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REPORT BY THE
Comptroller General
OF THE UNITED STATES

**Millions Spent Needlessly In Navy And
Marine Corps' Aviation Bonus Program**

To help solve shortages in aviation specialties and retain quality officers, the Congress in 1980 approved the aviation officer continuation bonus. The Navy and Marine Corps did not, however, follow the Congress' guidelines to judiciously manage and award these bonuses. As a result, as much as \$80 million of the \$103 million committed by the services in fiscal year 1981 has been, and is being, spent unnecessarily.

Because some specialties will continue to have shortages, GAO is recommending to the Congress that the bonus program be extended, but under tighter restrictions.



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

B-208010

The Honorable J. James Exon
Ranking Minority Member
Subcommittee on Manpower and
Personnel
Committee on Armed Services
United States Senate

Dear Senator Exon:

This report responds to your November 4, 1981, request, as modified by your office, that we evaluate the Navy's and Marine Corps' implementation of the aviation officer continuation bonus program authorized by Public Law 96-342. As you know, the authority for this bonus program expires on September 30, 1982, and the Navy and Marine Corps have asked that it be extended. We are recommending that the program be extended, but under tighter restrictions.

As you requested, we did not take the additional time to obtain official agency comments on the matters discussed in this report. However, we did discuss this report with agency program officials, and their comments have been considered. Also, as you know, on May 19, 1982, we testified before the Subcommittee on Defense, Senate Committee on Appropriations, on matters in this report. The Navy, Marine Corps, and the Office of the Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics) presented their positions on our findings and conclusions at that time.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 7 days from the date of the report. At that time we will send copies to interested parties and make copies available to others upon request.

Sincerely yours,

Comptroller General
of the United States

Enclosure

COMPTROLLER GENERAL'S REPORT
TO THE HONORABLE J. JAMES EXON
UNITED STATES SENATE

MILLIONS SPENT NEEDLESSLY
IN NAVY AND MARINE CORPS'
AVIATION BONUS PROGRAM

D I G E S T

The Navy and Marine Corps have experienced a shortage of officers in certain aviation specialties over the years. To retain the number and quality of officers needed in these specialties, the Congress approved the aviation officer continuation bonus program to begin in fiscal year 1981. This program expires September 30, 1982.

GAO was asked by Senator Exon, as the Ranking Minority Member of the Subcommittee on Manpower and Personnel, Senate Committee on Armed Services, to evaluate the Navy's and Marine Corps' implementation of this program and determine whether these services are selectively using it as the Congress intended--that is, to retain officers in specialties with critical shortages.

In GAO's opinion the Navy and the Marine Corps have not judiciously managed the bonus program. Both services continue to pay bonuses, averaging over \$18,000 and ranging as high as \$39,000, to officers who are not in specialties where there are critical shortages or who are past the point in their careers where retention is a problem.

Rather than selectively using bonuses, the Navy and Marine Corps designated the entire aviation community--which includes several pilot and naval flight officer specialties--a critical shortage area and essentially made all officers within the community, with more than 6 but less than 16 years of aviation service, eligible to receive a bonus.

Using these implementing procedures, the Navy and Marine Corps entered into agreements with 5,864 aviators during fiscal year 1981, at a cost of about \$103 million. GAO believes that as much as \$80 million of this amount is being unnecessarily spent.

GAO/FPCD-82-56

BONUSES CAN HELP NAVY'S PILOT SHORTAGES

Navy data shows that it has had and will likely continue to have a shortage of pilots in grades O-3 to O-5. GAO's analysis shows that generally the Navy has a better chance of retaining pilots by granting bonuses during the 3- to 4-year period just following completion of their obligated service. These are generally the critical years when continuation rates are low because many pilots leave active duty. Beyond that point, most pilots remain in the Navy for a full career, with year-to-year continuation rates often exceeding 95 percent. Thus, in GAO's opinion, of the \$49.2 million committed in fiscal year 1981 to pay bonuses to Navy pilots, \$27.9 million is being spent unnecessarily because it is being paid to pilots in year-of-service categories where retention is not a problem.

NAVY PAYS BONUSES FOR SPECIALTIES WHERE SHORTAGES ARE MINIMAL AND RETENTION IS HIGH

The Navy has not experienced a problem retaining naval flight officers, even in their 6th to 8th year of service. Continuation rates have been near or over 90 percent. Furthermore, the Navy has not had and does not expect to have serious shortages in naval flight officer specialties. Thus, in GAO's opinion, all of the \$28.7 million committed by the Navy in fiscal year 1981 for naval flight officer bonuses has been, and is being, unnecessarily spent.

MARINE CORPS PAYS BONUSES DESPITE SURPLUSES

The Marine Corps did not have a shortage of pilots or naval flight officers in grades where bonuses were paid. In fact, it had surpluses. Its shortages were at grades O-1 and O-2, a problem which cannot be solved by paying bonuses to officers in grades O-3 to O-5. The Marine Corps acknowledges that its shortages were not caused by poor retention, but rather by the insufficient number of pilots trained. Nevertheless, it believes that the \$25 million committed in fiscal year 1981 was worthwhile because higher

graded officers who were retained can be used to fill positions ordinarily filled by lower graded officers. GAO believes that the Marine Corps approach is an uneconomical way to solve its shortages.

NEED FOR A BETTER DEFINITION
OF ELIGIBILITY

GAO noted that many aviators were given bonuses even though they had or would have, before the end of their commitment, more than 16 years of active duty service. This occurred because the legislation states that bonus eligibility depends on "years of aviation service," which is often less than an individual's total active duty service. Because it is very unlikely that a service member in this category would resign from active duty before becoming eligible for retirement at 20 years of service, GAO believes that defining eligibility in this way can result in money being unnecessarily spent.

BONUS PROGRAM NOT AS
SUCCESSFUL AS REPORTED

The Navy reported to the Congress that it gained 599 aviators in fiscal year 1981 as a direct result of the bonus program, and the Marine Corps credited the program with a gain of 90 aviators.

The Marine Corps' estimate of gains, while possibly slightly high, is generally reasonable. Navy estimates, on the other hand, are substantially overstated. The Navy could not fully document or explain its gain calculation, but a more reasonable estimate would be 276 aviators rather than the 599 it claimed. Furthermore, most gains were in year-of-service groups where retention was not a problem or in specialties where shortages were not critical.

The Navy argued that the bonus program was cost-effective because training costs were avoided. In GAO's opinion, the Navy does not know whether it is more cost-effective to pay bonuses than to train new pilots and naval flight officers, because its calculation was inaccurate and incomplete.

BONUS PROGRAM SHOULD BE EXTENDED
BUT RESTRICTED

The Navy projects pilot shortages through fiscal year 1989, even if the bonus program is extended. This projection is based on numerous assumptions, however, which may or may not occur. Therefore, GAO believes that the bonus program should be extended only through fiscal year 1984 so that the Congress will have an opportunity to reassess the need for bonuses.

Retention problems have generally been most severe during pilots' 6th through 8th year of service, but this does not mean that problems will not develop in other areas in the future. Therefore, GAO believes that in extending the bonus authority, the Congress may want to avoid unduly restrictive legislative language regarding eligible year-of-service groups or aviation specialties. But it should require the Navy to periodically identify specific problem areas and use the bonus authority for aviation specialties with critical shortages and for year-of-service groups where continuation rates can be significantly improved.

RECOMMENDATIONS TO THE CONGRESS

GAO recommends that the Congress:

- Amend 37 U.S.C. 301b to extend the bonus authorization to September 30, 1984, and to define eligibility to include all of an aviator's active duty service.
- Amend 37 U.S.C. 301b by adding a provision requiring the Secretary of the Navy to develop new implementing procedures which would (1) target the bonus to specific aviation specialties where there are, and continue to be, critical shortages of aviators and (2) limit the application of the bonus to those years of service where retention has been a problem.

AGENCY COMMENTS

As requested, GAO did not follow its normal practice of obtaining official comments on this report; however, GAO discussed the report with program officials whose comments have been considered.



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	<u>ABBREVIATIONS</u>	
ACIP	Aviation Career Incentive Pay	
DOD	Department of Defense	
GAO	General Accounting Office	

CHAPTER 1

INTRODUCTION

In July 1981 the Navy and Marine Corps began implementing the aviation officer continuation bonus program, authorized by the Congress to help solve aviator shortages in the two services. The bonus authority expires on September 30, 1982, but the two services want it extended.

WHAT CONTRIBUTED TO PILOT SHORTAGES?

The purpose of paying aviators something in addition to their regular military pay--generally defined as basic pay, and subsistence and housing allowances which are nontaxable--is to enable the services to attract and retain for a full career the number and quality of aviators they need. The primary management tool designed to achieve this purpose was the Aviation Career Incentive Pay (ACIP) system. This system replaced the old hazardous duty flight pay system in 1974 and was designed simply as an incentive for people to make a career of military aviation.

The concept behind the ACIP system was that, if no unusual or uncontrollable circumstances exist to create temporary aviator shortages, the incentive pay schedule and amounts should be enough to maintain an adequate aviator force at all officer grade levels and for all aviation specialties. However, between 1974 and 1979 when, according to the services, their pilot shortage reached its most serious proportions, numerous circumstances came together to cause the shortage. While it is impossible to isolate all the factors and quantify the extent to which each helped cause the shortage, they generally fall into two categories:

- Those factors over which the services had either direct or indirect management control. This includes (1) the Navy's decision to involuntarily separate 391 pilots in their prime flying years during fiscal years 1975 through 1978, a period when pilot shortages were already beginning to grow, (2) the decline in pilot training rates (see app. I) which, between 1977 and 1979, produced a cumulative shortfall of 1,051 new Navy and Marine Corps pilots, and (3) the failure to periodically review and recommend adjustments in ACIP rates to assure their adequacy. (The services finally did, in December 1979, recommend that ACIP be increased, but by that time pilot shortages had become quite severe.)
- Those factors over which the services had no control, such as the commercial airline pilot hiring rate. While not all pilots leaving military service are hired by commercial airlines, the trend has been that when commercial airlines are hiring a large number of pilots, military

losses are also high. Conversely, when airline hiring is down, so is the military pilot loss rate. As shown in appendix II, airline hiring increased dramatically from about 1,000 new pilots in 1977 to more than 4,000 in 1979, the year that the services experienced their most severe shortage. However, the decline in airline hiring was even more dramatic than the rise, dropping to fewer than 1,000 in 1980.

The services' proposed solution to the shortage, submitted to the Congress in December 1979, was twofold. First, they proposed a 50-percent increase in ACIP levels. This, they stated, would restore the relationship that had initially existed between ACIP and basic pay. Second, they requested authority to pay a selective aviation continuation bonus. This was to help them more quickly solve the problem of retaining pilots, which was occurring in certain aviation specialties.

After considerable debate on the services' proposal--particularly the bonus portion of their solution--the Congress authorized a 25-percent increase in ACIP and an aviation officer continuation bonus program to begin in fiscal year 1981. Although authorized to begin in October 1980, continued congressional concern about how the bonus program would be implemented delayed its start until July 1981 when it was funded by the Supplemental Appropriations and Rescission Act, 1981 (Public Law 97-12, June 5, 1981). The Congress authorized a second 25-percent increase in ACIP to begin in fiscal year 1982, except that aviators who received the continuation bonus could not also receive the second 25-percent ACIP increase.

Although the Navy, Marine Corps, and Air Force were all experiencing officer pilot shortages when the bonus program was authorized and funded, only the Navy and Marine Corps decided to use it. The Air Force, instead, decided to rely on the increased ACIP to solve its shortages.

HOW THE CONGRESS INTENDED BONUSES TO BE USED

It seems quite clear from the aviation bonus program legislative history that the Congress distinguished between the purpose of ACIP and the purpose of a bonus program. That is, ACIP is a long-term career incentive while the bonus program is a short-term solution to a temporary problem. The Congress directed that the bonus program be managed accordingly. It was to be used specifically as a retention tool, selectively applied to aviation specialties having critical shortages of qualified officers, and was to be targeted to career points where the receipt of a bonus could be expected to influence an aviator's decision to remain in the service. Bonuses were to be used only when needed, and terminated when no longer warranted.

The conference report (Senate Report No. 96-895, dated Aug. 13, 1980) which accompanied the DOD Authorization Act of 1981 (Public Law 96-342) explained in part how the bonus program should be implemented:

"The conferees believe that this bonus, if focused at the critical retention points, would be useful in addressing the pilot shortage being experienced today."

The Senate Committee on Armed Services provided more guidelines in its report (Senate Report No. 97-146, dated July 8, 1981) on the Uniformed Services Pay and Benefit Act 1981 (Public Law 97-60). The Committee report states, in part, that:

"* * * the paying of the aviator bonus, authorized by the Congress last year, may be warranted for certain categories of aviators due to acute shortages and critical retention problems. It would appear, however, that the services' bonus programs, as approved by the Secretary of Defense, do not selectively target the bonuses to only critical aviation specialties as intended by the Congress and as required in the appropriate Department of Defense directives. * * * It is the committee's desire that the bonus be used as intended; that is, pilots, navigators and naval flight officers 1/ should all be equally considered for the bonus, but it should only be paid in aviation specialties where retention problems and shortages exist that cannot be addressed by other management actions or initiatives. It should not be paid solely because it is being paid to the same or to other types of aviators in the same or in another service. * * * The committee expects that, within the Navy and Marine Corps, if the retention levels of one category of aviator cease to be a problem, then payment of the bonus to that category would cease even if payment to another category is warranted and continued."

OBJECTIVE, SCOPE, AND METHODOLOGY

Our objective was to determine whether the Navy and Marine Corps are using the aviation officer continuation bonus program in a cost-effective manner to solve specific aviator shortage and retention problems as the Congress intended. This included determining whether bonuses were being paid only to officers in aviation specialties where critical shortages exist and were being targeted to career points where bonuses could be

1/ Naval flight officers are not pilots. Their primary function is to operate the aircraft weapon systems.

expected to significantly improve retention. We also evaluated the reasonableness of Navy and Marine Corps reports to the Congress that, together, they gained nearly 690 aviators in fiscal year 1981 as a direct result of the bonus program.

Because the Air Force decided not to participate in the bonus program and was barred from doing so by Public Law 97-60, this report addresses only the Navy and Marine Corps implementation of the bonus program.

Our review was performed in accordance with our Office's current "Standards for Audit of Governmental Organizations, Programs, Activities, and Functions." It was performed from November 1981 through June 1982. We did work at Navy and Marine Corps headquarters and at the Office of the Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics) in Washington, D.C. We reviewed (1) pertinent legislative history, (2) DOD and service implementing instructions and related memoranda, and (3) relevant studies, reports, and other analyses made by DOD, the services, the Defense Audit Service, and the Center for Naval Analyses.

We calculated aggregate aviator shortages on the basis of requirements and inventory data furnished by the services. We did not independently validate statistical data provided by the Navy and Marine Corps. However, we followed up on two January 1980 Defense Audit Service reports on aviator requirements and inventories to enable us to reasonably rely on the accuracy and validity of such data.

We identified the Navy and Marine Corps aviation specialties which have critical shortages and at what grade levels the shortages were occurring by comparing authorized strength levels with actual inventory data for pilots and naval flight officers (NFOs). By analyzing both pilot and NFO year-to-year continuation rates between 1975 and 1981, we identified the critical points in officers' careers where a bonus could be expected to influence their decision to remain in the service. We limited our analysis to pilot and NFO categories because of the limited availability of data for each specific aviation specialty.

To determine whether the Navy and Marine Corps claims concerning fiscal year 1981 aviator gains attributable to the bonus program have merit, we evaluated the reasonableness and logic of their assumptions and calculation methodology. By applying average 1975 through 1980 year-to-year continuation rates to the 1981 pilot and NFO inventories, we also estimated the number of aviators who might have remained in the Navy because of the aviation bonus. A fuller discussion of both our and Navy's methodology for estimating aviator gains is in chapter 3.

CHAPTER 2

NAVY AND MARINE CORPS ARE NOT

JUDICIOUSLY MANAGING THE BONUS PROGRAM

Our analysis of how the Navy and Marine Corps implemented and managed the aviation officer continuation bonus program shows that, of the \$102.9 million committed by the services in fiscal year 1981, as much as \$81.6 million has been, and is being, unnecessarily spent. This unnecessary expenditure includes (1) \$27.9 million for Navy pilots who were beyond the critical retention years, (2) \$28.7 million for Navy NFOs, a specialty which had no critical shortage and which had minimal retention problems, and (3) \$25 million for Marine Corps pilots and NFOs who were at grade levels where surpluses actually existed. We did not analyze fiscal year 1982 data because the fiscal year is still in progress. However, because the services' approach to managing the program has not changed, we believe many more millions of dollars are being unnecessarily committed and spent for fiscal year 1982.

As previously stated, the legislative history of this bonus authority is quite clear--it was to be used to retain aviation officers. It was to be selectively applied to aviation specialties with critical shortages and targeted to career points where it could be expected to influence an officer's decision to remain in service. Despite this very explicit congressional guidance, the Navy and the Marine Corps have not judiciously managed the bonus program. Both services continue to pay bonuses, which average over \$18,000 and range from about \$2,000 to over \$39,000, to officers who are not in aviation specialties experiencing critical shortages or to officers who are at the point in their careers where retention is not a problem.

SERVICES' IMPLEMENTATION OF THE BONUS PROGRAM

DOD's implementing policy directive, dated January 16, 1981, restated the legislative intent on how the program should be managed:

"The continuation bonus shall be used selectively where shortages of officers qualified in critical aviation specialties exist, or are projected, and shall be limited to critical retention points where the bonus can be expected to affect retention behavior."
(Emphasis added.)

Despite congressional intent and DOD's directive, neither the Navy nor the Marine Corps applied the bonus selectively or

only at the critical retention points. Instead, they treated it much like a long-term aviation career pay by designating the entire aviation community--which includes several pilot and NFO specialties--a critical shortage area and making all those within the community with more than 6 and less than 16 years of aviation service, who meet the other legislative criteria, eligible to receive a bonus. 1/

Aviators who have between 6 and 16 years of service are generally in grades O-3 to O-5, although about one-third at these grade levels are not eligible for the bonus because they either have less than 6 or more than 16 years of aviation service. The services established a declining bonus payment schedule; the highest amounts go to aviators in their 6th to 8th year of service and who commit themselves to service for 4 years; lower amounts go to those with more years of aviation service and to those signing up for less than 4 years. The maximum bonus payment is computed by multiplying the aviator's basic pay by 16--4 months of basic pay for each obligated year. Bonuses are paid in annual installments based on the number of years obligated.

FY 1981 Navy and Marine Corps Bonuses

	<u>Navy</u>	<u>Marine Corps</u>
Number eligible for a bonus	6,484	1,993
Number who applied for and received bonuses	4,590	1,274
Average bonus amount	\$16,972	\$19,623
Average years committed	3.0	3.3

FY 1981 Program Cost

	------(millions)-----	
Appropriated and spent in 1981	\$26.4	\$ 7.6
Anniversary payments of 1981 commitments	<u>51.5</u>	<u>17.4</u>
Total	<u>\$77.9</u>	<u>\$25.0</u>

1/The other legislative criteria were that the aviator must (1) be eligible to receive ACIP, (2) be in a pay grade below O-7, (3) be qualified for operational flying duty, (4) have completed his or her initial aviation service obligation, and (5) agree in writing to remain on active duty for at least 1 year.

The number of aviators who applied for and received bonuses is not necessarily indicative of the bonus success rate. An additional 605 Marine Corps aviators were eligible and applied for bonuses in fiscal year 1981 but postponed their effective date until after October 1, 1981, hoping to take advantage of the 14.3-percent basic pay raise effective on that date. A similar situation occurred in the Navy but it could not provide data on the number of aviators involved.

The length of commitments made in fiscal year 1981 by Navy and Marine Corps aviators--pilots and NFOs--who received a bonus ranged from 1 to 4 years. The number of years aviators agreed to remain on active duty in exchange for a bonus is shown below.

Distribution of FY 1981 Bonus Recipients

<u>Years committed</u>	<u>Navy years of aviation service</u>					<u>Total</u>
	<u>6-8</u>	<u>9-12</u>	<u>13</u>	<u>14</u>	<u>15</u>	
1	292	234	40	37	398	1,001
2	59	84	15	360	-	518
3	19	88	337	-	-	444
4	1,202	1,425	-	-	-	2,627
Total	<u>1,572</u>	<u>1,831</u>	<u>392</u>	<u>397</u>	<u>398</u>	<u>4,590</u>

<u>Years committed</u>	<u>Marine Corps years of aviation service</u>					<u>Total</u>
	<u>6-8</u>	<u>9-12</u>	<u>13</u>	<u>14</u>	<u>15</u>	
1	26	22	4	10	85	147
2	13	18	6	119	-	156
3	4	10	130	-	-	144
4	410	417	-	-	-	827
Total	<u>453</u>	<u>467</u>	<u>140</u>	<u>129</u>	<u>85</u>	<u>1,274</u>

WHAT WERE THE SHORTAGE PROBLEMS
THE SERVICES WANTED TO SOLVE?

Although each service has several pilot and NFO specialties (the number of specialties depends on the types of aircraft used), we limited our analysis to pilots and NFOs because information on the specific aviation specialties was not readily available. The pilot and NFO shortages (actual and projected) reported by the services are on the next page.

Pilot shortages by fiscal year

	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
<u>Navy</u>							
Required	9,216	8,953	9,005	9,174	9,344	8,176	8,632
Inventory	<u>8,268</u>	<u>7,604</u>	<u>6,993</u>	<u>6,815</u>	<u>7,012</u>	<u>7,021</u>	<u>7,048</u>
Shortage	<u>948</u>	<u>1,349</u>	<u>2,012</u>	<u>2,359</u>	<u>2,332</u>	<u>1,155</u>	<u>1,584</u>
Percent short	(10.3)	(15.1)	(22.3)	(25.7)	(25.0)	(14.1)	(18.3)
<u>Marine Corps</u>							
Required	4,019	3,844	3,744	3,796	3,867	3,852	3,884
Inventory	<u>3,644</u>	<u>3,429</u>	<u>3,219</u>	<u>3,286</u>	<u>3,543</u>	<u>3,658</u>	<u>3,760</u>
Shortage	<u>375</u>	<u>415</u>	<u>525</u>	<u>510</u>	<u>324</u>	<u>194</u>	<u>124</u>
Percent short	(9.3)	(10.8)	(14.0)	(13.4)	(8.4)	(5.0)	(3.2)

NFO shortages by fiscal year

	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
<u>Navy</u>							
Required	3,372	3,482	3,416	3,445	3,489	3,588	3,743
Inventory	<u>2,906</u>	<u>3,067</u>	<u>3,165</u>	<u>3,300</u>	<u>3,470</u>	<u>3,517</u>	<u>3,714</u>
Shortage	<u>466</u>	<u>415</u>	<u>251</u>	<u>145</u>	<u>19</u>	<u>71</u>	<u>29</u>
Percent short	(13.8)	(11.9)	(7.3)	(4.2)	(0.5)	(2.0)	(0.8)
<u>Marine Corps</u>							
Required	744	807	863	716	823	795	706
Inventory	<u>669</u>	<u>655</u>	<u>690</u>	<u>699</u>	<u>700</u>	<u>673</u>	<u>649</u>
Shortage	<u>75</u>	<u>152</u>	<u>173</u>	<u>17</u>	<u>123</u>	<u>122</u>	<u>57</u>
Percent short	(10.1)	(18.8)	(20.0)	(2.4)	(15.0)	(15.3)	(8.1)

Note: Navy pilot and NFO shortages are based on requirements for grades O-3 through O-5, whereas Marine Corps shortages are based on requirements for all grades O-1 through O-5 who have completed flight training; the Marine Corps' inventory also includes a small number of warrant officers. Inventory numbers reflect the status at the end of each fiscal year, and the numbers for 1982 and 1983 are based on the services' projections with a bonus.

Navy and Marine Corps NFO shortages

The Navy's required and inventory data shows that it has no critical NFO shortages and does not anticipate any. Furthermore, our analysis shown in the table below, indicates that retention has not been a problem, not even in the 6- to 8-year-of-service period where high losses usually occur.

Navy NFO Year-to-Year Continuation Rates

<u>Years of service</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
	------(Percent retained)-----						
5	85	84	88	88	87	89	90
6	91	87	85	88	88	91	94
7	90	87	89	87	87	89	88
8	95	93	90	92	92	91	91
9	82	95	95	96	96	96	97
10 (note a)	83	79	76	86	89	92	99
11	92	96	95	89	88	89	96
12	99	96	96	96	92	93	96
13	97	98	98	94	97	96	94
14	98	96	96	97	98	97	99
15	98	98	97	97	98	99	98
16	99	99	96	99	99	96	99
17	96	97	97	96	96	96	98

a/Lower rates in the 10th year reflect a high turnover of O-3s who were resigning or being released because they had not been promoted.

Since we could find no critical shortage of Navy NFOs and the Navy's retention of officers in these specialties leaves very little need for a bonus, we concluded that paying bonuses to NFOs is inconsistent with legislative intent and good management practice and that the entire \$28.7 million committed in fiscal year 1981 for NFO bonus payments has been, and is being, spent unnecessarily.

Data reported by the Marine Corps shows that it has experienced a 15- to 20-percent shortage of NFOs. We obtained a further breakdown for fiscal year 1981 to determine at what grade levels the shortages were occurring.

Marine Corps NFO Requirements and Inventory

<u>Grade</u>	<u>Requirements</u>	<u>Beginning inventory</u>	<u>Ending inventory</u>	<u>Yearend shortage (-) overage (+)</u>
O-1 & O-2	369	203	206	-163
O-3	250	303	286	+ 36
O-4	147	161	162	+ 15
O-5	<u>57</u>	<u>27</u>	<u>42</u>	<u>- 15</u>
Total	<u>823</u>	<u>694</u>	<u>696</u>	-127

This data shows that fiscal year 1981 Marine Corps' NFO shortages are primarily at the O-1 and O-2 grade levels, but aviators at these grades are generally not eligible to receive a bonus because they have not yet completed their initial period of obligated service. The O-3 to O-5 group, which is generally eligible to receive an aviation continuation bonus, already has a surplus.

Marine Corps officials acknowledged that insufficient NFO training rates--not shortages or inadequate retention of NFOs in grades O-3 to O-5--have caused their overall shortages. They also indicated that, in the long-term, this problem can only be solved by maintaining their currently improved training rates. While paying bonuses to NFOs in grades O-3 to O-5 will not solve their O-1 and O-2 shortages, the Marine Corps credits the bonus program with retaining an additional 13 NFOs in grades O-3 to O-5 in fiscal year 1981 who would not have otherwise remained on active duty. They believe that these gains are worth the \$4.2 million committed, despite surpluses which already exist, because these higher graded officers are used to fill positions ordinarily filled by lower graded officers.

Navy and Marine Corps pilot shortages

According to Navy and Marine Corps data, both services have, and will continue to have, overall pilot shortages, although the Marine Corps shortage has not been as severe as the Navy's. Also, like its NFO shortage, for fiscal year 1981 the Marine Corps pilot shortage is concentrated in the O-1 and O-2 levels. To see precisely where the pilot shortages were occurring, we obtained data by grade on fiscal 1981 pilot requirements and inventory.

Navy Pilot Requirements and Inventory

<u>Grade</u>	<u>Requirements</u>	<u>Beginning inventory</u>	<u>Ending inventory</u>	<u>Shortage (-) overage (+)</u>
0-3	4,695	2,895	3,030	-1,665
0-4	2,798	2,544	2,566	- 232
0-5	<u>1,851</u>	<u>1,376</u>	<u>1,416</u>	- 435
Total	<u>9,344</u>	<u>6,815</u>	<u>7,012</u>	<u>-2,332</u>

Marine Corps Pilot Requirements and Inventory

0-1 & 0-2	1,595	740	999	-596
0-3	1,104	1,212	1,194	+ 90
0-4	780	918	921	+141
0-5	<u>388</u>	<u>411</u>	<u>424</u>	+ 36
Total	<u>3,867</u>	<u>3,281</u>	<u>3,538</u>	-329

The Navy had a shortage of pilots in grades 0-3 to 0-5, although only about two-thirds of pilots in these grades were eligible for a bonus. On the other hand, the Marine Corps had a surplus of pilots in grades 0-3 to 0-5.

Marine Corps officials acknowledged that the insufficient number of pilots trained, and not shortages in grades 0-3 to 0-5, has caused their overall shortages. They contend, however, that the commitment of \$20.8 million in bonuses to 1,059 pilots in grades 0-3 to 0-5 helped them keep 77 pilots who would have otherwise left the service. They believe that retaining these additional pilots, regardless of whether they are at grade levels where surpluses exist, has improved readiness.

We do not disagree with the Marine Corps' argument that readiness may have been improved by retaining additional pilots at grades 0-3 to 0-5. However, paying bonuses to officers at grade levels where surpluses already exist is an uneconomical way to solve a pilot shortage caused by inadequate training rates. Furthermore, our analysis showed that, because Marine Corps pilot year-to-year continuation rates have been quite high, particularly at grades 0-4 and 0-5, we doubt that bonuses prompted many additional Marine Corps pilots to remain in service.

In contrast to the Marine Corps, Navy data shows that it has had a pilot shortage at grades 0-3 to 0-5. Therefore, to more precisely pinpoint where retention problems exist and where a bonus could be expected to influence retention behavior, we analyzed the Navy's year-to-year continuation rates, as shown on next page.

Navy Pilot Year-to-Year Continuation Rates

<u>Years of service</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
	----- (Percent retained) -----						
5	87	88	82	88	90	88	98
6	89	88	77	73	70	79	81
7	92	86	78	72	71	78	80
8	94	91	86	76	79	86	96
9	87	96	91	85	86	90	99
10 (note a)	86	78	79	79	80	87	99
11	97	96	96	91	87	92	99
12	97	97	96	96	94	96	98
13	99	97	97	96	98	97	98
14	99	98	97	95	95	98	99
15	99	98	96	95	95	97	99
16	99	99	99	98	95	97	99
17	98	98	99	99	94	97	98

a/Lower continuation rates in the 10th year reflect a high turnover of 0-3s who were resigning or being released because they had not been promoted.

This analysis shows that, during fiscal years 1978 and 1979, continuation rates for Navy pilots dropped off to the 70-percent range during the 6th year of service--the year the pilots' initial service obligation was completed--and remained at that level through the 8th year of service. In the 9th year, however, the continuation rate trend began to increase to the point where the rates exceeded 93 percent from the 12th year forward, even in fiscal year 1979 which, according to Navy data, was its poorest retention year. This indicates that a bonus paid during the 6th to 8th year, and possibly in the 9th year, could reasonably be expected to improve retention. In fact, the continuation rates for fiscal year 1981 indicate that the bonus may indeed have improved retention in these years. However, the analysis also shows that, beyond the 9th year, continuation rates are already very high, leaving little need for the bonus. Simply put, if 95 out of 100 pilots remain in the Navy without a bonus, and 98 or 99 stay because of it, the Navy would pay bonuses to all 99 pilots just to gain an additional 4. When continuation rates are already in the 95 to 99 percentage range, as they were in the 14th and 15th years of service, the gains made by paying a bonus are even smaller.

Our analysis of the Navy pilot continuation rates led us to conclude that (1) the potential for influencing pilots to remain in the service is greatest at their 6th through 8th year of service and (2) beyond pilots' 9th year of service there is very little opportunity for the bonus program to influence pilots'

career decisions. In our opinion, therefore, much of the \$27.9 million committed in fiscal year 1981 to pay bonuses to Navy pilots in their 9th year of service and above has been, and is being, unnecessarily spent.

BONUSES AWARDED ON "YEARS OF AVIATION SERVICE" RATHER THAN ON "YEARS OF ACTIVE DUTY SERVICE"

We noted that many pilots and NFOs were being paid large bonuses even though they were already beyond their 16th year of active duty service, or would be beyond that point by the time they had completed their bonus commitment. Navy and Marine Corps records show that as of January 1982, bonuses have been awarded to 637 pilots and NFOs in this category. For example, at the extreme, we noted that 2 individuals--both Navy NFOs--one with 15 and the other with 16 years of active duty service were awarded bonuses of \$24,633 and \$38,990, respectively, as an "incentive" to remain in the service.

Navy officials said that the reason these situations occurred was that the authorizing legislation (Public Law 96-342) states that bonus payments depend on "years of aviation service" rather than "years of active duty service." Since many officers do not become aviators until after they have accumulated several years of active duty service, either as an enlisted member or as an officer, many of those receiving bonuses are only a few years away from their 20-year retirement option.

The wording of the current authorizing legislation does permit situations like this to occur. However, the law does not preclude the Navy from exercising good management judgment in implementing the bonus program. We believe that good management would dictate that paying bonuses to officers nearing retirement is an unnecessary expenditure of funds, and that paying bonuses on "years of active duty service" would be more appropriate. It is important to note that if the aviation bonus program had been managed as the Congress intended, the expense of paying bonuses to aviators nearing retirement would have been substantially less.

Navy program officials agreed that paying bonuses to people with many years of service does not look good and that bonus eligibility should not be based on "years of aviation service." However, they said that eligibility should be governed by years of commissioned service rather than years of active duty service, so that officers who had served as enlisted members for several years would not be penalized.

We disagree with this point. The Navy officials' statement fails to recognize the bonus for what it is--a retention incentive.

It was not intended to be a "reward," nor can the lack of eligibility be considered a "penalty." The Navy seems to view a bonus as part of an aviator's career pay entitlement, which, in our opinion, goes beyond the legislative intent of the program. The bonus program was authorized specifically to be a management tool to improve aviator retention. However, after military members reach a certain point in their careers, the retirement system also serves as a retention incentive. For example, data from all services show that once an aviator--either pilot or NFO--has passed the 10th year of service, the military's retirement system is a very strong incentive to complete at least 20 years of service. Since all years of active duty service, regardless of whether served as an enlisted member or an officer, count towards retirement eligibility, and since both the retirement system and bonuses serve as retention tools, it does not seem reasonable to disregard the effect of one management tool when determining whether to apply another.

CONCLUSIONS

The Navy and Marine Corps are not judiciously managing the aviation continuation bonus program. They are paying bonuses to aviators with 6 but not more than 16 years of aviation service, regardless of whether these aviators are in specialties which have critical shortages or whether bonuses can improve retention rates. This "across-the-board" approach will result in as much as \$81.6 million of the \$102.9 million committed during fiscal year 1981 alone being unnecessarily spent.

We believe that the aviation bonus authority should be extended beyond its expiration date of September 30, 1982, because, according to the Navy, it will continue to have serious shortages in some pilot specialties for several years. The Navy projects that pilot shortages will continue through fiscal year 1989, even with the bonus program. However, if an extension of the bonus authority is granted, it should be contingent on the Navy and Marine Corps' developing new implementing instructions which would (1) be targeted to specific aviation specialties with critical shortages and (2) be selectively applied early enough in aviators' careers to influence their decision to remain in the service. Furthermore, since the Navy's shortage projections are based on economic, pay, and other assumptions which may or may not occur, we believe the bonus authority should be extended only through fiscal year 1984 so that the Congress will again have an opportunity to review its continued need.

We believe that awarding aviation bonuses on the basis of years of aviation service rather than on the basis of years of active duty service has resulted in some officers receiving a bonus which was probably not needed to keep them on active duty. It is extremely unlikely that individuals with long years of active duty service would resign from the service

just short of retirement if they did not receive a bonus. Therefore, we believe that if the bonus authority is extended, the legislation should be changed so that aviators nearing retirement because of their length of active duty service would not be eligible to receive a bonus.

RECOMMENDATIONS TO THE CONGRESS

We recommend that the Congress:

--Amend 37 U.S.C. 301b to extend the bonus authorization to September 30, 1984, and to define eligibility to include all of an aviator's active duty service.

--Amend 37 U.S.C. 301b by adding a provision requiring the Secretary of the Navy to develop new bonus implementing procedures which would (1) target the bonus to specific aviation specialties where there are, and continue to be, critical shortages of aviators and (2) limit the application of the bonus to those years of service where retention has been a problem.

Legislative language to implement these recommendations is suggested in appendix III.

CHAPTER 3

AVIATOR GAINS ATTRIBUTED TO THE BONUS

PROGRAM WERE OVERSTATED

The Navy and Marine Corps, in justifying their desire to have the aviation bonus program extended beyond September 30, 1982, reported on May 20, 1982, to the congressional oversight and appropriations committees that the program was highly successful in retaining additional aviators, even more so than originally expected, and that it was cost effective when compared to the training costs avoided. The Navy reported that an additional 489 pilots and 110 NFOs remained in the service solely because of the bonus program, and the Marine Corps credited the program with retaining 77 pilots and 13 NFOs who would have otherwise resigned.

MARINE CORPS' CALCULATION OF GAINS WAS REASONABLE

Despite the fact that Marine Corps bonuses were paid to officers at higher grades where shortages did not exist, there were nonetheless gains achieved. Our analysis of the methodology and assumptions used to compute the gains indicated that, although the reported gains of 77 pilots and 13 NFOs may be slightly overstated, they are reasonable estimates of the aviators who may have remained to receive a bonus.

Briefly, the Marine Corps calculated its gain by applying the fiscal year 1980 year-to-year continuation rates to the fiscal year 1981 aviator inventory. It properly limited this calculation to aviators with 6 to 16-years of service. Using fiscal year 1980 continuation rates to calculate the fiscal year 1981 gains seems reasonable because it was the latest year's experience without a bonus, and economic conditions, including commercial airline hiring, were similar for the two fiscal years. The calculation did not, however, take into account the 25-percent increase in ACIP authorized for fiscal year 1981, the 11.7-percent across-the-board pay raise for that year, or the value of the variable housing allowance which was also newly authorized for fiscal year 1981. These increased benefits probably would have improved retention somewhat even without the bonus program, but how much is unknown.

NAVY'S CALCULATION OF GAINS OVERSTATED

Navy reported that in fiscal year 1981, 489 pilots and 110 NFOs remained solely because of the bonus program, and to emphasize this point the Deputy Chief of Naval Operations (Manpower, Personnel and Training) stated, unequivocally, that none of these

aviators would have remained without the bonus program. However, despite repeated attempts to obtain documentation on how the Navy arrived at these numbers, Navy officials were unable to fully document the calculations or satisfactorily explain the methodology and assumptions used. Nevertheless, on the basis of sketchy data provided and our own estimate of the gains using a procedure similar to that used by the Marine Corps, we believe that a reasonable estimate of the aviator gains would be, at best, less than half the number reported by the Navy. Furthermore, many of these gains were at grades where retention had not been a problem and/or in a specialty where shortages were not critical.

At first glance, the Navy's calculation seems quite simple:

	<u>Pilots</u>	<u>NFOs</u>
Actual fiscal year 1981 ending inventory	7,012	3,470
Projected ending inventory without a bonus	6,523	3,360
Gain attributed to bonus program	489	110

To determine the reasonableness of the gains, we asked the Navy to provide documentation on how it calculated the projected inventory without a bonus. We received several different explanations and some documentation, but we do not know for sure which, if any, are correct. It appears that the Navy calculated the projected inventory numbers by applying some adjusted and some unadjusted fiscal years 1979 year-to-year continuation rates to the fiscal year 1981 inventory of all pilots and NFOs in grades O-3 to O-5, regardless of whether these aviators were within the 6 to 16-year eligibility range. Navy officials said that the fiscal year 1979 continuation rates were adjusted to take into account the effect of the fiscal year 1981 pay raise, but they could not explain how this adjustment was calculated or applied. They then attributed all gains at these grade levels to the bonus program, even though some increases were among officers who were not eligible to receive a bonus.

There are several deficiencies in what we believe was the Navy's methodology for stating gains. First, since about 30 percent of the aviators in grades O-3 to O-5 were not eligible for a bonus, it is not reasonable to credit the bonus program with gains among these officers. Second, even though some but not all of the fiscal year 1979 continuation rates may have been adjusted to account for the fiscal year 1981 pay raises, we do not believe that 1979 was an appropriate base year to use because (1) according to Navy data, 1979 was its poorest retention year

in 7 years and (2) pilot hiring by commercial airlines--which affects Navy pilot retention rates--was at a high of about 4,000 new hires in 1979, with less than 1,000 hired in 1980. (See app. II.)

To get a more realistic estimate of the Navy's 1981 pilot and NFO gains that might reasonably be credited to the bonus program, we used a methodology similar to the Marine Corps', except that we applied average 1975 through 1980 continuation rates to the 1981 inventory of eligible aviators. This comparison shows that the Navy might have kept an additional 204 pilots and 72 NFOs because of the bonus program, rather than the 489 pilots and 110 NFOs it reported. However, our comparison also probably overstates the gain because we did not develop a model which would quantify the effect of the steep drop in airline hirings, pay adjustments (which the services believe brought them up to a level of pay comparability with the private sector), or the generally poor economic condition during 1981. Our analysis indicates, however, that even most of the 276 gains were made in areas where retention has never been a serious problem and/or in NFO specialties having no critical shortages. We estimate that the Navy might have gained between 60 and 70 pilots in the 6- to 8-year groups.

IS GRANTING BONUSES LESS COSTLY THAN TRAINING NEW AVIATORS?

The Navy's May 20, 1982, report argues that the bonus program is cost-effective when compared to the high cost of training new aviators, and that in fiscal year 1981 alone over \$487 million in training costs was avoided because of the bonus program. But the Navy calculated this savings by (1) using the exaggerated pilot and NFO gains, (2) comparing a 1-year bonus cost with a training investment which will be paid back over at least 4-1/2 years, and (3) failing to take into account the total life-cycle cost of an aviator. Life-cycle costs would include, among other things, recruiting, training, pay, allowances, and retirement costs. Although the Navy claims that the bonus program is cost effective, it has not determined when paying bonuses or other monetary incentives of various amounts is more or less economical than training new aviators.

In our opinion, care should be taken in extending the Navy's cost-effectiveness argument too far. Taken to its logical conclusion, the Navy's argument would seem to imply that, since the bonus program saved training costs, the training budget should be reduced by the amount saved. This, in our opinion, would be precisely the wrong thing to do and would only exacerbate the Navy's shortages. Our examination of pilot training rates indicates that a sizable proportion of the current pilot shortages at grades O-3

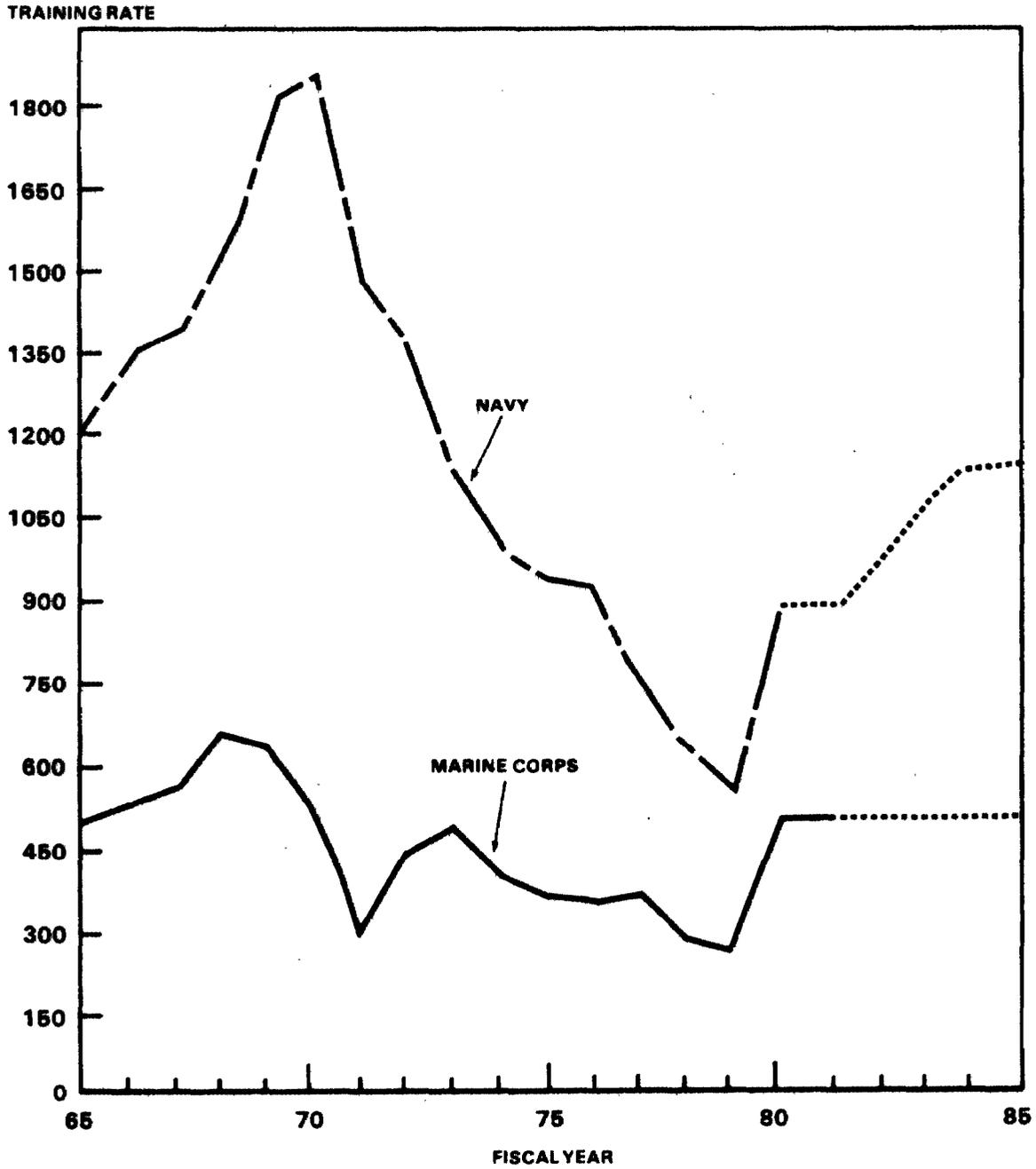
to O-5 can be traced to the precipitous drop in training rates during the mid-1970s. (See app. I.) The Navy is only now beginning to recover from this sharp decline in pilot production.

CONCLUSIONS

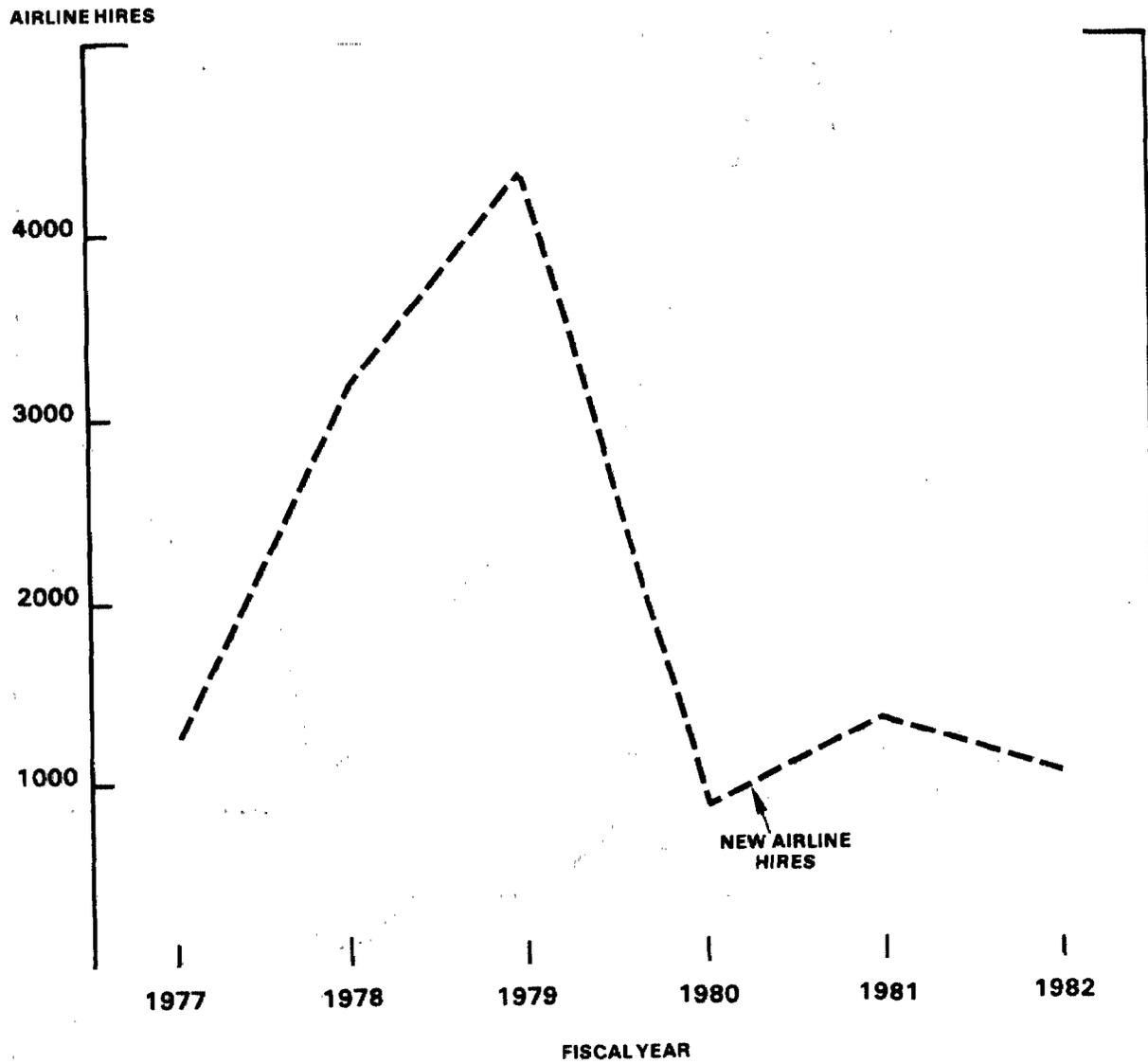
We agree with the Navy and Marine Corps that some aviators remained in the services solely to take advantage of the bonus program; however, the program was not as successful as the services claim. Our analysis of Marine Corps' gains credited to the bonus program indicates that the numbers reported are generally reasonable; but most of the gains were at grade levels where there were already surpluses of aviation officers. The Navy was unable to fully document how it computed the reported gains, but our evaluation of the sketchy documentation which the Navy provided, along with an explanation of how the program managers think the gain was computed, indicates that the numbers reported are exaggerated and, like the Marine Corps, many of the aviators remaining were not in critical shortage areas.

Concerning the statements made by the services about the cost-effectiveness of the aviation bonus program, we believe that the services do not know whether paying bonuses to retain existing aviators was more or less cost-effective than training new ones. In our opinion, any statement made by the services concerning the cost effectiveness of bonuses as compared to training would have to take into account, among other things, the full cost of the bonus commitments, the training payback period, the potential increase in retirement costs associated with keeping more officers on active duty until retirement eligibility, and the services' desired grade level and/or years-of-service distribution. These things were not considered by the Navy or Marine Corps when they reported to the Congress that the bonus program was a cost-effective alternative to training new aviators. Accordingly, we do not believe that the statements made by the services concerning the cost-effectiveness of the program can be supported.

NAVAL AIR TRAINING COMMAND PILOT PRODUCTION



AIRLINE PILOT HIRING



SUGGESTED LANGUAGE FOR AMENDING 37 U.S.C. 301b

- (a) Subsection (a) of section 301b of title 37, United States Code, is amended
- (1) by striking out "has at least 6 but less than 18 years of aviation service as an officer;" after "(4)" in the first sentence and inserting in lieu therefore "has at least 6 years of aviation service but less than 16 years of active duty service;"
 - (2) by striking out "and" before "(6)" in the first sentence;
 - (3) by inserting after "(6) is in an aviation specialty designated as critical;" in the first sentence, the phrase "and (7) is not serving a period of obligated service resulting from initial aviation training;" and
 - (4) by striking out "19 years of aviation service" in the second sentence and inserting in lieu therefore "17 years of active duty service."
- (b) Subsection (c) of such section is amended by striking out the second sentence and inserting in lieu thereof "The term 'active duty service' means all full-time service performed as an officer or enlisted member of a uniformed service."
- (c) Subsections (e) and (f) of such section are amended by striking out "September 30, 1982," wherever it appears and inserting in lieu thereof "September 30, 1984."
- (d) It is the sense of the Congress that eligibility for the special pay authorized by 37 U.S.C. 301b should be limited to officers who are serving in specific aviation specialties in which critical shortages of aviators actually exist, and whose retention in service will actually be affected by receipt of the special pay. The Secretary of the Navy shall therefore submit to the Congress annual written reports in 1983 and 1984, approved by the Secretary of Defense and submitted not later than May 15 each year, identifying the specific aviation specialties by aircraft and equipment type determined to be critical for which the special pay was authorized, and identifying the number of officers within each critical aviation specialty who received the special pay that year by their grades, years of prior active service, and amounts received.

The reports shall provide an explanation and justification for the designation of each aviation specialty as "critical" and for the payment of special pay to officers with more than 8 years of prior active service who are serving in pay grade O-4 or above. The reports shall also include a description of progress made that year towards eliminating shortages of aviators in the aviation specialties designated as critical.

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