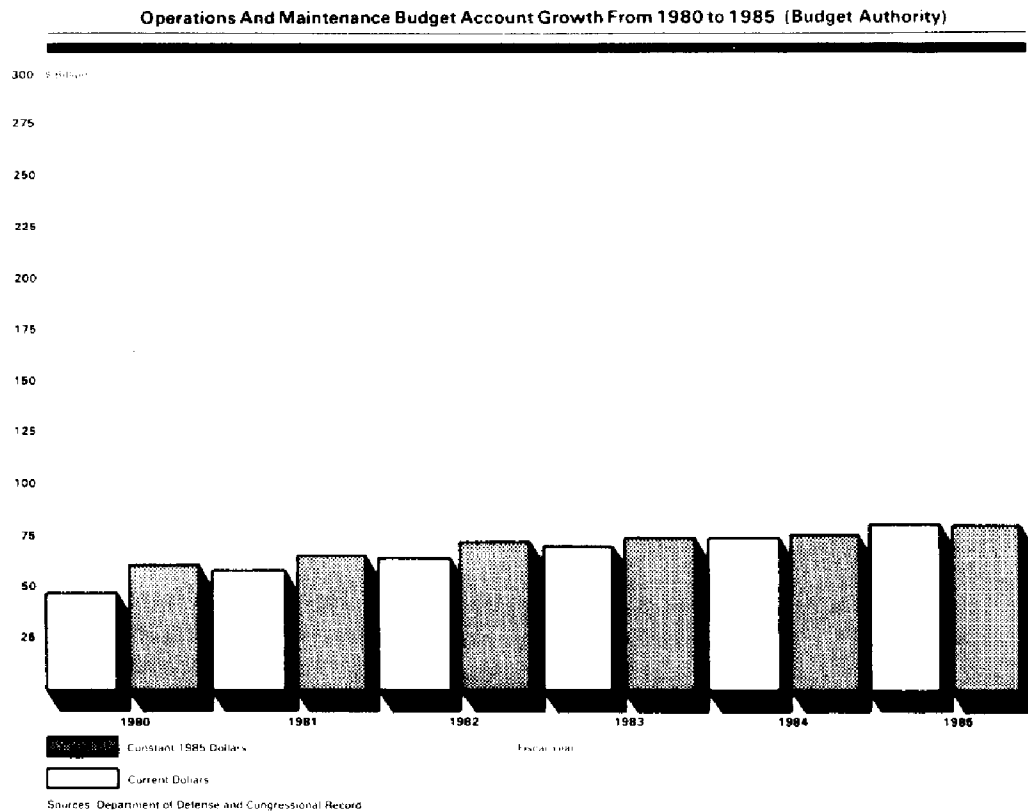
These issues also form the framework for much of GAO's work over the next few years in the acquisition area.

CHAPTER 3

LOGISTICS

Regardless of the size of U.S. forces or how modern their weapons and equipment, if they cannot be quickly moved to where they are needed and then logistically supported and sustained, the United States cannot realize its full combat potential.

While logistics costs are not shown separately as a budget line item, they are nevertheless substantial. Estimates are that they represent over one-third of the defense budget. The operations and maintenance account (see chart below) and parts of the procurement account make up the bulk of logistics costs.



Over the next few years, GAO's logistics work will address deploying U.S. forces, supporting deployed forces, and operating and supporting new weapon systems.

DEPLOYING U.S. FORCES

The ability to quickly deploy U.S. forces from their home station to where they are needed is critical if the United States is to have an effective fighting force. U.S. forces must be capable of assembling as units and have executable plans for moving from their peacetime locations to where needed.

After studying aspects of the deployment system, GAO reported the following:

- About 22 percent of Army Guard and Reserve personnel might not be notified and assembled promptly because members were not listed on the unit's roster or because phone numbers and/or addresses were missing or incorrect.¹
- Although DOD was spending millions of dollars to improve rail capabilities at its installations, it could not be assured that the rail network would be able to move required defense materiel and equipment during mobilization.²
- U.S. ports were highly vulnerable to various wartime disruptions, such as sabotage and mines, and responsible agencies were developing plans to correct deficiencies.³

GAO will continue to evaluate aspects of the deployment issue. Key questions that GAO will focus on over the next few years include the following.

- Are individual units adequately staffed with the quantity and skills needed? Are these personnel sufficiently trained and equipped? Do they have workable plans for assembling and moving to designated mobilization stations?
- Are mobilization stations prepared for and capable of performing their mobilization and deployment roles?
- Can deploying units and equipment be moved from mobilization stations to points of embarkation, from points of embarkation to points of debarkation, and from points of debarkation to where they are needed?

GAO's work on this set of questions is in an early stage and results are not expected until future years.

SUPPORTING DEPLOYED FORCES

Studies have estimated that as many as 6,000 U.S. civilians are now in DOD and contractor positions overseas that are essential to accomplishing DOD's wartime mission. These studies have concluded that without civilian support, some very important military systems and equipment would soon become seriously degraded or fail. Evidence regarding the likelihood that essential civilian employees would remain at their jobs in periods of potential or actual hostilities is contradictory, and there is reason for concern that some

essential employees would choose not to stay at their jobs if they thought conditions were excessively dangerous.

Progress by DOD in fully defining the extent and significance of the problem and in improving the situation has been slow. While alternatives exist, some appear to be costly or difficult to implement because of existing administrative or legislative restrictions.

In March 1984, GAO reported⁴ that the Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics) had issued draft policy guidance intended to ensure retention of essential civilians. This guidance called for using individual written agreements and contract provisions, and it stressed incentives, such as danger pay allowances and evacuation of dependents. However, some DOD officials have expressed doubts about how effective such an approach would be since only administrative sanctions could be imposed on violators.

However, the issue remains as to exactly how many essential civilians are working in potentially hostile areas, and whether, under existing laws and policies, DOD has sufficient control over them to ensure that critical systems will continue to be operated and maintained in the event of hostilities. The Congress should satisfy itself that DOD's actions adequately address this issue.

Other logistics support issues include:

- Whether DOD's stated war reserve requirements are valid and whether there is a proper balance among classes of reserves in terms of days of supply. After reviewing the Army's war reserve program, GAO reported,⁵ for example, that requirements for war reserves significantly exceeded the Army's existing inventory. Further, the inventory was imbalanced, resulting in large quantities or days of supply for some items while virtually no stock existed for others. DOD has advised us that it has established goals providing for increased inventory levels of munitions and war reserves.
- Whether the U.S. industrial base can gear up quickly enough to sustain U.S. forces. An ongoing GAO study identified problems in industrial base responsiveness and in DOD's methods to assess industrial base capabilities. DOD states that it has placed additional emphasis on maintaining and enhancing the capabilities of the industrial base.

OPERATING AND SUPPORTING NEW WEAPON SYSTEMS

Operating and supporting new weapon systems once they are fielded will require large amounts of resources in the late 1980's and beyond. Operation and support costs are generally greater in total than a weapon's procurement cost and span a much longer time. Since their budgetary effect will not be felt until after the weapons are deployed, these costs tend not to receive as much attention as procurement costs while the new weapons are being developed. However, decisions made during the acquisition process can commit the Congress to funding future operation and support costs if the new systems are to be kept in a required state of readiness.

GAO has issued reports^{6,7} in recent years on the need for DOD to adequately consider operating and supporting new weapon systems in procurement decisions. It also reported on DOD's historical pattern of significantly underestimating future year's defense costs,^{8,9} including operations and maintenance costs, in developing its Five-Year Defense Program (See p. 27) and on the need for DOD to improve its reviews of logistics support planning.^{10,11,12}

Whether there is adequate planning and budgeting for supporting new weapon systems remains a key issue. It is particularly relevant since the services will be fielding an unprecedented number of new weapon systems as part of their force modernization programs. Attention needs to be given to whether sufficient efforts are being made to reduce the personnel requirements of new systems. Given the difficulties the services have had in retaining critically skilled persons and the declining pool of individuals from which the services traditionally recruit, personnel shortages could become a serious problem in future years. (See p. 18.)

ISSUES FOR CONGRESSIONAL CONSIDERATION

How to ensure that U.S. forces can be effectively supported at the least cost is a principal logistics issue facing DOD and the Congress. As the Congress reviews DOD's fiscal year 1986 budget and programs, it may wish to focus on

- whether U.S. forces can be effectively deployed from where they are to where they are needed,
- whether U.S. forces can be adequately supported and sustained once deployed, and
- whether there is adequate planning for logistically supporting new weapon systems and whether such support costs are accurately reflected in the information submitted to the Congress.

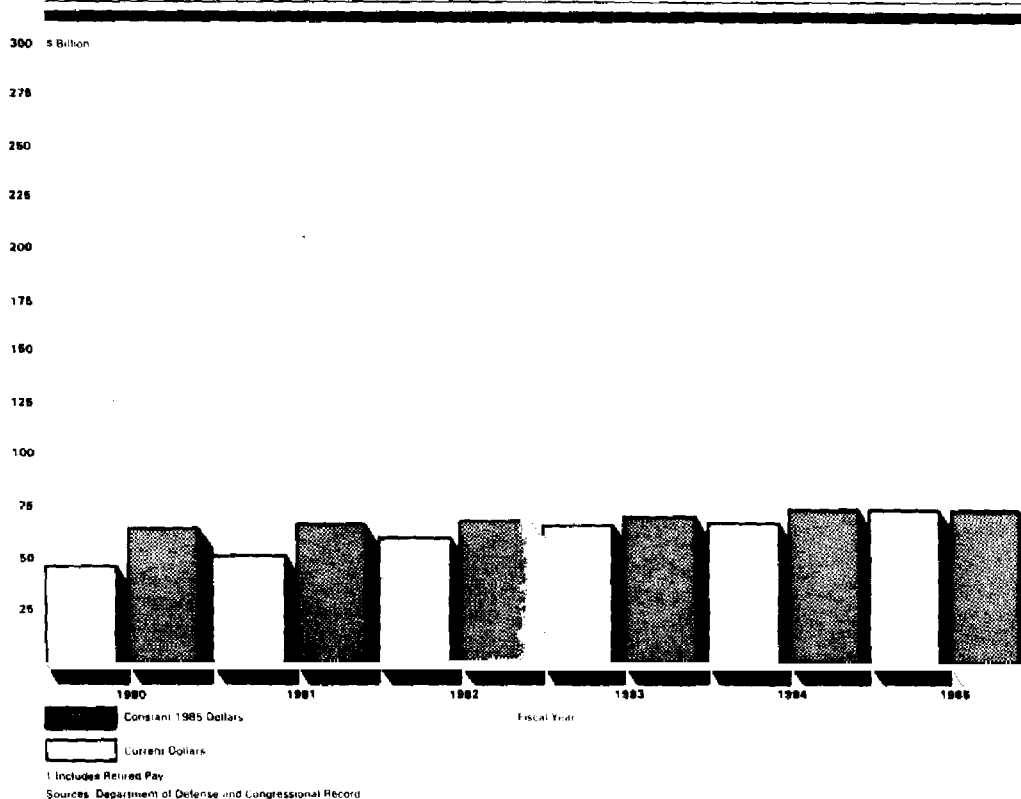
GAO will also be addressing these issues over the next few years.

CHAPTER 4

MILITARY PERSONNEL

Since the advent of the All Volunteer Force in the early 1970's, recruiting and retaining an adequate supply of high-quality personnel has been a major concern of defense managers. Finding the right combination of pay, benefits, and enticements that will provide needed personnel at an affordable price is a central challenge facing DOD and the Congress. Military personnel costs, including retirement, have risen from \$43 billion in fiscal year 1980 to around \$68 billion in fiscal year 1985. (See chart below.) These costs currently represent about 24 percent of DOD's budget. (See p. 4.)

Military Personnel Budget Account Growth From 1980 to 1985¹ (Budget Authority)



GAO's work over the next few years will focus on meeting future personnel needs, cost effectiveness of military compensation (pay and retirement), and increasing responsibilities of the Reserve Forces.

MEETING FUTURE PERSONNEL NEEDS

The services' ability to accomplish their missions in time of peace or conflict depends highly on their ability to recruit and retain sufficient qualified personnel. Of particular concern are those military positions in each service which require extensive technical training and experience and whose occupants have the skills to successfully compete in the civilian job market.

In recent years, the services have had only modest difficulty in meeting their requirements for such personnel. However, the outlook for the remainder of the 1980's is not encouraging. Besides increasing competition from the civilian sector when the economy is strong, other factors are likely to make it more difficult for the services to meet future needs for critically skilled personnel. These include

- a decline in the number of persons in the 17- to 21-year-old age group from which the services traditionally recruit,
- plans of the services to expand the size of the Active and Reserve Forces, and
- increasing demands from the services for high-quality personnel to operate and maintain new technological instruments and weapon systems.

In examining the issue of potential future personnel shortages, GAO will address the following questions.

- What are the future critical skill personnel problems DOD expects? Are they likely to be in only specific critical skill areas? Are they likely to be just in the Active Force or also in the Reserves?
- How reasonable are the assumptions used in arriving at out-year personnel requirements and projected staffing problems?
- Are other cost-effective alternatives available which could allow DOD to better meet its future needs for critically skilled personnel?

COST EFFECTIVENESS OF MILITARY COMPENSATION

The underlying issue concerning military compensation is whether the total compensation package--both current and deferred (i.e., retirement)--is cost effective; that is, will it yield the desired level of force readiness at the least cost? GAO's prior work has shown that the military compensation system has not been as cost effective as it could be. The services' reliance on across-the-board solutions (such as general pay increases) to individualized problems has contributed to personnel shortages in some military occupations and surpluses in others.

GAO has supported¹ the need for a greater targeting of compensation to specific staffing problems, and DOD is moving in that direction. However, much of the current compensation package is still in the form of entitlements, such as basic pay, allowances, and retirement. This reduces the flexibility that managers have to adjust pay to meet staffing requirements and

tends to be less cost effective in overcoming personnel shortages than targeting pay to specific skills or occupations.

With the growth in the size of the military career force and related costs, there is also mounting concern over military retirement costs. In recent years, the military retirement system has been the focus of numerous congressional or executive branch studies and a number of comprehensive legislative proposals. Each has recommended major changes, but none has been very successful in getting the more significant of its recommendations adopted. In general, these studies have pointed to the current system as (1) being very expensive (outlays of \$16.5 billion in 1984), (2) providing very liberal benefits (lifetime benefits which generally exceed those usually found in other retirement plans), and (3) conflicting with efficient personnel management.

Reducing retirement benefits, however, is not the only option for reducing military retirement costs. Another way is to reduce the number of personnel eligible for benefits. This could be done by restructuring the military forces, such as by reducing the number who stay beyond the first term. This would, in the long-run, ultimately reduce the number of military personnel who stay to retirement, thus reducing retirement costs. Such a change could, however, increase recruiting and training costs. Also, coming in the midst of a declining recruiting pool, it could also have other readiness implications. Clearly, the costs and benefits of such a change need to be carefully studied.

Key questions GAO will address over the next few years include the following.

- Would changes to military pay composition and structure which would be more responsive to relevant labor market conditions give the services needed personnel at lower cost?
- Would a different mix of current versus deferred compensation be more efficient in attaining the desired force structure?
- Are there alternative force structures which would allow the United States to meet its commitments and, at the same time, reduce pay and retirement costs?

As in the case with the deployment issue, discussed in chapter 3, GAO's work on these questions is in an early stage.

INCREASING RESPONSIBILITIES OF RESERVE FORCES

Since the beginning of the All Volunteer Force in the early 1970's, the responsibilities assigned to Reserve components have grown substantially. In fiscal year 1980, the Selected Reserves represented 29 percent (about 851,000) of the Total Force. By the end of fiscal year 1984, this had grown to about 33 percent (1.05 million). With continued planned growth, the Reserves are a major force, continuing to increase in size and missions that will be called on in any major confrontation.

Last year, in testimony before the House and Senate Armed Services Committees, the Reserve Forces Policy Board presented the results of its study of DOD's process for making Active/Reserve Force mix decisions. The Board concluded the following:

- There is no structured force mix decisionmaking process. Force mix decisions and the assignment of missions and functional areas of responsibility within the Total Force have not been made through a corporate management process.
- There is currently no standard interservice methodology by which the services can accurately assess comparative and actual costs of their Active and Reserve Forces.
- There is no single body, council, or committee responsible for the review and oversight of the Total Force structure.
- There is an imbalance in the force mix in some services.

The Office of the Secretary of Defense (OSD), in its testimony, said that it had developed, had tested, and was implementing a new decision process that would provide a more complete explanation and justification of its force mix decisions.

The assignment of additional responsibilities to the Reserves appears, in large part, to be driven by cost considerations. While cost savings are important, ensuring that such shifts do not result in an unacceptable degradation of force readiness and war-fighting capability is equally important. Two central questions that GAO will address are:

- Have OSD and the services developed and are they now implementing a sound and consistent methodology for measuring both the cost and readiness impact of force mix decisions?

- Are current plans to transfer more functions to the Reserves based on a sound analysis of both costs and readiness impacts?

ISSUES FOR CONGRESSIONAL CONSIDERATION

How to provide the personnel needed to maintain and sustain U.S. commitments at an affordable cost is a major issue facing DOD and the Congress. As the Congress reviews DOD's fiscal year 1986 budget request and programs, it may wish to address

- the likelihood of future critical personnel shortages and the adequacy of current planning to minimize them,
- whether changes need to be made in military compensation policies and practices to enhance their efficiency and effectiveness,
- whether there are cost-effective reforms that can be made to the military retirement system, and
- the cost and readiness impacts of assigning additional responsibilities to the Reserves.

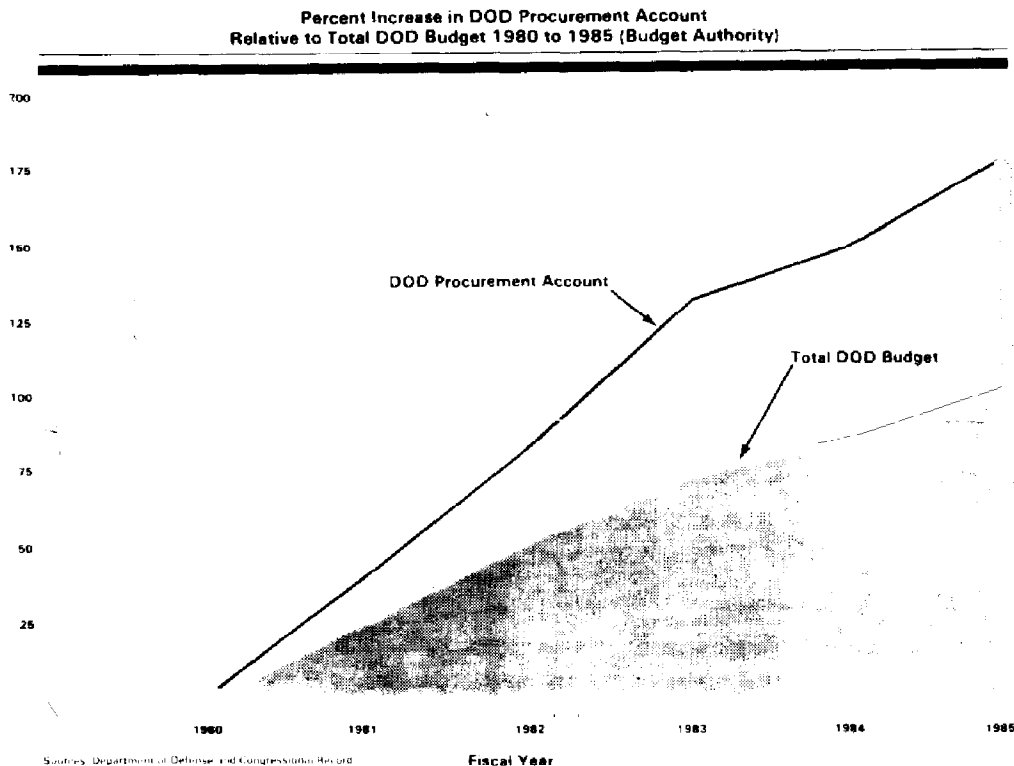
These issues are also the basis for much of GAO's work in the military personnel area over the next few years.

CHAPTER 5

COST AND IMPACT OF

MODERNIZING AND EXPANDING U.S. FORCES

While most areas of defense benefited from the budget increases since 1980, the modernization and expansion programs of each service and the resulting procurement of new weapon systems received the largest share of the increases, as shown below.



--The Army is in the process of its largest modernization program in peacetime history. Hundreds of weapons and support systems are being upgraded, replaced, or relocated. The modernization program will cost billions of dollars and will require more than 10 years to complete. Major changes are also being made in the size and composition of the forces and in battle doctrine.

- The Navy is modernizing and expanding its fleet. It is projected to grow from 545 ships by the end of fiscal year 1985 toward the Navy's goal of 600 ships by the end of the decade. The Marine Corps is also modernizing its aviation, ground, and service support forces.
- The Air Force is modernizing and expanding its tactical forces by replacing aging systems and increasing the size of its forces. Since 1980, the number of tactical air wings has risen from about 34 to almost 37 (each wing typically consists of 3 squadrons of 24 aircraft each). The Air Force goal is to have 40 wings by the 1990's.
- In 1981, DOD published its plan to revitalize all elements of U.S. strategic forces. That plan is now being carried out. B-52 bombers are being converted to launch cruise missiles; B-1B bombers are being produced; the Advanced Technology Bomber is being developed for deployment in the early 1990's; a new Advanced Cruise Missile is being developed for use on B-52's, B-1B's, and the Advanced Technology Bomber; and strategic command, control, and communications systems are being substantially upgraded.
- With respect to the land-based intercontinental ballistic missile force, the Congress has not fully accepted the Peacekeeper (MX) program and has placed constraints on its progress.
- The Navy is procuring the Trident submarine along with the Trident I missile. It is also developing the Trident II missile.

Two central questions surrounding the use of the increase in the defense budget since 1980 and the projected growth through the remainder of the decade are as follows:

- What has the United States achieved in terms of increased readiness and sustainability as a result of the budget increases?
- Are the individual services' modernization and expansion plans for the remainder of the decade viable and can they be implemented within the amounts estimated?

READINESS AND SUSTAINABILITY

After 4 years of unprecedented growth in the defense budget, there has been growing concern in the Congress and among the public as to how these increases have affected military capability.

GAO analyzed¹ information prepared by DOD on the changes in military capability since 1980. GAO concluded that the services have made progress in increasing the size of their forces, modernizing their weapon systems, and improving the quality of their personnel. However, this progress was not matched in other areas--namely, equipment condition and equipment and supplies inventories--and in the services' ability to sustain their military forces. For example, inventories of munitions and war reserves necessary to keep U.S. forces fighting were substantially below projected requirements.

In a specific case, GAO examined² how recent budget increases had affected the readiness^a of U.S. Air Force, Europe, tactical fighter units. This study showed that funds had been used to increase flying hours for training which, in turn, had improved personnel readiness. However, overall reported readiness declined because of shortages in equipment and supplies. Also, its ability to sustain its forces was reduced because spare parts needed to support an increased flying hour program required the Air Force to use some of its war reserves. This study highlighted the importance of balancing funding for increased training (e.g., flying hours) with funding for spare parts needed to support an increased training program.

GAO had earlier examined³ the readiness of the Navy's tactical air forces, which are composed primarily of aircraft carriers and their accompanying combat and combat support aircraft. The reported readiness levels were generally below Navy goals. In fact, because of reporting inaccuracies, actual readiness may have been significantly lower than reported. Also, shortages of essential assets, such as munitions and spare parts, limited the carriers' ability to meet wartime deployment schedules. GAO recommended improvements in the Navy's readiness-reporting procedures.

In the final analysis, while there has been progress since 1980 in improving the strength of U.S. military forces in certain areas, the overall results were mixed. A key lesson for the future is that with limited resources to meet generally unlimited needs, the difficult task is to allocate the resources to achieve relative balance among mutually supportive needs. How to do this remains an important, but difficult, issue for the Congress as it reviews the services' continuing modernization and expansion programs.

^aReadiness is one of four components which, according to DOD, constitute military capability. The others are (1) force structure, (2) force modernization, and (3) force sustainability.

Linking resources to impact on military capability

The proper allocation of resources among competing demands is made more complex by the difficulty in quantifying the impact it will have or has had on military capability. This is not a new issue, nor is it an easy one to address. In fiscal years 1977, 1980, and 1982, the Congress, concerned over this matter, directed DOD to identify the link between funding and readiness. In response, DOD submits an annual Force Readiness Report to the Congress which highlights the services' personnel, training, and materiel readiness status.

A problem in linking resources to military capability is the difficulty in coming up with objective and consistently used measures of capability. For example, GAO's report⁴ on the Joint Chiefs of Staff's Unit Status and Identity Report (UNITREP), a widely used measurement of U.S. military unit readiness, discusses limitations in the UNITREP system's design and differences among the services in reporting through the system. Also, less than adequate reporting guidance and inadequate training for those developing readiness input data have been problems identified in GAO's reviews of military readiness.

In April 1984, the Secretary of Defense established a task force to develop more realistic and meaningful assessments of military readiness. The task force's initial efforts are to improve the UNITREP system with a goal, among other objectives, of making it a more realistic and consistent portrayal of unit readiness. The Army is also taking action to make its unit status reporting more reflective of unit readiness.

FUTURE MODERNIZATION AND EXPANSION PLANS

The modernization and expansion programs of the services will continue to require substantial funds and close oversight by the Congress. Tough choices will have to be made. Modernization of strategic forces, for example, could squeeze funding for other priority areas for the rest of the decade. Future funding of new systems will need to be balanced with funds for training and support for systems being fielded. Otherwise, this country may find itself with modern weapon systems that cannot be supported.

Because of their significant effects on the defense budget, GAO will review the services' modernization and expansion programs.

Defense programs cost
more than estimated

It is important that the Congress, in assessing the affordability of the services' modernization and expansion programs, as well as all defense expenditures, receive good information on current and future costs of the programs it is reviewing.

The Five-Year Defense Program (FYDP), developed by DOD, provides an estimate of defense costs related to ongoing and planned defense programs. In recent years, there has been a great deal of controversy over the accuracy of the costs in the FYDP.

GAO has studied the historical relationship between the amounts estimated in individual FYDPs and the total obligational authority ultimately appropriated to execute those plans. The analysis shows that the FYDPs since 1963 have consistently underestimated budget requirements for the third, fourth, and fifth years by an average of 14 percent, 26 percent, and 38 percent, respectively. In the case of individual major weapon systems, the Congress granted an average of 32 percent more funds than DOD estimated in its FYDPs.⁵ Even with the additional funds, the number of weapon systems which DOD was able to procure was less than programmed. Some of the variance resulted from a genuine inability to predict the form and cost of the force structure and weapon systems 4 and 5 years in the future. But much of the undercosting is due to overoptimistic assumptions. This is particularly true with cost estimates for major weapon systems and associated support. As the fiscal years 1980-84 FYDP was being executed, actual appropriated obligational authority exceeded DOD's original estimate by about \$246 billion.

DOD believes it has addressed many of the past problems in estimating the FYDP and that current estimates more accurately reflect program requirements. The results of these improvements should become apparent over the next few years.

ISSUES FOR CONGRESSIONAL CONSIDERATION

As the Congress reviews the services' continuing modernization and expansion programs, it may wish to address the following issues and questions. GAO will also address aspects of them in its future work.

- As to whether the modernization and expansion of tactical Air Forces is a viable and supportable program which includes cost-effective alternatives for achieving tactical requirements, it could ask:

- a. Are mission requirements based on realistic analyses of combat and other operational data?
- b. Are aircraft requirements compatible with new Army doctrine?
- c. Are trend lines and budget projections for tactical forces compatible with force structure projections?
- d. Does program implementation provide for the development, acquisition, and support of cost-effective systems to achieve required tactical mission capability?

--As to whether the Army is effectively and efficiently developing and implementing doctrine and force structure changes, it could ask:

- a. How sound is the Army's analysis that supports doctrine, force structure, and weapons requirements decisions?
- b. What progress has the Army made toward implementing force structure changes and what are the ramifications?
- c. How can turbulence caused by force structure changes be reduced?

--As to whether the Navy is effectively planning and managing the fleet expansion, it could ask:

- a. Will the Navy's planned fleet expansion result in the force mix the Navy's commitments require?
- b. Do future Navy plans adequately consider the costs of fleet expansion?
- c. How does fleet expansion affect the readiness and sustainability of the existing fleet?
- d. Will the Navy be able to recruit, retain, and train the people to staff the expanded fleet?

--As to whether the improvement and modernization programs for offensive strategic forces are being carried out effectively and efficiently, it could ask:

- a. Do plans consider constraints which could adversely affect logistics support and system readiness and offer alternative approaches and

strategies (such as service life extension for older systems)?

- b. Is the strategy for developing strategic forces still valid and do all aspects need concurrent upgrading?
- c. Can system goals be achieved within program and budget projections?

CHAPTER 6

INTERNATIONAL SECURITY

A strong U.S. defense is not only a national issue, it is an international issue. It involves meeting worldwide commitments which protect U.S. security interests and those of our Allies.

GAO's work in the international security arena over the next few years will address issues such as U.S. strategy for meeting its commitments overseas, management and impact of U.S. security assistance, and control over international transfer of conventional weapons and nuclear technologies.

MEETING OVERSEAS COMMITMENTS

New directions in U.S. foreign policy are influencing the U.S. strategy for meeting its overseas commitments. While the North Atlantic Treaty Organization (NATO) remains the primary defense commitment, current defense planning reflects an increasing need to deal with the Soviet threat on a global basis. DOD's FYDP is intended to move it toward the long-term goal of being able to meet the demands of a worldwide war. The Secretary of Defense, in his fiscal year 1984 annual report to the Congress, stated that considering Soviet capabilities to launch concurrent attacks in NATO, Southwest Asia, and the Pacific, U.S. forces must be capable of defending all theaters simultaneously. In the Congress, the debate converges on how to reduce the growing budget deficit while maintaining a credible defense.

Over the last few years, GAO has provided information in response to the increasing congressional concern with the level of burden sharing by other NATO Allies and Japan, particularly compared with the large costs incurred by the United States. This work has included examining Allied contributions to the common defense; the sharing of costs for common programs, such as the NATO Infrastructure Program; and host nation support provided by other Allies to offset U.S. stationing costs. In two reports,^{1,2} GAO addressed some of these burden-sharing issues in the Federal Republic of Germany, the United Kingdom, Japan, and the Republic of Korea and identified the problems likely to impede these countries' willingness and ability to assume a greater share of the common defense burden. GAO also reported on NATO's Long-Term Defense Program³ and the United States-Korean agreement for deployment of Air Force A-10 aircraft.⁴

GAO's work on base rights agreements included an overview of U.S. foreign basing and facility access.⁵ This work assessed the overall costs to the United States, as well as the benefits. Specific basing agreements have also been addressed and so far include those in Honduras,⁶ the Caribbean,⁷ and the Philippines.⁸

Key questions that GAO will address in assessing the U.S. strategy for meeting its overseas commitments are as follows:

- What costs and capabilities are required to carry out the strategy?
- How do collective defense arrangements support the strategy?
- Does the overseas basing structure adequately support the strategy?
- Are there viable alternatives to the strategy?

GAO will continue to review burden-sharing issues, particularly with NATO and Japan, and to provide information to the Congress about the progress and problems of Allied burden-sharing initiatives. GAO is now reviewing how the NATO Allies will respond to a U.S. request for assistance if forces previously planned for use by NATO are diverted to Southwest Asia. GAO also plans to continue its assessments of basing agreements and report on how they affect U.S. defense costs and serve political, economic, and military objectives.

SECURITY ASSISTANCE

The United States provides security assistance to help friendly and Allied countries defend themselves, to promote closer military relationships with U.S. forces, and to enable the United States to obtain access to overseas facilities.

The primary bases for security assistance are the Foreign Assistance Act of 1961 and the Arms Export Control Act. The basic programs are Foreign Military Credit Sales, Military Assistance, and International Military Education and Training. Additionally, Economic Support Funds provide for balance-of-payments support and economic development projects but are justified on political and security grounds.

Since 1980, the cost of U.S. security assistance programs has more than doubled to almost \$10 billion per year. In addition to the basic program, many other activities are related to security assistance, such as the Foreign Military Cash Sales program. This program, managed by DOD, approximates another \$15 billion in arms flow. Commercial arms sales of about \$3 billion annually are also licensed by the U.S. government.

Reflecting congressional concerns about U.S. security assistance to Middle East and other countries, GAO has reported on U.S. security assistance programs in Israel,⁹ Egypt,¹⁰ Jordan,¹¹ Turkey,¹² Saudi Arabia,¹³ Korea,¹⁴ and Thailand.¹⁵

With respect to Israel and Egypt, GAO found that these countries have received liberal financing terms for some U.S. aid. For example,

- Israel and Egypt purchased equipment under the so-called "cash flow" financing method, allowing them to buy more than their approved loan guarantees would have otherwise made possible. A problem with this method is that it implies a commitment for the Congress to approve large aid packages in the future to ensure that signed contracts are honored. GAO recommended that the Congress enact legislation requiring the executive branch to provide advance notification for "cash flow" financing commitments to be given to Allied countries. This would help ensure adequate oversight and control.
- Israel and Egypt have had substantial amounts of foreign military sales (FMS) loans forgiven by the U.S. government. Israel has been forgiven \$750 million of its \$1.7 billion in FMS loans for fiscal year 1983. Egypt was forgiven \$425 million of its \$1.3 billion in FMS loans for the same year. Such actions could set precedents for aid to other countries.

GAO also issued three reports^{16,17,18} on U.S. military involvement in Central America. In one of those reports,¹⁷ the Comptroller General rendered a formal legal decision requiring DOD to reimburse its operations and maintenance accounts for funds improperly used as part of a joint combined exercise in Honduras.

In assessing whether U.S. security assistance is provided in a manner which best reflects the recipient's legitimate needs and U.S. security interests, future GAO work will address the following questions.

- Are recipient countries' individual needs and capabilities adequately reflected in the terms and conditions of U.S. aid packages?
- What are the interrelationships and effects of U.S. aid to individual countries?
- What is likely to be the level and composition of future requests?
- How does U.S. aid affect defense trade relationships and what is the resulting impact on the U.S. economy and national security?

GAO will reinforce its past work in the security assistance area by reviewing how well security assistance provided to

individual countries or regions is managed, with emphasis on Latin America and the Middle East.

NUCLEAR NONPROLIFERATION AND ARMS CONTROL

The quality, quantity, and distribution of both nuclear and conventional arms and the spread of related technologies throughout the world strongly influence our own and other nations' national security. Enhancing international security through nuclear nonproliferation efforts and nuclear/conventional arms control has long been a major U.S. foreign policy goal. While nuclear nonproliferation and strategic arms control issues are most often highlighted, the regulation of conventional arms transfers has become increasingly important and complex. Such transfers no longer involve only sales and grants of weapons. Increasingly, cooperative production arrangements are involved resulting in the sharing of weapons technologies and manufacturing capabilities.

GAO reported¹⁹ on efforts to increase resources and improve management practices at the Arms Control and Disarmament Agency and suggested that the Congress earmark funds for the Agency's research program to ensure that it is adequately supported. GAO also reported²⁰ on U.S. support for the International Atomic Energy Agency's nuclear safeguards equipment needs, noting the efforts being made to put the equipment into routine use and recommending ways to improve these efforts.

The central question involved in assessing U.S. management of, and controls over, the transfer of technology is whether arms transfers involving technology transfers, licensing, coproduction, and other cooperative arrangements are being appropriately authorized and adequately controlled to ensure that U.S. interests--political, military, economic--are served.

ISSUES FOR CONGRESSIONAL CONSIDERATION

As the Congress reviews the fiscal year 1986 defense budget and programs involving international issues, it may wish to address

- whether the United States has a sound strategy for meeting its commitments overseas,
- whether U.S. security assistance to individual countries is effectively and economically managed, and
- whether U.S. efforts to prohibit or control international transfers of conventional weapons and nuclear technology are adequate.

GAO will also be addressing these issues over the next few years.

CHAPTER 7

OTHER MAJOR ISSUES

AN EXPANDING MILITARY ROLE IN SPACE

The military role in space is rapidly becoming a major area of concern to the American public, the Congress, and the administration. Over time, U.S. military forces have become increasingly dependent on "passive" command, control, communications, and intelligence (C3I) space systems to accomplish their missions, and the investment in these systems has grown rapidly. While DOD's investment in space activities increased substantially in recent years, past investments may be insignificant compared with what could be spent developing and deploying future space weapon systems. Interest in the military's use of space will likely continue to grow as issues surrounding the militarization of space evolve and funding requirements increase.

GAO reported the following:

--Increased interaction and integration of NASA and DOD space activities will blur the distinction between civilian and military programs. This raises the question of how evolving shuttle operations will affect NASA and DOD missions and how much program separation should be maintained. GAO supported a recommendation made in an Office of Technology Assessment report that the Congress require the reestablishment of a mechanism similar to the disbanded National Aeronautics and Space Council to obtain high level attention to space matters and achieve balanced agency interaction.¹ In July 1984, the Congress resolved this issue when it passed Public Law 98-361, the NASA Authorization Act for fiscal year 1985. Title II of this law requires that a National Commission on Space be established to study existing and proposed space activities and identify long-range goals, opportunities, and policy options for U.S. civilian space activities over the next 20 years.

--When the Air Force selected the miniature vehicle technology as the primary solution to the antisatellite mission, it was envisioned as an inexpensive, quick way to get an antisatellite system that would meet mission requirements. GAO found that this was no longer the case. It will be a more complex and expensive task than originally envisioned.²

Because of the emerging role of space systems in achieving military missions, the Air Force and Navy have created space commands to carry out operational management of their present space systems. All three services are involved in research and

development to improve existing as well as developing space systems to support strategic offensive and defensive missions. DOD also appointed a high level program manager to administer the ballistic missile defense research and development program, and has received approval to establish a unified command to operationally manage all space assets.

GAO will increase its efforts to examine military space issues. It will evaluate how adequate U.S. planning for the military use of space is and whether these plans are being adequately implemented and coordinated.

Issues for congressional consideration

The central issue facing the Congress is whether the United States is adequately planning for the military use of space and if these plans are being adequately implemented and coordinated. In addressing the issue, the following areas need to be examined. GAO will address aspects of them over the next few years.

- Whether DOD is establishing an effective and efficient organizational structure and planning an effective and economical investment strategy to accomplish its military objectives in space.
- How well existing and planned space C3I systems contribute to improving the effectiveness of U.S. strategic forces.
- Whether DOD's existing and planned resources provide credible and efficient launch capability and spacecraft control required to support the expected growth in military space efforts.
- Whether automatic data processing and communications resources are being applied to ensure that computational and data transmission requirements will be met for space systems.

COMMAND, CONTROL, AND COMMUNICATIONS SYSTEMS

Command, control, and communications (C3) systems are vital links in an effective U.S. military capability. These systems enable civilian and military commanders to assess enemy attacks and direct and control military forces and weapons. C3 systems comprise a network of command centers, sensors, computers, communications links, and other support systems.

Improving existing C3 capabilities has been given high priority in recent years, and this will likely continue. Over the next 5 years, DOD will be asking for over \$100 billion for C3 programs.

GAO reported³ that in developing their fire support command and control systems, neither the Army nor the Marine Corps had rigorously pursued opportunities for common systems. DOD agreed that, in the past, the Army and the Marine Corps probably did not investigate the use of each other's systems as vigorously as they should have and that, in the future, it will carefully review the services' individual programs to see if joint programs are feasible.

GAO also proposed⁴ that the Army restructure its short range air defense command and control program to avoid unnecessary overlap among systems and also build in adequate testing before initiating production. Army management reconsidered the short range air defense program and integrated the two separate system developments and deferred system production to allow for more adequate testing. As a result, the Army reduced its fiscal year 1985 budget request by \$70 million.

GAO will continue to evaluate DOD C3 systems, both strategic and tactical. It will examine the cost effectiveness of existing and planned C3 systems, the adequacy of DOD efforts to enhance the survivability and interoperability of C3 systems, and the effectiveness of efforts to develop electronic combat capabilities and C3 countermeasures.

Issues for congressional consideration

The central C3 issues which the Congress may wish to address include

- whether existing and planned C3 systems provide credible and cost-effective capabilities to satisfy mission requirements,
- whether DOD efforts to enhance the survivability of C3 capabilities are being adequately planned and implemented,
- whether DOD's efforts to improve interoperability of C3 systems are effective, and
- whether DOD is developing and acquiring effective electronic combat countermeasures.

GAO will also address these issues over the next few years.

COST AND QUALITY OF DOD HEALTH CARE

Containing health care cost growth and providing top quality medical care are among the more important health care issues facing the Congress.

DOD provides worldwide hospital and outpatient care to active and retired military personnel and their dependents. In addition, the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS) is an insurance-like program for payment for medical services when they are not available from military facilities. In fiscal year 1983, DOD treated about 800,000 inpatients in its hospitals and provided about 37.3 million outpatient visits. CHAMPUS supported about 250,000 inpatients and 2.5 million outpatient visits. In fiscal year 1983, DOD spent \$7 billion in providing health care to federal beneficiaries.

GAO is examining the costs and quality of DOD health care, including (1) the adequacy and reliability of DOD criteria for sizing and staffing hospitals and dental clinics, (2) the feasibility of using less costly outpatient surgical procedures in lieu of inpatient services, and (3) DOD quality assurance programs, which assess the quality of medical care in military health care facilities.

GAO recently reported⁵ that four military medical facility replacement proposals submitted by the Surgeons General of the Army, the Navy, and the Air Force had not, in GAO's opinion, adequately considered underutilized space at nearby DOD medical facilities, as required by Public Law 97-337 and DOD directive. The four facilities reviewed were the Brooke Army Medical Center, Fort Sam Houston, Texas; the Madigan Army Medical Center, Fort Lewis, Washington; the Naval Hospital, Philadelphia, Pennsylvania; and the USAF Hospital, Patrick Air Force Base, Florida.

GAO will continue to examine the efficiency of DOD health care and the systems it uses to measure quality of medical care, including (1) whether DOD hospital planning provides for the right number and mix of beds and professional services and (2) whether the way DOD allocates health care resources creates effective incentives for cost containment. The Congress should also address these issues.

FINANCIAL MANAGEMENT

The two financial management issues discussed below--rebuilding the federal financial management structure and strengthening internal controls--apply government-wide. They are not confined to defense, although certainly, they are an integral part of effectively and efficiently managing defense programs and are of concern to DOD managers. They are discussed in this report because of their importance to defense

management. However, GAO's work in these areas is government-wide in scope.

Rebuilding the federal financial management structure

Government policymakers and managers are facing formidable financial management challenges in today's complex economic, political, and social environment. Demands to fund current programs, as well as to provide for new investment in national defense and capital improvements, require accurate financial information for making sound resource allocation decisions. GAO recently completed⁶ a major study of the financial management systems in the federal government, concluding that the current financial management process does not adequately provide reliable, consistent information for policy formulation and management control. Following are a number of problems with the current process that were documented:

- poor quality of financial management information;
- poor linkages between the phases of the financial management process;
- inadequate attention to monitoring and comparing budgeted activity with actual results;
- primary emphasis on fund control;
- inadequate disclosure of assets, costs, and liabilities, and
- antiquated and fragmented financial management systems.

The need for improvements will remain until these and other problems are adequately addressed. Some of the previous major improvement efforts, such as creating the President's budget; implementing the Planning, Programming and Budgeting System (PPBS) at Defense; unifying the budget; and establishing the congressional budget process have strengthened government financial management. Other reform initiatives, such as zero-based budgeting, management by objectives, and federal productivity measurement and improvement, have achieved only limited success.

GAO believes that the first step toward a modern structure for financial management is to start developing a consensus about the need for reform and the general outline of that reform. This consensus might best be achieved through a series of congressional hearings covering the full breadth of current and future issues surrounding federal financial management. These hearings might culminate in the passage of a bill or resolution setting forth the objectives of the long-term

rebuilding effort for financial management in the federal government.

A base in statutory authorization appears useful for sustaining financial management initiatives over time. It provides credibility and explicit congressional and presidential support for implementation. Without the express commitment of the Congress, it would be difficult, if not impossible, to sustain initiatives which have organizational, functional, and procedural implications for the entire federal government.

Some areas which implementing legislation should address include the following:

- establishing the mechanism (leadership issue) for seeing the project through to completion;
- establishing an oversight function for project development and its subsequent operation;
- establishing milestones for reporting results on project development, including implementation of new governing rules and regulations;
- establishing the entity (ownership issue) to maintain and run the central system;
- specifying the role and responsibilities the new entity has in financial management;
- establishing a timetable for conducting financial audits; and
- resolving the personnel issues (career series, training programs, and qualification for financial management officers to run the centralized system). Pay scale, career path, appointment mechanism, and term for financial management officers must also be considered.

Building a more modern and effective financial management structure for the federal government is an ambitious goal, but it can be achieved if there is a broad consensus.

GAO has laid out the framework for building an effective financial management structure in its report on financial management systems, referred to earlier.⁶

Internal controls

Over the years, internal controls have not been an area of management emphasis throughout the government. Although some managers have stressed effective internal controls, the development of effective governmental systems of internal control has

generally been marked as a slow, painstaking process with inadequate resources allocated to the task.

The Accounting and Auditing Act of 1950 required each executive agency to implement and maintain effective systems of internal accounting control. These systems were expected to help prevent fraud, waste, abuse, and mismanagement in federal government operations.

Nevertheless, the government experienced situation after situation where illegal, unauthorized and questionable acts were characterized as fraud, waste, and abuse. Often these problems resulted from weaknesses in internal controls or from breakdowns in compliance with internal controls. Recently, attention on internal controls within the government has increased dramatically because of a number of events, including budget cuts; continued disclosure of fraud, waste, and abuse; and findings of poor internal controls in federal agencies.

The Federal Managers' Financial Integrity Act of 1982

In September 1982, the Congress passed the Federal Managers' Financial Integrity Act of 1982, amending the 1950 act. The new act requires executive agency heads to report annually on their agencies' compliance with internal control standards prescribed by the Comptroller General and the guidelines for evaluating internal controls issued by the Office of Management and Budget.

The act established a government-wide framework for improving and monitoring the effectiveness of financial management in federal agencies. It requires each agency to establish systems of internal accounting and administrative controls that can provide assurance that (1) obligations and costs comply with applicable laws, (2) funds, property, and other assets are safeguarded from waste, loss, unauthorized use, or thefts, and (3) revenues and expenditures are properly recorded, accounted for, and reported. The act also requires each agency to assess its accounting systems for compliance with principles and standards prescribed by the Comptroller General.

To satisfy the act's requirements, federal agencies must continuously evaluate their systems of internal accounting and administrative control. These systems are necessary not only for financial and administrative activities, but for program and operational activities as well. Each agency must develop a plan to evaluate, improve, and report on its internal control systems in the most efficient and effective manner.

On May 1, 1984, GAO issued six reports on its reviews of DOD's first year implementation of the act. These reports covered the Departments of the Army,⁷ the Navy,⁸ the Air

Force,⁹ and Defense;¹⁰ the Defense Logistics Agency;¹¹ and the Defense Mapping Agency.¹²

In general, DOD has made progress in complying with the requirements of the act. However, problems and delays have affected the implementation of fully satisfactory programs. Many of these have DOD-wide implications; some are unique to specific reporting centers. These problems are discussed in the individual reports identified above.

GAO is continuing to review the implementation of the act. It will follow up on its first-year findings to determine whether agencies are correcting known internal control weaknesses and will review agency assessments of vulnerability and internal control reviews.

LIST OF GAO REPORTS AND TESTIMONYCHAPTER 2

- ¹Logistics Support Costs for the B-1B Aircraft Can Be Reduced (GAO/NSIAD-84-36, Sept. 20, 1984).
- ²Trident II System: Status and Reporting (GAO/NSIAD-84-86, May 15, 1984).
- ³Pershing II Program Should Be Reassessed Prior to Commitment to Further Production (GAO/C-NSIAD-83-7, Sept. 21, 1983 (classified)).
- ⁴Status of the Peacekeeper (MX) System (GAO/NSIAD-84-112, May 9, 1984).
- ⁵Army's Decision to Begin Production of the High Mobility Multipurpose Wheeled Vehicle Was Premature (GAO/NSIAD-84-136, June 12, 1984).
- ⁶Analysis of Benefits Realized From Multiyear Contracting for the Black Hawk Helicopter (GAO/NSIAD-84-74, May 9, 1984).
- ⁷Analysis of DOD's Fiscal Year 1985 Multiyear Procurement Candidates (GAO/NSIAD-85-9, Oct. 25, 1984).
- ⁸Better Planning and Management of Threat Simulators and Aerial Targets Is Crucial to Effective Weapon Systems Performance (GAO/MASAD-83-27, June 23, 1983).
- ⁹The Army Needs More Comprehensive Evaluations to Make Effective Use of Its Weapon System Testing (GAO/NSIAD-84-40, Feb. 24, 1984).
- ¹⁰Statement of Warren G. Reed, Director, Information Management and Technology Division, U.S. General Accounting Office, before the Committee on Armed Services, United States Senate, on Department of Defense Spare Parts Procurement Practices (Oct. 25, 1983).
- ¹¹DOD Needs to Provide More Credible Weapon Systems Cost Estimates to the Congress (GAO/NSIAD-84-70, May 24, 1984).

CHAPTER 3

- ¹Problems in Alerting and Preparing Army Reservists for Mobilization (GAO/NSIAD-84-52, Feb. 27, 1984).
- ²Federal Actions Needed to Retain Essential Defense Rail Service (GAO/PLRD-83-73, May 20, 1983).
- ³Observations Concerning Plans and Programs to Assure the Continuity of Vital Wartime Movements Through United States Ports (GAO/NSIAD-83-18, Aug. 30, 1983).
- ⁴Ensuring Retention of Essential Civilians Overseas During Hostilities (GAO/NSIAD-84-73, Mar. 14, 1984).
- ⁵The Army Can Do More to Assure War Reserve Funds are Spent Effectively (GAO/NSIAD-84-50, Feb. 17, 1984).
- ⁶Budgetary Pressures Created by the Army's Plans to Procure New Major Weapon Systems Are Just Beginning (GAO/MASAD-82-5, Oct. 20, 1981).
- ⁷Weapon Systems Overview: A Summary of Recent GAO Reports, Observations and Recommendations on Major Weapon Systems (GAO/NSIAD-83-7, Sept. 30, 1983).
- ⁸Underestimation of Funding Requirements in Five Year Procurement Plans (GAO/NSIAD-84-88, Mar. 12, 1984).
- ⁹Defense Spending and Its Relationship to the Federal Budget (GAO/PLRD-83-80, June 9, 1983).
- ¹⁰Comments on Navy's Manpower, Personnel, and Training Planning Process (GAO/NSIAD-84-6, Oct. 7, 1983).
- ¹¹Opportunities to Improve the Effectiveness of the Army's Logistics Review Process (GAO/NSIAD-83-25, Aug. 5, 1983).
- ¹²Suggestions for Improving Navy Logistics Reviews (GAO/NSIAD-83-24, Aug. 5, 1983).

CHAPTER 4

¹Observations on the April 15, 1982, Joint Services Report, "Military Pay Adjustment Mechanism Study" (GAO/FPCD-82-78, Sept. 28, 1982).

CHAPTER 5

¹Letter to Senator Sam Nunn, from the Director, National Security and International Affairs Division, U.S. General Accounting Office (June 6, 1984).

²Flying Hours for U.S. Air Forces in Europe Exceeded Logistical Support Capability and Reduced Reported Readiness (GAO/C-NSIAD-85-1, Jan. 8, 1985 (classified)).

³Navy Tactical Air Forces Readiness, Deployability and Implications for Decisionmakers (GAO/C-NSIAD-84-11, Oct. 31, 1983 (classified)).

⁴The Unit Status and Identity Report (UNITREP) System--What It Does and Does Not Measure (GAO/NSIAD-84-39, Mar. 12, 1984).

⁵Underestimation of Funding Requirements in Five Year Procurement Plans (GAO/NSIAD-84-88, Mar. 12, 1984).

CHAPTER 6

¹Reductions in U.S. Costs to Station Forces in the Federal Republic of Germany and the United Kingdom Are Unlikely (GAO/NSIAD-84-130, July 31, 1984).

²Greater Contributions by Japan and the Republic of Korea to Reduce U.S. Stationing Costs Are Unlikely (GAO/C-NSIAD-84-4, Feb. 2, 1984 (classified)).

³An Assessment of NATO's Long-Term Defense Program (GAO/C-NSIAD-84-26, Sept. 12, 1984 (classified)).

⁴A-10 Deployment to Korea May Require Additional Outlays of U.S. Funds (GAO/C-NSIAD-84-23, May 15, 1984 (classified)).

⁵Overview of U.S. Foreign Basing and Facility Access Agreements (GAO/C-ID-83-4, May 9, 1983 (classified)).

⁶U.S. Facilities Improvement Program in Honduras (GAO/C-ID-83-5, May 27, 1983 (classified)).

- 7 Delays in Consolidating and Relocating DOD Test Facilities in the Caribbean Are Costing Millions of Dollars (GAO/C-ID-83-2, Mar. 11, 1983 (classified)).
- 8 U.S. Bases in the Philippines: Increasing Costs and Uncertain Future (GAO/C-NSIAD-84-22, July 11, 1984 (classified)).
- 9 U.S. Assistance to the State of Israel (GAO/C-ID-83-51, June 24, 1983 (classified)).
- 10 Forging a New Defense Relationship With Egypt (GAO/ID-82-15, Feb. 5, 1982).
- 11 U.S. Assistance to the Hashemite Kingdom of Jordan (GAO/C-NSIAD-84-24, July 13, 1984 (classified)).
- 12 The Defense and Economic Cooperation Agreement-U.S. Interests and Turkey's Needs (GAO/ID-82-31, May 7, 1982).
- 13 Problems in Collecting Military Sales Payments From Saudi Arabia (GAO/C-NSIAD-84-16, Jan. 25, 1984 (classified)).
- 14 U.S. Security Assistance to the Republic of Korea (GAO/C-ID-82-5, June 1, 1982 (classified)).
- 15 U.S. Defense Programs in Thailand (GAO/C-ID-82-3, Dec. 31, 1981 (classified)).
- 16 U.S. Military Activities in Central America (GAO/C-NSIAD-84-8, Mar. 6, 1984 (classified)).
- 17 Funding of Joint Combined Military Exercises in Honduras (Appendix to Comptroller General decision, B-213137, June 22, 1984).
- 18 U.S. Security Assistance and Defense Activities in Central America (GAO/C-NSIAD-85-2, Dec. 11, 1984 (classified)).
- 19 Efforts to Improve Management Practices and Increase Resources at the Arms Control and Disarmament Agency (GAO/NSIAD-84-19, Apr. 11, 1984).
- 20 New and Better Equipment Being Made Available for International Nuclear Safeguards (GAO/NSIAD-84-46, June 14, 1984).

CHAPTER 7

- ¹Implications of Joint NASA/DOD Participation in Space Shuttle Operations (GAO/NSIAD-84-13, Nov. 7, 1983).
- ²U.S. Antisatellite Program Needs a Fresh Look (GAO/C-MASAD-83-5, Jan. 27, 1983 (classified)).
- ³Development of Fire Support Command and Control Systems by the Army and the Marine Corps (GAO/NSIAD-84-15, Oct. 19, 1983).
- ⁴Army's Restructuring of Its Short Range Air Defense Command and Control Program Should Reduce Program Risks (GAO/NSIAD-84-141, June 28, 1984).
- ⁵Improved Guidance Could Result in More Cost-Effective Sizing of Military Medical Facilities (GAO/HRD-85-32, Dec. 31, 1984).
- ⁶Managing the Cost of Government, Building an Effective Financial Management Structure (GAO/AFMD-85-35 and GAO/AFMD-85-35A, Feb. 1985).
- ⁷Department of the Army's First-Year Implementation of the Federal Managers' Financial Integrity Act (GAO/NSIAD-84-92, May 1, 1984).
- ⁸Department of the Navy's First-Year Implementation of the Federal Managers' Financial Integrity Act (GAO/NSIAD-84-94, May 1, 1984).
- ⁹Department of the Air Force's First-Year Implementation of the Federal Managers' Financial Integrity Act (GAO/NSIAD-84-93, May 1, 1984).
- ¹⁰Department of Defense's First-Year Implementation of the Federal Managers' Financial Integrity Act (GAO/NSIAD-84-98, May 1, 1984).
- ¹¹Defense Logistics Agency's First-Year Implementation of the Federal Managers' Financial Integrity Act (GAO/NSIAD-84-99, May 1, 1984).
- ¹²Defense Mapping Agency's First-Year Implementation of the Federal Managers' Financial Integrity Act (GAO/NSIAD-84-101, May 1, 1984).

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