

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 <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	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 O-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.

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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.

