

REDUCING THE SIZE OF THE MILITARY OFFICER CORPS:
EFFECTS ON PROMOTIONS AND ACCESSIONS

Staff Working Paper

February 1988

Congress of the United States
Congressional Budget Office

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PREFACE

In 1986, the Congress mandated that the size of the military officer corps be reduced to 6 percent below 1986 levels, with the cuts taking place in the years 1987 through 1989. When the Department of Defense sought to avoid or reduce the mandated reductions last year, the Congress permitted the pace of the reductions to be slowed--they can now extend through 1990--but retained the goal of a 6 percent reduction. It seems likely that the issue will again be the subject of debate this year.

This analysis by the Congressional Budget Office (CBO) examines the effects of the officer corps reductions on the patterns of promotion within the military services and also on the numbers of new officers (that is, accessions) that the services can accept. It reflects service plans for accommodating the mandated reductions in 1988 but not the details of the budget amendment submitted for 1989.

The analysis was requested by the Subcommittee on Manpower and Personnel of the Senate Committee on Armed Services. In accordance with CBO's mandate to provide objective analysis, the paper makes no recommendations.

Marvin M. Smith of CBO's National Security Division prepared the paper under the general supervision of Robert Hale and Neil Singer. The author gratefully acknowledges the assistance of Joel Slackman and James West. Amanda Balestrieri edited the manuscript and Rebecca J. Kees prepared it for publication.

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February 1988

SUMMARY

The armed services have always endeavored to strike a balance between the number of military personnel in their officer corps and enlisted ranks. Between 1980 and 1986, however, the officer corps grew by 12.1 percent, while the enlisted ranks increased by only 4.8 percent. The resulting decline in the enlisted-to-officer ratio, coupled with pressures for reductions in the defense budget, raised sufficient concern for the Congress to legislate a 6 percent reduction in the size of the active-duty commissioned officer corps.

Initially, the Congress called for a 1 percent reduction in 1987 from the fiscal year 1986 level, followed by additional cuts of 2 percent in 1988 and 3 percent in 1989. The 1 percent reduction took place in 1987, and the remaining schedule was modified by giving the Secretary of Defense the option of adhering to the original reductions or choosing slower cuts of 1 percent in 1988, 2 percent in 1989, and 2 percent in 1990. The Congress also left to the Department of Defense (DoD) the final allocation of the total reduction among the various military services.

The Congressionally mandated reductions in the officer corps are thought to have a major impact on two areas of force manning: the requisite number of officers to sustain combat capability and the personnel management system. Officials in DoD maintain that the officer reductions would not leave enough officers to meet combat needs. While this is clearly a matter of concern, this report does not examine the accuracy of this claim. Instead, this analysis addresses the effects of officer corps reductions on promotions and accessions by examining alternative ways of implementing current law.

IMPORTANT PERSONNEL ISSUES

The Defense Officer Personnel Management Act of 1980 (DOPMA) places limits ("ceilings") on the numbers of officers who can serve in three of the senior pay grades of each military service. These ceilings, which are part of permanent law, vary according to the total

number of officers subject to DOPMA in each service. Thus, reductions in the total number of officers will lower DOPMA ceilings. DOPMA also guarantees tenure to officers in senior pay grades--that is, they can remain in the military for 20 or more years. If few officers in senior pay grades leave because of guaranteed tenure, lowered ceilings could mean a sharp drop in the number of officers who could be promoted to more senior grades. Such a drop could adversely affect morale and hence defense capability. Consequently, the first key question is:

- o Will officer corps reductions, coupled with DOPMA ceilings, seriously affect promotions?

In addition, the services expect a reasonably steady flow of new, young officers (called "accessions") into the military. If the number of accessions were to fall sharply, there might not be enough personnel to meet needs in key senior pay grades in later years, since the military does not normally hire people directly from civilian life into senior grades. Hence, the second key question is:

- o Will officer corps reductions lead to fewer accessions and possibly cause eventual problems in force manning?

METHODS AND ASSUMPTIONS

To answer these questions, the Congressional Budget Officer (CBO) developed a model that projects the number of officers by pay grade in the Army, the Navy, and the Air Force, the three largest services. (Projections were also made for the Marine Corps, but the effects of reductions on the Marine Corps were not analyzed.) The model assumes that the willingness of officers to remain in the military continues at recent levels but accounts for various possible changes in personnel policies, especially those governing promotion. The percentage reductions in the officer corps were calculated as a percentage relative to a baseline projection that had two main assumptions: no cuts in the number of officers planned by the services in last year's budget, and the continuation of other policies at current levels.

The analysis makes many important assumptions. The Secretary of Defense is assumed to opt for the slower cuts of 1 percent in 1988 followed by 2 percent

per year in 1989 and 1990. The impact of these reductions depends on how DoD chooses to allocate the cuts among the services. Navy officers were exempted from the 1987 reductions, presumably because of the growth in the number of Navy ships; all cuts were allocated among the other three services. In 1988, the Navy was actually allowed an increase in the number of officers. It is possible that cuts in 1989 and 1990 may be apportioned evenly among all services. Reductions were calculated for such a proportional case, Case 1, as well as one in which the Navy remains exempt and cuts are proportional among the other services, Case 2 (see Summary Table 1).

The effects of the cuts also depend on how the armed services implement them. Based on their approaches to carrying out the fiscal year 1987 cuts, the services appear to have quite different philosophies. The Army, for example, chose to protect its new officer accessions at the expense of more senior officers. In contrast, the Air Force attempted to protect those officers currently in uniform and in turn placed a larger burden from the cuts on accessions. The Navy has indicated that, if it makes cuts in the future, it would protect its "warfare" officer communities (that is, officers serving primarily on ships, aircraft squadrons, and other combat elements) and thus take the bulk of its share of reductions from shore support billets. Based on informal discussions with the services, this study assumes that they would implement future cuts using the same approaches that they employed or would have employed in 1987.

PROMOTING EXISTING PERSONNEL

CBO's analysis concludes that the limits on numbers of senior officers imposed by DOPMA do not appear likely to constrain seriously any of the services' abilities to comply with the mandated reductions in the officer corps. Given past policies, the Army is projected to be below DOPMA limits at two of the three pay grades controlled by DOPMA in 1988 through 1990 (see Summary Tables 2 and 3). The Army is actually likely either to speed up promotion, or to increase promotion opportunities, or both. The Air Force and the Navy, on the other hand, are projected to exceed DOPMA limits for most pay grades from 1988 through 1990; they would therefore have to promote officers more slowly to comply with current law. In most cases, however, the requisite slowdown would be less than six months. If

SUMMARY TABLE 1. PROJECTED ANNUAL REDUCTIONS IN THE OFFICER CORPS BELOW 1986 STRENGTH (Number of officers)

	1986 Actual Strength	Annual Reduction (-) or Increase (+) by the End of					
		1987	1988	1989		1990	
				Case 1 <u>a/</u>	Case 2 <u>b/</u>	Case 1 <u>a/</u>	Case 2 <u>b/</u>
Army	107,962	-1,635	-1,514	-2,153	-3,107	-2,166	-2,839
Navy	72,051	0	+559	-1,452	0	-1,423	0
Air Force	109,048	-1,255	-2,255	-2,167	-2,134	-2,181	-2,815
Marine Corps <u>c/</u>	<u>19,735</u>	<u>-198</u>	<u>+122</u>	<u>-404</u>	<u>-935</u>	<u>-406</u>	<u>-522</u>
Total	308,796	-3,088	-3,088	-6,176	-6,176	-6,176	-6,176

SOURCE: Based on Department of Defense data and Congressional Budget Office estimates.

- a. Proportional cuts in all services.
- b. Navy exempt from cuts.
- c. CBO did not analyze effects of the officer corps reductions on the Marine Corps.

SUMMARY TABLE 2. EFFECTS OF OFFICER CORPS REDUCTIONS
ON DOPMA LIMITS IN EACH SERVICE
BEYOND 1988

Service	1988	1989	1990
<u>Number of Officers in Pay Grade Above (+) or Below (-) DOPMA Limit Assuming Proportional Reductions</u>			
Army			
Major	-374	-211	-322
Lieutenant Colonel	+132	+148	+124
Colonel	-269	-168	-292
Navy			
Lieutenant Commander	-297	+242	+191
Commander	-128	+40	-5
Captain	+44	+266	+244
Air Force			
Major	+337	+144	+172
Lieutenant Colonel	+156	+15	+43
Colonel	+113	+195	+264
<u>Number of Officers in Pay Grade Above (+) or Below (-) DOPMA Limit Assuming Proportional Reductions Except Navy Exempt</u>			
Army			
Major	-374	-428	-169
Lieutenant Colonel	+132	+171	+170
Colonel	-269	-258	-498
Air Force			
Major	+337	+235	+334
Lieutenant Colonel	+156	+325	+461
Colonel	+113	+194	+282

SOURCE: Congressional Budget Office estimates.

NOTE: DOPMA = Defense Officer Personnel Management Act.

SUMMARY TABLE 3. EFFECTS OF OFFICER CORPS REDUCTIONS
ON ACCESSIONS IN EACH SERVICE
BEYOND 1988

Service	1988	1989	1990
	Percentage Reductions in Accessions Relative to Baseline Assuming Proportional Reductions		
Army	0	13	22
Navy	14	24	32
Air Force	36	25	30
	Percentage Reductions in Accessions Relative to Baseline Assuming Proportional Reductions Except Navy Exempt		
Army	0	19	31
Air Force	36	32	33

SOURCE: Congressional Budget Office estimates.

the effects of these promotion patterns are judged unacceptable by the services, there are other options. Current law allows the services to review the records of senior officers who have not been promoted to the next higher paygrade after the customary waiting period. Up to 30 percent of these officers can be required to leave the military before the years of tenure normally guaranteed by DOPMA. This provision for Selective Early Retirement (SER) has not yet been widely used by the services. The services could also ask the Congress to modify the DOPMA grade ceilings temporarily--none of the services has yet formally made such a request.1/

ACCESSING NEW PERSONNEL

Although the DOPMA concerns appear manageable, the services might face more serious consequences in their overall management of accessions if they approach the reductions using their 1987 strategies. For example, the Army attempted to protect its accessions in 1987. If the Army follows such a course in the future, it will have to reduce the number of some trained officers--such as captains who usually have 12 or more years of experience--by as much as 4 percent in 1990 relative to the CBO baseline described above. Even with these reductions, the Army would have to reduce accessions by 13 percent in 1989 and 22 percent in 1990 if cuts in the number of officers are distributed proportionately across services, or 19 percent in 1989 and 31 percent in 1990 if the Navy continues to be exempt from reductions (see Summary Table 3).

The continuation of 1987 strategies would have important effects on the other services as well. The Air Force, which has sought to avoid losing trained officers, could face reductions in accessions of 25 percent or 32 percent in 1989, and 30 percent or 33 percent in 1990, again depending on whether the Navy is exempt from reductions (see Summary Table 3). Such large reductions in accessions would interrupt the flow of new officers into the Air Force, eventually leaving a gap in trained officers (a "trough" in the officer

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1. DoD has developed a package of legislative changes suggested by the services for submission to the Congress. However, the legislative proposals have not been formally submitted, as of this writing.

profile) when they are needed to replace those leaving the service. Thus, the effect would last for many years. If the Navy were required to accept reductions and insisted on protecting its warfare officer communities, it might have to accept disproportionate losses in some key nonwarfare communities such as engineers and intelligence officers. Moreover, by relying heavily on shore billets as the major source for mandated reductions, the Navy might not be able to assign enough officers to shore duty to prevent longer sea tours and the associated family separations that create potential problems in retaining personnel.

Accession problems could be mitigated if the policies needed to achieve reductions cause more officers to leave voluntarily. Such increased voluntary losses were not assumed in this study but might occur if promotions were delayed substantially, causing officers to seek other careers. The finding that promotion would not have to be delayed by more than about six months suggests, however, that voluntary losses probably would not rise enough to avert large reductions in accessions.

More importantly, the services may be able to ease--but not eliminate--these accession problems by a more balanced approach to accommodating reductions, instead of the "all-accession" or "no-accession" approach. Such a balanced approach would involve a combination of fewer accessions and more losses, achieved through use of provisions like SER or reductions in junior officer ranks. Compensation incentives could also be used to persuade officers to serve in key jobs.

Some of these policy changes might require changes in the law. In order to reduce the number of junior officers, for example, some of the services may need the authority to implement a reduction-in-force (RIF) that requires those officers to leave. If the Navy has problems with sea-shore rotations, it might need to offer additional sea pay to induce officers to remain at sea longer. No conclusions have been reached about these options, since the services have not yet proposed any changes.

CHAPTER I

INTRODUCTION

In 1986, the Congress mandated reductions in the officer corps of the armed services that were to be completed by the end of 1989. The Congressional Budget Office has analyzed the effects of these reductions on the personnel management of military officers, in particular the effects on promotions and accessions. The study examines alternative ways of implementing current law when planning the required reductions and suggests ways in which cuts can be made with the least disruption to the personnel system already in place. Alternative options for reducing the overall number of officers are evaluated for the Army, the Navy, and the Air Force in terms of changes in pay grades and accession policies relative to a baseline projection. Although the size of reductions in the Marine Corps was projected, this study does not include an analysis of the effect of those cuts. (The baseline projection provides an estimate of the future size of the officer corps for each service if no cuts were made and other policies remained the same. It is not related to CBO baseline projections used in the analysis of the federal budget.) In addition, the effect of the Defense Office Personnel Management Act of 1980 (Public Law 96-513, referred to as DOPMA) on strategies to reduce the officer corps is investigated by comparing projected numbers of officers after the cuts have been made with the DOPMA limits on the number of officers in each pay grade.

This study does not address the issue of how many officers are required to meet Department of Defense (DoD) needs. While clearly important, this issue involves many detailed judgments that are beyond the scope of this effort. In debates during the next few years, the effects of officer cutbacks on promotions and accessions may assume greater importance than the issue of requirements for defense needs. Press reports suggest that in response to budget limits, DoD is considering reducing the size of its total force--officer and enlisted--by around 2 percent. This cut would be accomplished by delaying buildups of capability and perhaps by removing some existing military units. These changes could obviate the armed services' concerns about reductions in the number of officers.

The effect of officer cutbacks on promotions, however, would still be an important issue.

REASONS FOR THE REDUCTIONS IN THE OFFICER CORPS

An important objective of the armed services in their force planning has been to maintain an officer corps that provides adequate leadership and management in peacetime or war without adding unnecessarily to costs or providing excessive supervision. Recently, concerns have been raised in the Congress that the officer corps has grown beyond the point of balance between these constraints. Chief among these concerns is that the size of the officer corps increased by 12.1 percent between fiscal years 1980 and 1986 while the enlisted ranks grew by only 4.8 percent during the same period. This shift caused the enlisted-to-officer ratio to decline from 6.3 in 1980 to 5.9 in 1986, with the greatest decline occurring in the Army (see Table 1).

Although DoD has consistently maintained that this decline in the enlisted-to-officer ratio is justified on the grounds of increased combat capability, in 1986 the Congress mandated a 6 percent reduction in the size of the active-duty commissioned officer corps. The Congress initially called for a 1 percent reduction from the fiscal year 1986 level by the end of 1987, followed by additional 2 percent and 3 percent reductions by the ends of fiscal years 1988 and 1989, respectively. The 1987 reduction has been carried out. The 1988 DoD authorization legislation maintained the remaining cuts as originally mandated but included a provision whereby the Secretary of Defense, upon determining that the reductions would create severe personnel management problems, could notify the Congress and trigger an alternative series of cuts of 1 percent in 1988, 2 percent in 1989, and 2 percent in 1990. The Secretary has apparently chosen the slower reductions.

SOURCES OF DEBATE

Although the Congress has mandated continued officer corps reductions, DoD has appealed for relief from reductions in the past, and it may well do so again for the years 1989 and 1990. DoD may also request changes

TABLE 1. RECENT CHANGES IN THE
ENLISTED-TO-OFFICER RATIO

Service	1980 (Ratio)	1986 (Ratio)	Percentage Change 1980-1986
Army	6.8	6.1	-10.3
Navy	7.3	7.0	-4.1
Air Force	4.7	4.5	-4.3
Marine Corps	9.4	8.8	-6.4
Total DoD	6.3	5.9	-6.3

SOURCE: Congressional Budget Office estimates based on Department of Defense data.

in the law to help it accommodate the reductions. Several issues will dominate any debate.

DoD bases much of its opposition to officer corps reductions on the argument that it has valid requirements for more officers than are now in the forces. DoD determines its requirements for officers and enlisted personnel based on detailed planning factors that assign personnel to ships, aircraft, ground vehicles, and all other weapon systems as well as to the forces that support them. DoD argues that requirements for officers, especially those in support forces, have increased in recent decades because highly technical weapon systems demand skills normally found in the officer corps rather than in the enlisted ranks.

Some members of the Congress have countered that the size of the officer corps has grown to the point that it contributes to "redundant headquarters and overblown staffs."^{1/} Officers made up 12.5 percent of total military personnel in 1950. By 1980 that number had grown to 13.6 percent, and it climbed to 14.4 percent by the end of 1986. In recent debates, Congressional critics--especially in the Senate--have also argued that DoD has failed to document its needs for this growing number of officers.^{2/}

How many officers DoD is judged to need will affect future defense budgets, another key issue. The 1 percent officer corps reduction in 1987 lowered 1988 defense costs by about \$155 million (including a reduction in dollars set aside to pay future retirement costs), assuming the reduction was proportional across pay grades. If fully carried out, the 6 percent reduction might eventually reduce annual costs by about \$1 billion. Since officer corps reductions can be offset by increases in enlisted personnel, cost savings stem from the lower salaries of enlisted personnel compared with officers. These sums are modest compared with the whole of the DoD budget, but during this period of intense budget stringency, savings of any magnitude are taken seriously.

1. National Defense Authorization Act for Fiscal Year 1987, Report No. 99-331, Senate Armed Services Committee, to accompany S.2638, 99:2 (1986), p. 211.

2. Ibid.

Yet another issue is the effect of a reduced officer corps on the ability of the services to attract, promote, and separate officers. Management of officer personnel is governed by DOPMA. For each service, DOPMA sets limits ("ceilings") on the number of officers who can serve in selected pay grades at the end of the year (termed "end strength"). Officers serve in one of ten pay grades, from the most junior (designated "O-1" for officer pay grade 1, and corresponding to an Army second lieutenant) to the most senior (designated "O-10" and corresponding to a full general in the Army). For a given total number of officers in a particular military service, DOPMA limits the end strengths in three key "field grade" positions: O-4 (major or lieutenant commander), O-5 (lieutenant colonel or commander), and O-6 (colonel or Navy captain). In addition, DOPMA provides tenure rights. Officers attaining pay grade O-4 are guaranteed the right to complete 20 years of service (except in a case of bad behavior); officers in pay grade O-5 can complete 28 years, while officers in pay grade O-6 can complete 30 years. DOPMA also governs many other details of promotion policy.

Coupled with an officer cutback, DOPMA could pose problems. Tenure rights may prevent the services from reducing the number of officers in key pay grades. Ceilings on numbers allowed to serve could then force substantial delays in the timing of promotions or sharp reductions in the chance of being promoted to a higher pay grade. If sufficiently severe, these problems could cause morale problems that harm military readiness or discourage qualified candidates from entering the officer corps.

In addition to problems with promotions, the officer reductions could lead to problems with accessions. The military services count on a reasonably steady annual flow of new officers into each service. Without such a flow in later years, there might not be enough officers to meet needs at more senior levels since the services usually do not hire people from the civilian population to fill senior grades. If there are no increases in the number of senior personnel leaving the military, therefore, the reductions in the officer corps could lead to a sharp cutback in accessions.

CHAPTER II

EFFECTS OF REDUCTIONS IN THE OFFICER

CORPS ON PERSONNEL POLICIES

The Congressional Budget Office assessed the effects of planned officer reductions on the personnel policies of the Army, the Navy, and the Air Force. Specifically, the analysis projects the effects of reductions from 1988 through 1990 on the number of officers entering and leaving each service, and the promotion pattern within the service. To make such projections, CBO developed a methodology for modeling these effects and relied on a certain set of assumptions. Appendix A provides a detailed discussion of the CBO model and the assumptions underlying it.

METHODS AND ASSUMPTIONS

The model developed by CBO to study the officer personnel system accepts as input an estimate of the willingness of officers at each year of service to continue in the military. The model also accounts for important personnel policies, such as the number of years before an officer is eligible for promotion and the chance of being promoted. The military officer personnel system is therefore an important underlying assumption in the methodology developed for this study.

Military Officer Personnel System

This study focuses on selected commissioned officers--that is, those holding a Presidential appointment to serve in positions of authority in the U.S. military. The study deals with those commissioned officers who are serving on active duty and who are not commissioned warrant officers (a class of officer that provides technical supervision). At the end of 1987, the armed forces had a total of 305,708 commissioned officers on active duty in the ranks that are the subject of this study. Those officers served in all four services, with the Air Force having the most and the Marine Corps the fewest (see Table 2). They made up 14 percent of the total number of personnel on active duty at the end of 1987 (excluding cadets and midshipmen). Most of the

TABLE 2. ALL COMMISSIONED OFFICERS IN THE ARMED SERVICES, END OF 1987

Service	Number of Officers
Army	106,327
Navy	72,051
Air Force	107,793
Marine Corps	<u>19,537</u>
Total .	305,708

SOURCE: Congressional Budget Office based on Department of Defense data.

rest (85 percent) were enlisted personnel; a few (1 percent) were noncommissioned warrant officers who provide technical supervision. Noncommissioned warrant officers are managed separately from other officers and are not considered in this study.

Several subpopulations of this group are of particular interest in the study. Only certain members of the officer corps are specifically covered by the DOPMA legislation that regulates officer personnel policies. The total of DOPMA-accountable officers excludes those who are generals or admirals and certain officers serving in special fields, such as those responsible for the administration of the reserves. In many cases this study focuses on a further subgroup known as line officers. Line officers are eligible to command major weapon systems and combat units, generally excluding officers providing support services such as doctors, lawyers, supply corps specialists, and intelligence officers. The promotion and retention behavior of line officers tends to be similar, and data for line officers are readily available.

The commissioned officers of interest in this study serve in one of ten pay grades, from pay grade 0-1 through pay grade 0-10. Pay grade defines an officer's pay and status and also his authority. Generally, officers in a higher pay grade have authority over officers in lower grades.

The DOPMA legislation specifies the maximum number of officers in the key field pay grades of 0-4, 0-5, and 0-6 in each service. The maximum numbers vary with the number of total commissioned officers (excluding warrant officers). DOPMA also guarantees tenure to officers in these pay grades, and establishes other rules that govern officer personnel management. For example, time-in-grade requirements stipulate that an officer serving in a senior rank must spend a certain number of years (usually three) before he or she can retire and draw the pay associated with that rank.

Within the limits set by law, the services are free to manage their officer corps as they see fit. Each service determines the promotion point, which is the number of years of service required before an officer is eligible for promotion. Each service also sets the promotion opportunity or probability of promotion. Between the most junior officer eligible for promotion and the most senior, there is a group of officers that makes up the promotion zone. Promotion opportunity refers to the chance of being selected for

promotion for officers within this zone. Promotion points and opportunities influence the number of officers serving in pay grades and so must be determined in ways consistent with DOPMA limits.

The services can use other policies to influence the size and composition of their officer corps. DOPMA allows the services to exercise Selective Early Retirement (SER) of officers. SER provisions permit a one-time review and selection of senior officers who are then required to leave the military before the minimum periods otherwise guaranteed by DOPMA. The services have only rarely used SER, but could use it more extensively to accommodate officer reductions. The services could also seek to apply reductions-in-force (RIF) to all paygrades, including those guaranteed minimum periods of service by DOPMA. Under a RIF--which would require a change in the law--officers are required to leave the services involuntarily before the points of departure set by law or normal service policies.

These personnel policies, and the nature of military service, lead to a pattern of retention or willingness to remain in the military. Many officers leave after an initial period of service, often four to six years. Of those who complete about ten years of service, most remain to complete twenty years--the minimum required to qualify for military retirement pay--but many then retire. (These retention patterns are reflected in continuation rates--defined as the fraction of officers at the end of a given year of service who remain on active duty until the end of the next year.) Retention patterns influence numbers serving in each pay grade--and hence promotion points and opportunities--because they determine how many remain in service. Indeed, in recent years retention has been high, causing an increase in the number of senior officers or, where DOPMA limits have been reached, increases in promotion points or decreases in promotion opportunity.

Baseline for Comparison

For purposes of comparison, this study needed a baseline projection that did not assume officer reductions. Thus, the baseline assumes that the services are authorized to have end strengths equal to those proposed in the January 1987 budget, which excluded any officer reductions. In most cases, continuation rates are assumed to remain at 1986 levels

as are promotion policies such as years before promotion and chance of promotion. Baseline projections for each service are discussed below in connection with the finding for that service.

Portion of Officer Corps Modeled

Data were not available to allow CBO to model the entire officer population of each service, and time did not permit the development of such data. Nor was it possible to model all officers subject to the DOPMA legislation. Instead, CBO modeled selected subgroups of officers defined in Table 3. These subgroups represented 68 percent or more of all commissioned officers and should therefore be representative. In the remainder of this study, the subgroup for the Army is simply referred to as Army officers, and so on for the other services.

DOPMA limits also had to be modified to reflect the size of the subgroup in each service. This was done proportionally: if the subgroup represented 80 percent of all officers subject to DOPMA, that subgroup was assumed to have an officer ceiling equal to 80 percent of the total ceiling. Henceforth these sublimits are simply referred to as DOPMA limits.

Allocation of Reductions to the Services

Although the Congress has stipulated the size of the total officer reductions, DoD is responsible for distributing the reductions among the various military services. After extensive deliberations at the beginning of 1987, DoD finally selected and implemented a scheme to distribute the 1987 reduction.¹ That plan exempted the Navy from reductions below its 1986 level of officers, apparently because of requirements stemming from an increase in the number of ships. The other services were reduced enough to accomplish the 1 percent cut in total DoD officer strength, with cuts made roughly in proportion to strengths at the end of 1986. For 1988, DoD allowed the Navy an increase of 559 officers and allocated larger reductions among the

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1. For more information on DoD's administration of the 1987 reduction, see General Accounting Office, Military Officers: DoD's Implementation of Congressionally-Mandated Reductions (1987).

TABLE 3. DEFINITION OF OFFICER POPULATIONS
MODELED BY CBO

Service	Definition	Percentage of all Commissioned Officers	Percentage of DOPMA- Accountable Officers
Army	Officer Personnel Management Directorate (OPMD) Line Officers	68	84
Air Force	All Line Officers	85	90
Navy	All Naval Officers Except Training and Administration of Reserves (TARs) and Warrant Officers	95	108

SOURCE: Congressional Budget Office estimates based on Department of Defense data.

NOTE: These percentages are as of the end of fiscal year 1987.

other services to achieve the required total cut. DoD has not made known its distribution plan for cuts for 1989 and 1990.

This study examines two possible scenarios. In the first scenario, reductions in 1989 and 1990 are allocated proportionally among all the services including the Navy (Case 1); in the second, the Navy remains exempt while the other services are cut proportionally (Case 2). The reductions in Case 1 are made relative to current end strengths. However, since Case 2 is assumed to be similar to the 1987 reductions, where the Navy was also exempt, the cuts are computed slightly differently: reductions are made relative to end strengths planned in January 1987, since this approach appeared to be most consistent with past DoD actions. Consequently, if a service planned an increase in strength in 1989, then the higher strength was used in calculating its proportion of any reduction.^{2/} This approach has been controversial and is discussed more fully in Appendix A.

Table 4 shows the reductions for all commissioned officers resulting from these calculations. Regardless of how DoD arrived at its allocation of reductions, the law required reductions below actual officer strength as of the end of 1986. Thus, Table 4 shows annual reductions below the 1986 levels for each of the years from 1987 through 1990. Reductions for the last two years assume cuts as described above.

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2. A hypothetical example should clarify this approach. Assume that Service A has 1,000 officers and plans to stay at that level in 1989. Service B also has 1,000 officers but plans growth to 1,100 by 1989. The Congressionally mandated reduction in 1989 requires a cut of 2 percent below actual levels at the end of the previous year, leaving 1,960 officers in both services (2 percent below the total of 2,000 officers in both services at the end of the previous year.) But, relative to planned strength of 2,100, the reduction amounts to 140 officers. If this reduction is assessed proportionally to planned strength, Service A is reduced by 67 officers to 933 officers while Service B is reduced by 73 officers below planned strength to a level of 1,027. Because of its planned increase, the officer "reduction" actually allows Service B some growth above its actual level.

TABLE 4. PROJECTED ANNUAL REDUCTIONS IN THE OFFICER CORPS BELOW 1986 STRENGTH (Number of officers)

	1986 Actual Strength	Annual Reduction (-) or Increase (+)					
		1987	1988	by the End of		1990	
				1989	1990	Case 1 a/	Case 2 b/
Army	107,962	-1,635	-1,514	-2,153	-3,107	-2,166	-2,839
Navy	72,051	0	+559	-1,452	0	-1,423	0
Air Force	109,048	-1,255	-2,255	-2,167	-2,134	-2,181	-2,815
Marine Corps <u>c/</u>	<u>19,735</u>	<u>-198</u>	<u>+122</u>	<u>-404</u>	<u>-935</u>	<u>-406</u>	<u>-522</u>
Total	308,796	-3,088	-3,088	-6,176	-6,176	-6,176	-6,176

SOURCE: Based on Department of Defense data and Congressional Budget Office estimates.

- a. Proportional cuts in all services.
- b. Navy exempt from cuts.
- c. CBO did not analyze effects of the officer corps reductions on the Marine Corps.

STRATEGIES FOR ACCOMMODATING CUTS

There are, of course, many ways for each service to accommodate reductions. They can emphasize reductions in more senior or more junior officers. The analysis in this chapter assumes reductions are carried out based on plans supplied informally to CBO by each of the services in the fall of 1987. The details of each service's strategy are discussed in connection with results for that service.

Based on the services' experiences with the fiscal year 1987 cuts and their tentative plans for future officer corps reductions, it appears that the Army, the Navy, and the Air Force can accommodate the mandated officer reductions without changes to the existing DOPMA legislation. To meet existing DOPMA limits, however, some of the services would have to change their policies such as the time of promotion to higher pay grades, though not by more than about six months. There could also be important effects on other personnel variables, particularly the number of new officers entering the corps. For example, based on its tentative plans that emphasize reductions in accessions, the Air Force appears likely to reduce new officer accessions in 1990 by as much as 33 percent below baseline levels.

One of the interesting findings is that each service appears to prefer a different approach to implementing the officer reductions. For example, in carrying out its fiscal year 1987 cut, the Army chose options for reduction that resulted in the protection of its accessions at the expense of more senior officers. Moreover, the Army appears to intend to do the same in fiscal years 1988, 1989, and 1990, although it may have difficulty doing so.

In contrast, the Air Force appears to take the opposite approach. In meeting its allocated reduction in fiscal year 1987, the Air Force attempted to protect those officers currently in the service and placed a larger burden of the cuts on accessions. Air Force officials have indicated informally that they will follow this strategy in future years.

The Navy was exempt from allocated reductions in 1987, and was permitted instead to maintain its 1986 officer end strength. For 1988, the Navy will actually be allowed to increase its officer corps by 559 officers. Navy officials have indicated that if their

personnel are not exempted in 1989 and 1990, they would protect officers in what they refer to as their warfare communities--chiefly, officers in surface, submarine, and air warfare billets--at the expense of those in shore support billets.

As these various approaches suggest, there are many alternatives available to accommodate officer reductions. Thus, if one approach appears to have onerous effects--for example, a large reduction in new officers that in later years would mean too few officers available for key jobs--the service could alter other possible cuts and balance the effects. The services could also request changes in the current DOPMA legislation to allow them more flexibility to accommodate cuts, though no service has yet requested specific changes.

Accommodating Cuts in the Army

The baseline projection for the Army is shown in Table 5. Consistent with the Army's plans, accessions are assumed to remain constant at the 5,500 level in fiscal years 1988 through 1990. Promotion opportunity was adjusted slightly to ensure that promotion points remained constant, as Army personnel managers prefer. The baseline projections show that the Army is expected to remain within the estimated DOPMA limits.

The Army's reduction strategy is assumed to include the following policies. For perspective, numbers in parentheses indicate the reductions achieved by each policy initiative in 1987.

- o A voluntary switch to selected reserve (part-time) units by some in pay grade O-2 or first lieutenants (100);
- o The separation of some captains (pay grade O-3) who were twice passed over for promotion (565);
- o The Selective Early Retirement of some lieutenant colonels, and colonels (pay grades O-5 and O-6) (45); and
- o Only such reductions in the number of accessions as are necessary, after these other policies are implemented.

TABLE 5. BASELINE PROJECTION FOR END STRENGTH IN THE ARMY OFFICER CORPS (Number of officers)

	<u>1988</u>	<u>1989</u>	<u>1990</u>
End Strength	72,249	72,377	72,377
Accessions	5,500	5,500	5,500
Majors (O-4)			
Number in grade	12,525	12,174	12,174
DOPMA limit	12,597	12,614	12,614
Promotion point <u>a/</u>	11-1	11-1	11-1
Promotion opportunity <u>b/</u>	78.6	77.9	77.9
Lieutenant Colonels (O-5)			
Number in grade	8,774	8,729	8,729
DOPMA limit	8,767	8,777	8,777
Promotion point <u>a/</u>	17-6	17-6	17-6
Promotion opportunity <u>b/</u>	78.7	78.5	78.5
Colonels (O-6)			
Number in grade	2,975	2,995	2,995
DOPMA limit	2,985	2,990	2,990
Promotion point <u>a/</u>	22-6	22-6	22-6
Promotion opportunity <u>b/</u>	52.0	51.9	51.9

SOURCE: Congressional Budget Office estimates based on Department of Defense data.

- a. The number of years and months of service at which typical officers can expect promotions.
- b. The cumulative percentage opportunity for advancement for those who have competed for promotion to the next higher grade.

Despite the Army's attempts to avoid or at least minimize any reduction in officer accessions, it appears that some cuts will be required in both 1989 and 1990 to accommodate the mandated cuts (see Tables 6 and 7). Under Case 1 (proportional cuts), the likely reductions in accessions below baseline levels would be 720 (or 13 percent) in 1989 and 1,220 (or 22 percent) in 1990. Under Case 2 (proportional except Navy exempt), the corresponding reductions would reach 1,047 (19 percent) and 1,731 (31 percent) in 1989 and 1990, respectively.

Although the reduction of 720 accessions might be compatible with the long-run transition to a smaller Army officer force, the larger projected reductions in 1990 could distort the Army's force profile and result in too few officers available for key jobs in later years. As discussed earlier, continuation rates could be affected by some of the policies the Army might use to slow promotions or to encourage separations by senior officers. Lower continuation rates, in turn, would reduce the need for cuts in accessions. To achieve its goal of no reductions in accessions, however, the Army would probably have to seek authority for personnel policies not allowed under current law. One possibility might be for the Army to obtain RIF authority to separate some regular officers who are now guaranteed tenure by DOPMA. Another option would be for the Army to seek relief from time-in-grade requirements for newly promoted officers, who under current law may not retire with the pay of the higher rank unless they remain in service for three years after promotion. These approaches are not analyzed in detail since they have not been proposed by the Army.

Unlike the pressure they create for accession cuts, the mandated reductions in officer end strength coupled with DOPMA's limits on the number of field-grade officers do not appear to pose a serious constraint for Army promotion policies. Although CBO's model projects that the Army's strength in grade O-5 (lieutenant colonel) would exceed DOPMA limits by 1989, the Army could easily comply with the DOPMA limits by slowing promotions overall by an average of only six months. Such minor slippage appears unlikely to have dramatic effects on Army officers' continuation in service.

One result of CBO's analysis is that, under the constant promotion points assumed in this study, the Army would actually be under the DOPMA limit for colonels and majors while being over the limit for

TABLE 6. EFFECT OF REDUCTIONS ON END STRENGTH IN THE ARMY OFFICER CORPS (Proportional reductions in each service)

	Number of Officers	Difference from Baseline	Number of Officers Above (+) or Below (-) DOPMA Limits	Promotion Opportunity <u>a/</u>
1988				
End Strength	71,221	-1,028	n. a.	n. a.
Accessions	5,500	0	n.a.	n.a.
Major (0-4)	12,525	0	-374	78.6
Lieutenant Colonel (0-5)	8,624	-150	+132	78.7
Colonel (0-6)	2,640	-335	-269	52.0
1989				
End Strength	70,267	-2,110	n.a.	n.a.
Accessions	4,780	-720	n.a.	n.a.
Major (0-4)	12,168	-6	-211	77.5
Lieutenant Colonel (0-5)	8,523	-206	+148	78.5
Colonel (0-6)	2,695	-300	-168	51.8
1990				
End Strength	68,846	-3,531	n.a.	n.a.
Accessions	4,280	-1,220	n.a.	n.a.
Major (0-4)	12,164	-10	-322	77.5
Lieutenant Colonel (0-5)	8,382	-347	+124	78.5
Colonel (0-6)	2,524	-471	-292	51.8

SOURCE: Congressional Budget Office based on simulation model.

NOTE: n.a. = not applicable.

a. The cumulative percentage opportunity for advancement for those who have competed for promotion to the next higher grade.

TABLE 7. EFFECT OF REDUCTIONS ON END STRENGTH IN THE ARMY OFFICER CORPS (Proportional reductions in each service, except Navy exempt)

	Number of Officers	Difference from Baseline	Number of Officers Above (+) or Below (-) DOPMA Limits	Promotion Opportunity ^a
1988				
End Strength	71,221	-1,028	n.a.	n.a.
Accessions	5,500	0	n.a.	n.a.
Major (0-4)	12,525	0	-374	78.6
Lieutenant Colonel (0-5)	8,624	-150	+132	78.7
Colonel (0-6)	2,640	-335	-269	52.0
1989				
End Strength	69,446	-2,931	n.a.	n.a.
Accessions	4,453	-1,047	n.a.	n.a.
Major (0-4)	12,166	-8	-428	77.5
Lieutenant Colonel (0-5)	8,494	-235	+171	78.5
Colonel (0-6)	2,584	-411	-258	51.8
1990				
End Strength	67,567	-4,810	n.a.	n.a.
Accessions	3,769	-1,731	n.a.	n.a.
Major (0-4)	12,161	-13	-169	77.5
Lieutenant Colonel (0-5)	8,341	-388	+170	78.5
Colonel (0-6)	2,283	-712	-498	51.8

SOURCE: Congressional Budget Office based on simulation model.

NOTE: n.a. = not applicable.

a. The cumulative percentage opportunity for advancement for those who have competed for promotion to the next higher grade.

lieutenant colonels. In practice, the Army (like the other services) will tend to promote to the DOPMA limit. For example, under Case 1, instead of the number of colonels in the Army being 292 below the DOPMA limit in 1990, the Army would more than likely accelerate promotions to ensure that the number of colonels would be at the DOPMA limit of 2,816.3/

Accommodating Cuts in the Air Force

The baseline projection for the Air Force is presented in Table 8. For the analysis undertaken here, accessions are assumed to be at the levels consistent with plans submitted in January 1987. As with the Army, promotion opportunity was adjusted slightly to keep promotion points constant. The projections show that the number of senior Air Force officers will just reach the DOPMA limits.

To achieve reductions in 1988 and 1990, the Air Force was assumed to rely on the following policies which are the same ones it used in 1987. For perspective, numbers in parentheses indicate the reductions achieved by each policy in 1987.

- o Reduced accession (1,164);
- o Reduction in the number of days officers are required to remain on active duty between notification of intent to separate and actual separation (208);
- o Denial of date-of-separation (DOS) withdrawal, which applies to officers who initially indicate their intention to leave the force and subsequently change their minds (4);
- o Allowing some officers to repay the tuition assistance they received, thus relieving them of the additional service obligation associated with their educational grants (20);
- o Reduced continuation of some captains and

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3. The model assumes that promotion points remain the same, which accounts for the projected numbers being under the DOPMA limits.

TABLE 8. BASELINE PROJECTION FOR END STRENGTH
IN THE AIR FORCE OFFICER CORPS
(Number of officers)

	1988	1989	1990
End Strength	92,248	92,710	92,774
Accessions	5,712	6,568	6,241
Majors (O-4)			
Number in grade	16,289	16,352	16,364
DOPMA limit	16,289	16,352	16,364
Promotion point <u>a/</u>	11-3	11-3	11-3
Promotion opportunity <u>b/</u>	90.7	92.0	92.6
Lieutenant Colonels (O-5)			
Number in grade	10,906	10,939	10,945
DOPMA limit	10,905	10,938	10,945
Promotion point <u>a/</u>	16-3	16-3	16-3
Promotion opportunity <u>b/</u>	75.3	75.8	76.1
Colonels (O-6)			
Number in grade	4,429	4,445	4,447
DOPMA limit	4,429	4,445	4,447
Promotion point <u>a/</u>	20-7	20-7	20-7
Promotion opportunity <u>b/</u>	50.1	50.8	50.9

SOURCE: Congressional Budget Office estimates based on Department of Defense data.

- a. The number of years and months of service at which typical officers can expect promotions.
- b. The cumulative percentage opportunity for advancement for those who have competed for promotion to the next higher grade.

majors who were twice passed over for promotion (175); and

- o If further reductions are necessary after the other policies are implemented, they would be accomplished by the separation of those officers who failed flight training and technical training.^{4/}

An examination of the effect of the officer cuts on the Air Force under the two scenarios considered here is shown in Tables 9 and 10. By design, the brunt of the cuts would fall on accessions, with reductions that could be quite large--as much as 33 percent by 1990. The Air Force appears to have chosen this approach in preference to one where officers currently on active duty would absorb a larger share of the reductions. In doing so, the Air Force is expressing its desire to retain experienced, trained officers even at the cost of some future shortages of officers available for key jobs.

Like the Army, the Air Force may seek changes in current law to accommodate reductions in its officer strength. Two possibilities are a waiver of the time-in-grade requirement that requires service for a certain number of years in a grade before retirement at that grade and a waiver of the requirement of 10 years of commissioned service before an officer is eligible for retirement with full benefits.^{5/} Clearly, these options would reduce the effect of the reductions on accessions. These options are not currently available to the Air Force, however, since they would require new

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4. Typically, many of those officers are now allowed to remain in the Air Force by transferring to another branch within the service.
 5. Officers must have a total of 20 years of military service before retiring; 10 of those years must have been served as a commissioned officer. Thus, if an officer has 12 years of enlisted service, he or she would have to serve a total of 22 years (12 years enlisted plus 10 years commissioned service) to be eligible to retire as an officer. This provision would allow this individual to retire after 20 years as an officer even though he or she would have completed only 8 years of service as a commissioned officer.

TABLE 9. EFFECT OF REDUCTIONS ON END STRENGTH IN THE AIR FORCE OFFICER CORPS (Proportional reductions in each service)

	Number of Officers	Difference from Baseline	Number of Officers Above (+) or Below (-) DOPMA Limits	Promotion Opportunity <u>a/</u>
1988				
End Strength	89,253	-2,995	n.a.	n.a.
Accessions	3,670	-2,042	n.a.	n.a.
Major (0-4)	16,184	-105	+337	90.7
Lieutenant Colonel (0-5)	10,828	-78	+156	75.3
Colonel (0-6)	4,429	0	+113	50.1
1989				
End Strength	87,420	-5,290	n.a.	n.a.
Accessions	4,902	-1,666	n.a.	n.a.
Major (0-4)	15,725	-627	+144	92.0
Lieutenant Colonel (0-5)	10,829	-110	+15	75.8
Colonel (0-6)	4,444	-1	+195	50.8
1990				
End Strength	85,576	-7,198	n.a.	n.a.
Accessions	4,370	-1,871	n.a.	n.a.
Major (0-4)	15,484	-880	+172	91.0
Lieutenant Colonel (0-5)	11,005	+60	+43	75.9
Colonel (0-6)	4,444	-3	+264	51.9

SOURCE: Congressional Budget Office based on simulation model.

NOTE: n.a. = not applicable.

a. The cumulative percentage opportunity for advancement for those who have competed for promotion to the next higher grade.

TABLE 10. EFFECT OF REDUCTIONS ON END STRENGTH IN THE AIR FORCE OFFICER CORPS (Proportional reductions in each service, except Navy exempt)

	Number of Officers	Difference from Baseline	Number of Officers Above (+) or Below (-) DOPMA Limits	Promotion Opportunity <u>a/</u>
1988				
End Strength	89,253	-2,995	n.a.	n.a.
Accessions	3,670	-2,042	n.a.	n.a.
Major (0-4)	16,184	-105	+337	90.7
Lieutenant Colonel (0-5)	10,828	-78	+156	75.3
Colonel (0-6)	4,429	0	+113	50.1
1989				
End Strength	87,448	-5,262	n.a.	n.a.
Accessions	4,477	-2,091	n.a.	n.a.
Major (0-4)	15,819	-533	+235	90.4
Lieutenant Colonel (0-5)	10,859	-80	+325	75.7
Colonel (0-6)	4,444	-1	+194	50.8
1990				
End Strength	85,068	-7,706	n.a.	n.a.
Accessions	4,160	-2,081	n.a.	n.a.
Major	15,572	-792	+334	90.4
Lieutenant Colonel (0-5)	10,813	-132	+461	75.7
Colonel (0-6)	4,444	-3	+282	50.8

SOURCE: Congressional Budget Office based on simulation model.

NOTE: n.a. = not applicable.

a. The cumulative percentage opportunity for advancement for those who have competed for promotion to the next higher grade.

legislation. They are not analyzed here in detail because the changes have not been proposed by the Air Force.

Like the Army, the Air Force should be able to comply with DOPMA, though some changes are needed in its personnel policies. Even though the results suggest that the Air Force would be over the estimated DOPMA limits, it would have to slow its promotions by an average of only six months in 1990 in order to comply with DOPMA. Such a small delay in promotion does not seem likely to have a strong influence on officers' decisions to stay in the Air Force.

Accommodating Cuts in the Navy

The findings for the Navy are less likely to reflect final service plans than are those for the Army and Air Force. First, unlike projections for the Army and Air Force, those for the Navy are not based on a detailed personnel plan provided by the service. Such a plan was not available from the Navy. More importantly, the projections simply assume that various portions of the reductions can be borne by specific officer communities. CBO's model does not permit evaluation of the effect of reductions on a specific Navy officer community. For example, it is possible that some support officer groups could have been allocated such large cuts that they could not be absorbed without involuntarily separating officers guaranteed tenure by DOPMA. The baseline projection for the Navy is shown in Table 11. Consistent with the analysis of the previous two services, Navy accessions are assumed to be at the levels planned by the service in its January 1987 plans. Likewise, the promotion opportunity was adjusted to maintain constant promotion points. Like the Air Force, the Navy's senior officer corps is projected to fall just within the DOPMA limits.

In meeting any mandated officer reductions, the Navy has stipulated that it intends to protect its "warfare" communities (that is, officers serving primarily on ships, aircraft squadrons, and other combat elements) and thus take the bulk of the cuts from its shore support billets. Indeed, the Navy has informally suggested a percentage distribution of the cuts that it would plan to impose on each of the shore support communities. The number of officers affected, summarized in Table 12, was used to compute the possible cuts for 1989 and 1990. The losses were

TABLE 11. BASELINE PROJECTION FOR END STRENGTH
IN THE NAVY OFFICER CORPS
(Number of officers)

	1988	1989	1990
End Strength	69,253	69,942	70,694
Accessions	6,729	7,417	8,169
Lieutenant Commanders (O-4)			
Number in grade	12,888	12,989	12,998
DOPMA limit	12,889	12,990	13,100
Promotion point <u>a/</u>	9-8	9-8	9-8
Promotion opportunity <u>b/</u>	83.3	89.0	91.0
Commanders (O-5)			
Number in grade	7,664	7,712	7,761
DOPMA limit	7,664	7,712	7,763
Promotion point <u>a/</u>	15-3	15-3	15-3
Promotion opportunity <u>b/</u>	74.5	77.8	77.7
Captains (O-6)			
Number in grade	3,394	3,418	3,433
DOPMA limit	3,395	3,418	3,442
Promotion point <u>a/</u>	21-0	21-0	21-0
Promotion opportunity <u>b/</u>	57.1	51.3	51.5

SOURCE: Congressional Budget Office estimates based on Department of Defense data.

- a. The number of years and months of service at which typical officers can expect promotions.
- b. The cumulative percentage opportunity for advancement for those who have competed for promotion to the next higher grade.

TABLE 12. ESTIMATED REDUCTIONS IN THE NAVY OFFICER
CORPS BY NAVAL COMMUNITY FOR 1989 AND 1990
(Number of officers)

Community	Reduction	
	1989	1990
Unrestricted Line	668	655
Restricted Line	224	220
Staff Corps	322	315
Limited Duty Officer	157	154

SOURCE: Congressional Budget Office based on Navy data.

assumed to be proportional to each community's 1986 distribution of officers by grade and year of service.

Table 13 shows results for the Navy in the only case (Case 1) relevant to the Navy. In most cases, numbers of Navy officers exceed the DOPMA limits, particularly in 1989 and 1990. But delays in promotion of no more than six months should avoid these excesses. Thus, with some changes in the timing of promotions, the Navy should be able to comply with DOPMA.

Like the other services, the Navy would have to reduce its accessions significantly. Relative to baseline levels, decreases could be as much as 32 percent in 1990. This could create a trough of officers in that particular year and possibly lead to problems for the Navy in later years.

Of particular concern are the reductions in accessions to be borne by nonwarfare communities. Here the issue is the Navy's definition of a warfare and nonwarfare officer. The Navy maintains that all new officers deployed at sea--whether doctors or other support personnel or officers manning a ship--are subject to attack and therefore should be considered warfare officers. Whatever the merit of this argument, it so limits the numbers of nonwarfare accessions that they cannot bear the total reductions needed to accommodate Congressionally mandated cuts in the overall Navy officer corps. If it is to accommodate the cuts, the Navy may have to narrow its definition of a warfare officer (as it does in some contexts, defining warfare officers as only those routinely and regularly assigned to operating units such as submarines, surface ships, or aircraft). Alternatively, if it wishes to accept the broader definition, then the Navy must allocate some of the reduction in accessions to warfare communities.

CONCLUSION

The services should be able to accommodate the officer reductions without changes in DOPMA. The Army would be under DOPMA limits in some cases and over in others and thus, more than likely, would speed up promotions or slow them down as needed to reach the limits. The changes would generally involve only a few months. The Air Force and Navy would be over DOPMA limits in nearly all pay grades, necessitating an increase in time to

TABLE 13. EFFECT OF REDUCTIONS ON END STRENGTH IN THE NAVY OFFICER CORPS (Proportional reductions in each service)

	Number of Officers	Difference from Baseline	Number of Officers Above (+) or Below (-) DOPMA Limits	Promotion Opportunity <u>a/</u>
1988				
End Strength	68,769	-484	n.a.	n.a.
Accessions	5,755	-974	n.a.	n.a.
Lieutenant Commanders (0-4)	12,996	+108	-297	83.1
Commanders (0-5)	7,726	+62	-128	73.7
Captains (0-6)	3,423	+29	+44	56.7
1989				
End Strength	67,394	-2,548	n.a.	n.a.
Accessions	5,634	-1,783	n.a.	n.a.
Lieutenant Commanders (0-4)	12,858	-131	+242	89.1
Commanders (0-5)	7,576	-136	+40	77.5
Captains (0-6)	3,598	+180	+266	51.7
1990				
End Strength	66,046	-4,648	n.a.	n.a.
Accessions	5,539	-2,630	n.a.	n.a.
Lieutenant Commanders (0-4)	12,608	-390	+191	89.1
Commanders (0-5)	7,438	-323	-5	77.5
Captains (0-6)	3,531	+98	+244	51.7

SOURCE: Congressional Budget Office based on simulation model.

NOTE: n.a. = not applicable.

a. The cumulative percentage opportunity for advancement for those who have competed for promotion to the next higher grade.

reach the promotion points; in most cases, the changes required would be a matter of a few months.

While DOPMA concerns seem surmountable, the overall cuts would force other, more severe changes in all of the services' personnel management if they attempt to follow their tentative plans without legislative relief. For example, the Army would have to cut into its middle pay grade (O-3)--losing experienced officers it is counting on in the future to provide leadership in the senior ranks--and would still have to reduce accessions despite efforts to avoid such an action. The Air Force, on the other hand, would cut more deeply into accessions, risking a long-term trough in its officer force profile. The Navy would impose a disproportionate burden on key nonwarfare communities such as engineers and intelligence officers. Since some of these support jobs are filled by sea-going officers who are on shore duty, large reductions in support jobs could result in more time at sea for sea-going officers and thus could have adverse effects on retention in the Navy.

Some of these adverse non-DOPMA effects could be minimized by a more balanced approach to accommodating reductions. If, as a result of Congressional action to reduce the overall size of the military, the long-run size of the officer corps is to be smaller than the services had planned, then probably the number of officer accessions also should be smaller than planned. In that case the Army's "requirement" of 5,500 accessions per year should be reduced somewhat, so the cuts projected by the model would be slightly easier for the Army to accept. Similarly, the impact on Air Force accessions would be less drastic than the model's projections suggest.

If long-run reductions have to be made, moreover, the numbers of officers in each pay grade will have to decline, and thus promotion opportunities will fall for current service members. Today's officers will react by increasing their voluntary separation rates, even if the services do not encourage them to leave, and the services could lose many of their most able officers while retaining some they might have preferred to separate. To counteract this effect, even the Air Force--which has been aggressive in protecting its current officer force--might choose a more active separation policy. In that event, some of the losses among senior officers could help to reduce the need to cut accessions.

To mitigate the adverse effects of officer cuts, statutory changes may be desirable to allow the services more flexibility. Among the changes the services may propose, and that the Congress may wish to consider, are:

- o RIF authority for regular officers. Both the Army and Navy are likely to need this authority to avoid large accession reductions.
- o Selected Compensation Increases. In the Navy, for example, additional sea pay might counter the effects of cuts in the number of shore billets that increased the length and frequency of sea tours. The necessary increase in sea pay would, however, serve as a partial offset of the expected savings from overall officer reductions.
- o Temporary DOPMA Relief. If modest increases in times of promotion are not acceptable, then the services may need relief from DOPMA. This could include easing of the ceilings on pay grades O-4 through O-6 while the services adjust to their lower overall strengths; suspending the time-in-grade requirement; or reducing tenure grants to 20 years for grade O-4, 24 years for grade O-5, and 28 years for grade O-6.

Acceptance now of lower long-term officer strengths by the services would help their personnel management systems to accommodate lower targets through a combination of policies. The projections of the CBO model show that the mandated reductions can be accommodated even without a balanced approach, but the alternative is likely to be less equitable, with more severe long-run distortions in personnel management, and ultimately more harm to the services' capabilities.

APPENDIX A

DETAILS OF METHODS AND ASSUMPTIONS USED IN THIS STUDY

The military services use many different projection models to aid their force planning efforts. One major class of models includes large scale simulations that project the long-term steady-state force, assuming constant patterns of retention and promotion. These models are useful for detailed personnel planning, such as prospects for force manning at the level of small units such as companies or squadrons, but they shed little light on the consequences of changes in personnel policies. A second class of models, less detailed but also more helpful in policy analysis, focuses on the dynamics of the promotion system, such as the time required before promotion and the annual numbers of each paygrade. This latter type includes the model developed by the Congressional Budget Office and used in this study to project the effect that alternative officer corps reduction strategies will have on promotions.

The specific models developed by CBO were calibrated by comparing each service's officer inventory as projected by the model with actual officer inventories for fiscal years 1985 and 1986. The models performed well. For instance, in no case did projected inventories differ from actual ones by more than 1 percent.

Level of Detail. Each service's overall population of commissioned officers includes several distinct subpopulations. Typically, the services manage these subpopulations differently, offering different promotion opportunities and applying different rules for retention and separation. A model that treated these subpopulations as a group within any of the services would ignore these differences in personnel management policies.

CBO's analysis focused instead on important subpopulations of each service's total commissioned officer force: line officers for the Army (specifically, those administered by the Officer Personnel Management Directorate) and Air Force, and a comparable group of the Navy. The analysis excluded those officers not counted under DOPMA, as follows:

- o Reserve officers (that is, those who serve only part-time);
- o General officers (paygrade 0-7 and above);
- o Medical officers (physicians);
- o Dental officers;
- o Warrant officers (in the Army and Navy); and
- o Training and Administration of Reserves officers (TARs, Navy only).

These populations were chosen because they offer valuable insight into the two major aspects of officer reductions examined in this study--namely, the overall effect on the promotion system and the effects of DOPMA. The study populations constitute the great majority of commissioned officer strength in each of the services, and thus will be the source of the bulk of the mandated reductions. In addition, these subpopulations represent a large percentage of the officers accountable to DOPMA--84 percent for the Army, 90 percent for the Air Force, and 108 percent for the Navy.

CBO's analysis simulates the retention and separation behavior of commissioned officers in accordance with current continuation rates (that is, the probability of continuing from one year to the next) and predetermined promotion opportunity rates and promotion points. An important simplification embedded in the model is that no adjustment is made for changes in continuation that might occur in response to changes in promotion policies or force reductions.

Detailed Model Assumptions

Allocation of Cuts in Officer End Strength. A crucial aspect of CBO's analysis centers on the manner in which DoD allocates the mandated aggregate officer reductions among the various services. In the absence of a definitive allocation plan from DoD for 1989 and 1990, CBO relied, in part, on DoD's 1987 distribution scheme to examine two alternative allocations. Under one alternative, all services are assumed to absorb equal proportionate cuts from current end strength in all years (Case 1), while in the other all services except the Navy share the cuts proportionately (Case 2) in

accordance with DoD's 1987 distribution scheme. It should be noted that DoD's 1987 distribution approach allocates reductions on the basis of planned or programmed strengths instead of actual strength ceilings. Consequently, the resulting cuts would reflect forgone planned growth as well as "real" cuts from actual end strength. Thus, while the allocation of cuts might be proportional among the services on the basis of programmed end strength, once planned growth has been taken into account, the remainder of the cut as a percentage of actual end strength would no longer be proportional (see Box A-1 and Table A-1 for a further discussion of DoD's 1987 distributional scheme). However, since the law requires that all cuts be made from the services' 1987 officer end strength rather than from planned strengths that the services may intend to propose in future budgets, the reductions considered in the analysis reflect the real or actual cuts. Tables A-2 and A-3 show the reductions under Cases 1 and 2, respectively.

DOPMA Limits. CBO estimated two sets of DOPMA grade limits on numbers of officers in paygrades 0-4 to 0-6. The first is a set of overall ceilings computed in the standard manner--by relating the end strength of all DOPMA accountable officers to the grade distribution table in the DOPMA legislation. The second set of limits is a calculation of prorated ceilings, derived from the DOPMA grade ceilings, for the sub-populations of line officers examined in this study. While no official DOPMA limits pertain specifically to line officers, limits were derived for comparative purposes by assuming that line officers would constitute the same percentage of total DOPMA accountable officers in fiscal years 1988 through 1990 as in 1987.

Definition of Baseline

Distributions in the baseline officer force were derived for each service for 1988 to 1990 to indicate what the services' force profiles would be without mandated officer reductions. This baseline is for use in this study and does not correspond to the CBO spending baseline used in the budget process. These baseline projections were then used to evaluate the impact of alternative strategies for officer corps reduction.

The baselines were derived from each service's inventory of line officers for 1987, its promotion opportunities and promotion points for 1987 (1986 for

Box A-1

DEPARTMENT OF DEFENSE'S 1987
ALLOCATION SCHEME

To determine the estimated allocations for each service for 1989 and 1990, CBO assumed DoD's 1987 approach. This distributional procedure, however, can result in the allocation of officer reductions among the various services being both proportional and nonproportional simultaneously. This effect can be illustrated by considering the allocation of the 1987 cuts. Table A-1 shows the 1987 cuts. As can be seen, Navy losses were limited to the planned growth in commissioned officers, thus freezing the Navy's end strength at the 1986 level. DoD then distributed the total reduction (3,088) proportionally among the remaining services based upon their programmed end strength for 1987.

Use of programmed 1987 end strength instead of the actual 1986 levels as the base for the allocated reductions yields inconsistent results when assessing the percentage reductions incurred by the individual services. DoD has argued that the reduction was shared equally, in percentage terms, by the three services other than the Navy. The Army, however, maintains that its percentage reduction was greater than that of the Air Force. A closer examination of the 1987 allocation scheme reveals that both sides are correct. Since the Air Force planned more growth relative to the Army, its cut from programmed end strength (1.5 percent) approximated the Army's cut (1.6 percent), as DoD asserts. The Air Force's actual losses from its 1986 end strength, however, were only 1.2 percent--slightly smaller than the corresponding Army losses of 1.5 percent, thus supporting the Army's contention.

TABLE A-1. COMMISSIONED OFFICER REDUCTIONS, 1987
(Number of officers)

Service	Actual 1986 End Strength	Share of Cut From 1986	Programmed Growth 1986-1987	Programmed 1987 End Strength	Share of Cut From 1987	End of 1987 Strength Ceiling
Army	107,962	1,635	102	108,064	1,737	106,327
Navy	72,051	0	1,576	73,627	1,576	72,051
Air Force	109,048	1,255	398	109,446	1,653	107,793
Marine Corps	<u>19,735</u>	<u>198</u>	<u>95</u>	<u>19,830</u>	<u>293</u>	<u>19,537</u>
Total DoD	308,796	3,088	2,171	310,967	5,259	305,708

SOURCE: Congressional Budget Office estimates.

TABLE A-2. COMMISSIONED OFFICER REDUCTIONS, 1989-1990: PROPORTIONAL REDUCTIONS IN EACH SERVICE (Number of officers)

Service	End of 1987 Strength Ceiling	Reduction or (Increase) From 1987	End of 1988 Strength Ceiling	Reduction From 1988	End of 1989 Strength Ceiling	Reduction From 1989	End of 1990 Strength Ceiling
Army	106,327	1,514	104,813	2,153	102,660	2,166	100,494
Navy	72,051	(559)	72,610	1,452	71,158	1,423	69,735
Air Force	107,793	2,255	105,538	2,167	103,371	2,181	101,190
Marine Corps	<u>19,537</u>	<u>(122)</u>	<u>19,659</u>	<u>404</u>	<u>19,255</u>	<u>406</u>	<u>18,849</u>
Total DoD	305,708	3,088	302,620	6,176	296,444	6,176	290,268

SOURCE: Congressional Budget Office estimates.

TABLE A-3. COMMISSIONED OFFICER REDUCTIONS, 1989-1990: PROPORTIONAL REDUCTIONS IN EACH SERVICE, EXCEPT NAVY EXEMPT (Number of officers)

Service	End of 1987 Strength Ceiling	Reduction or (Increase) From 1987	End of 1988 Strength Ceiling	Reduction From 1988	End of 1989 Strength Ceiling	Reduction From 1989	End of 1990 Strength Ceiling
Army	106,327	1,514	104,813	3,107	101,706	2,839	98,867
Navy	72,051	(559)	72,610	0	72,610	0	72,610
Air Force	107,793	2,255	105,538	2,134	103,404	2,815	100,589
Marine Corps	<u>19,537</u>	<u>(122)</u>	<u>19,659</u>	<u>935</u>	<u>18,724</u>	<u>522</u>	<u>18,202</u>
Total DoD	305,708	3,088	302,620	6,176	296,444	6,176	290,268

SOURCE: Congressional Budget Office estimates.

the Air Force), and its 1986 continuation rates (adjusted to take account of the mandated reductions for 1987). To derive the baseline force distributions for 1988 through 1990, CBO projected the inventories based on 1987 officer end strengths and 1986 continuation rates, and then adjusted overall strength to the Administration's planned levels by varying accessions. Promotion opportunity was adjusted slightly to maintain relatively constant promotion points.

A baseline incorporating the Administration's planned officer strengths is useful, since the baseline is then consistent with the detailed service plans being presented to the Congress. The strengths assumed in this study's baseline, however, are those in the January 1987 plan presented along with the President's budget for fiscal year 1988. Particularly for the Navy, these planned strengths are higher than actual strengths in 1987 because of growth in the officer corps accompanying increases in total Navy forces and because all the service plans submitted in January 1987 assumed that the Congress would reverse requirements for reductions in the number of officers. The plans submitted along with the President's budget for fiscal year 1989 may reflect reductions mandated by the Congress. If so, this study's baseline numbers for factors such as accessions could be higher than those in the plan accompanying the 1989 budget.

