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February 2017

# MILITARY COMPENSATION

## Additional Actions Are Needed to Better Manage Special and Incentive Pay Programs

# GAO Highlights

Highlights of [GAO-17-39](#), a report to the Committee on Armed Services, U.S. Senate

## Why GAO Did This Study

DOD uses S&I pay programs to compensate and incentivize servicemembers for occupations that are dangerous, less desirable, or require special skills. Senate Report 114-49 included a provision for GAO to review the effectiveness of DOD's S&I pay programs. This report assesses (1) trends in DOD obligations for S&I pay programs for fiscal years 2005 through 2015 and the extent to which DOD reports such obligations department-wide; and (2) the extent to which the military services applied key principles of effective human capital management in the design of S&I pay programs for selected high-skill occupations for fiscal years 2010 through 2015.

GAO analyzed DOD S&I pay obligations for fiscal years 2005 through 2015; reviewed a nongeneralizable sample of S&I pay programs for nuclear propulsion, aviation, and cybersecurity occupations, chosen based on their pay programs' attributes; compared DOD and service policies and documents with key principles of effective human capital management; and interviewed DOD officials.

## What GAO Recommends

GAO is making five recommendations, including that DOD explore reporting reserve S&I pay program data, review the incorporation of human capital management principles and use of resources, and develop related measures. DOD concurred with three recommendations and partially concurred with two. GAO continues to believe that actions to fully address these two recommendations are needed, as discussed in the report.

View [GAO-17-39](#). For more information, contact Brenda S. Farrell at (202) 512-3604 or [farrellb@gao.gov](mailto:farrellb@gao.gov).

February 2017

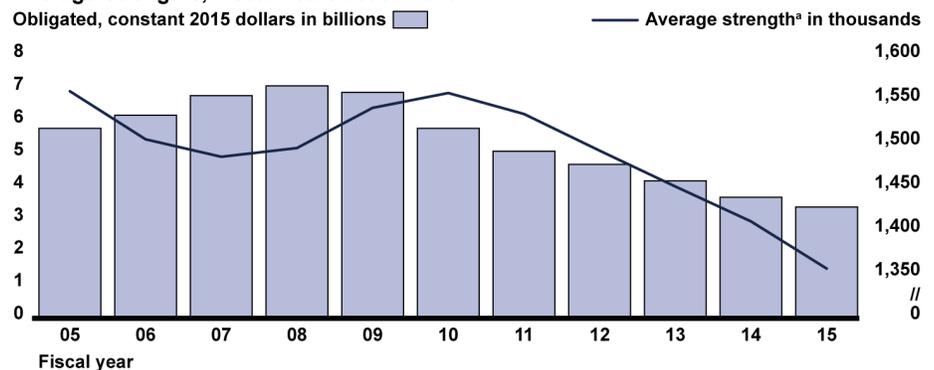
## MILITARY COMPENSATION

### Additional Actions Are Needed to Better Manage Special and Incentive Pay Programs

## What GAO Found

The Department of Defense's (DOD) special and incentive (S&I) pay obligations for active duty servicemembers decreased from fiscal years 2005 through 2015 from \$5.8 billion to \$3.4 billion (about 42 percent) in constant 2015 dollars (see fig.). DOD officials attributed the decrease to a combination of reduced overseas contingency operations, a reduced annual average strength of the force, and a favorable recruiting climate. DOD does not collect and report complete S&I obligation data for the reserve components because, according to officials, there is no requirement to do so and the services would likely need to make changes to their financial and personnel systems to separately track the obligations. However, according to officials, DOD has not explored cost-effective approaches to collect and report this information, which would better position the department to know the full cost of its S&I pay programs.

**Active Duty Personnel Special and Incentive Pay Program Obligations and Total Active Duty Average Strengths, Fiscal Years 2005 - 2015**



Source: GAO analysis of Department of Defense data. | GAO-17-39

The military services largely applied key principles of effective human capital management in the design of their S&I pay programs for nuclear propulsion, aviation, and cybersecurity occupations. However, the application of these key principles varied by service and occupation. Only the Navy's S&I pay programs for nuclear propulsion and aviation fully addressed all seven principles; programs for other occupations and services generally exhibited a mixture of full and partial application. GAO found that, according to officials, DOD and the services had not taken steps to fully ensure consistent application of the principles. For example, DOD has not reviewed the extent to which its S&I pay programs have incorporated principles of effective human capital management and used resources efficiently. DOD also has not established related measures to ensure efficient use of resources. Without such measures, DOD and the services generally assess the effectiveness of S&I pay programs by the extent to which they achieve desired staffing targets. However, this approach does not ensure that S&I pay programs are using resources in the most efficient manner, as DOD guidance requires. Until DOD reviews the extent to which S&I pay programs have incorporated human capital management principles and used resources efficiently—and develops related measures for efficient use of resources—DOD and the services may lack assurance that S&I pay programs are effective and that resources are optimized for the greatest return on investment.

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## Abbreviations

ACIP	Aviation Career Incentive Pay
AIB	Annual Incentive Bonus
AIP	Assignment Incentive Pay
ACP	Aviation Continuation Pay
COPAY	Nuclear Officer Continuation Pay
DOD	Department of Defense
ESRP	Enlisted Supervisor Retention Pay
NCAB	Nuclear Career Accession Bonus
NOAB	Nuclear Officer Accession Bonus
NOIP	Nuclear Officer Incentive Pay
QRMC	Quadrennial Review of Military Compensation
RPA	Remotely Piloted Aircraft
S&I	Special and Incentive
SDAP	Special Duty Assignment Pay
SDIP	Sea Duty Incentive Pay
SSIP	Submarine Support Incentive Pay
SRB	Selective Reenlistment Bonus
U.S.C.	United States Code

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February 3, 2017

The Honorable John McCain  
Chairman  
The Honorable Jack Reed  
Ranking Member  
Committee on Armed Services  
United States Senate

The Department of Defense (DOD) uses special and incentive (S&I) pay programs as tools in its compensation system to help ensure that military pay is sufficient to field a high-quality, all-volunteer force, including those in hard-to-fill or critical specialties.<sup>1</sup> Collectively, these pay programs aim to help DOD compensate and incentivize servicemembers for occupations that are dangerous, are less desirable, or require special skills and training for which higher compensation is available in the civilian labor market. In fiscal year 2015, DOD obligated more than \$3.4 billion for S&I pays, representing about 3.3 percent of its budget for active duty cash compensation.

Cash compensation, which includes S&I pays and basic pay, is part of a comprehensive compensation package that the department provides to military personnel, which also includes noncash benefits such as health care and deferred compensation such as retirement pensions. In its budget request for fiscal year 2017, DOD noted that it must sustain a robust pay and benefits package to retain the best warfighters to execute the national defense strategy.<sup>2</sup> However, DOD also noted the department must ensure that its military personnel compensation requirements—which comprise about one-third of the current military budget—do not crowd out investments in the readiness and modernization portions of the budget. In fiscal year 2008 Congress authorized a consolidation of the existing 60 S&I pay authorities (legacy authorities) into 8 authorities (consolidated authorities) based on broad categories of personnel and

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<sup>1</sup> We use the term “special and incentive pays” to refer to special pays, incentive pays, and bonuses authorized in chapter 5 of Title 37 of the U.S. Code.

<sup>2</sup> DOD, Office of the Undersecretary of Defense Chief Financial Officer, *Defense Budget Overview: United States Department of Defense Fiscal Year 2017 Budget Request* (Feb. 2016).

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activities.<sup>3</sup> DOD is in the process of implementing the consolidated authorities by revising existing pay programs in conformance with the new authorities. Implementation of this change must be complete by January 28, 2018. For additional information on the status of DOD's implementation efforts, see appendix I.

We have issued multiple products and made many recommendations related to DOD's efforts to effectively manage its military personnel compensation incentives. Our March 2011 report on duplication and opportunities for cost savings in government programs found that DOD and Congress have expanded military pay and benefits using a piecemeal approach rather than a total compensation approach that could help to balance the appropriateness, affordability, and sustainability of personnel-related costs. The report referenced our past recommendations, including a 2007 recommendation that DOD should establish a clear compensation strategy that includes performance measures to evaluate the efficiency of compensation in meeting recruiting and retention goals.<sup>4</sup> DOD has taken some steps to evaluate the effectiveness of specific pay and benefits included in military compensation but has not comprehensively assessed the effectiveness of its mix of pays and benefits and used the results to develop a compensation strategy as we recommended. Most recently, in November 2015, we reported on the extent to which the Office of the Secretary of Defense, Department of the Army, and the Army National Guard have conducted their oversight responsibilities of the Army National Guard's financial incentives programs.<sup>5</sup> We found that, although Department of the Army and National Guard regulations require evaluations of the effectiveness of the Army National Guard financial incentives programs—

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<sup>3</sup> National Defense Authorization Act for Fiscal Year 2008, Pub. L. No. 110-181 (Jan. 28, 2008) (Fiscal Year 2008 NDAA). Congress's authorization enacted a DOD recommendation to consolidate S&I pays into eight broad categories. In its *Report of the Tenth Quadrennial Review of Military Compensation* (Sept. 2008), DOD noted in part that the large number of legacy pays made the system difficult to administer and that the degree of flexibility varied among pays. DOD recommended consolidating the many existing pays into a smaller number of broad categories that would offer the advantages of efficiency, flexibility, and effectiveness.

<sup>4</sup> GAO, *Military Personnel: DOD Needs to Establish a Strategy and Improve Transparency over Reserve and National Guard Compensation to Manage Significant Growth in Cost*, [GAO-07-828](#) (Washington, D.C.: Jun. 20, 2007).

<sup>5</sup> GAO, *Military Recruiting: Army National Guard Needs to Continue Monitoring, Collect Better Data, and Assess Incentives Programs*, [GAO-16-36](#) (Washington, D.C.: Nov. 17, 2015).

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including S&I pays such as enlistment and reenlistment bonuses—the Army and the Army National Guard had not evaluated and documented the effectiveness of the programs.<sup>6</sup> Further, we reported that DOD did not include Reserve Component obligation data in required reports that are used to help ensure that DOD is using the most efficient and cost-effective processes in the recruitment of new personnel. On the basis of our findings, we recommended that the Secretary of the Army, in conjunction with the Director, Army National Guard, exercise their oversight responsibilities by evaluating and documenting the effectiveness of the Army National Guard’s incentives program in meeting its goals. In addition, we recommended that DOD enforce its requirement for the Reserve Components to submit information on the amounts of incentives obligated and incorporate the required information in the recruiting resources reports. DOD concurred with the recommendations, and has taken action to implement the second recommendation. For additional information on our prior work on military personnel compensation incentives, see a list of related products at the end of this report.

A Senate Armed Services Committee report accompanying a bill for the National Defense Authorization Act for Fiscal Year 2016 includes a provision for us to review the effectiveness of DOD’s S&I pay programs.<sup>7</sup> This report assesses (1) trends in DOD obligations for S&I pay programs for fiscal years 2005 through 2015, and the extent to which DOD reports such obligations department-wide; and (2) the extent to which the military services applied key principles of effective human capital management in the design of S&I pay programs for recruitment and retention of servicemembers in selected high-skill occupations for fiscal years 2010 through 2015.

To address our first objective, we obtained and analyzed data on S&I pay programs from the annual budget justification materials published by DOD and the military services. We analyzed obligations for S&I pays from their active and Reserve Component military personnel accounts for fiscal years 2005 through 2015. We selected this timeframe to enable us to evaluate trends over time, and fiscal year 2015 was the most recent year

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<sup>6</sup> Army Regulation 135-7, *Army National Guard and Army Reserve Incentives Programs* (Apr. 15, 1996), and National Guard Regulation 600-7, *Selected Reserve Incentive Programs* (Aug. 12, 2014).

<sup>7</sup> S. Rep. 114-49 (2015), accompanying S. 1376, a proposed bill for the National Defense Authorization Act for Fiscal Year 2016.

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of available obligations data at the time of our review. To assess the reliability of the data on S&I pays, we assessed the completeness of the data and compared the data against other data sources. As a result of our assessment and discussions with DOD officials, we determined that obligation data for active component S&I pay programs were sufficiently reliable. DOD's *Financial Management Regulation*, which provides a uniform budget and accounting classification that is to be used for preparing budget estimates, requires the Reserve Components to report obligations for certain recruiting and retention bonuses but does not require the services to report all Reserve Component S&I obligation data separately from other types of compensation. As such, we requested data on Reserve Component obligations for S&I pay programs from each of the services. We determined that obligation data for Reserve Component S&I pay programs—other than those for the Marine Corps Reserve—were unreliable due to incompleteness or inconsistency, as discussed later in this report. Further, we examined DOD policy, key statutes, accounting standards, and federal internal control standards for developing and reporting cost information to determine the extent to which they were followed by DOD when reporting on S&I pay obligations.<sup>8</sup>

To address our second objective, we selected a non-generalizable sample of S&I pay programs associated with high-skill occupations from across the military services to review in greater detail as case studies. In selecting the case studies, we sought to include (1) a mix of S&I pay programs associated with an occupation-specific pay authority and S&I pay programs that apply authorities that are available across occupation types; (2) programs containing pays in varying stages of implementation; and (3) at least one emerging occupation. We selected the S&I pay programs associated with the following three occupations, identified as “high-skill” in the congressional provision in Senate Report 114-49, for focused study: aviation, cybersecurity, and nuclear propulsion. These occupations were chosen because each service uses different approaches to offering S&I pays to aviators; cybersecurity is an emerging

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<sup>8</sup> The Chief Financial Officer's Act of 1990, Pub. L. No. 101-576 (Nov. 15, 1990) underscores the importance of improving financial management in the federal government. Among other things, the act calls for developing and reporting cost information. Statement of Federal Financial Accounting Standard Number 4, “Managerial Cost Accounting Standards and Concepts,” is aimed at providing reliable and timely information on the full cost of federal programs, their activities, and outputs. GAO, *Standards for Internal Control in the Federal Government*, [GAO/AIMD-00-21.3.1](#) (Washington, D.C.: Nov. 1999).

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occupation for which there are no designated S&I pays; and while the nuclear propulsion occupation is limited to one military service, it is a relatively high-cost S&I pay program. While the findings of the case studies cannot be generalized to all S&I pay programs across DOD, they reflect a range of characteristics of such programs and are associated with skills and missions deemed critical by the department. To identify criteria for evaluating the effectiveness of S&I pay programs designed to recruit and retain military servicemembers, we reviewed a compilation of GAO's body of work on human capital management and DOD's human capital guidance.<sup>9</sup> Using these sources, we selected seven key principles of effective human capital management that can be applied to assess the effectiveness of the services' S&I pay programs' design.<sup>10</sup> We applied these seven key principles to DOD and service practices for designing their S&I pay programs associated with the three case study occupations we selected. In addition to using the key principles, we also compared aspects of DOD's S&I pay program guidance with federal internal control standards that emphasize the importance of establishing clear and consistent agency objectives.<sup>11</sup> This report provides the results of our three case studies, and appendixes II through IV provide additional information and analysis for each case study. For additional details on our scope and methodology, see appendix V.

We conducted this performance audit from July 2015 to February 2017 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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## Background

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<sup>9</sup> GAO, *A Model of Strategic Human Capital Management*, [GAO-02-373SP](#) (Washington, D.C.: Mar. 15, 2002); GAO, *Human Capital: Key Principles for Effective Strategic Workforce Planning*, [GAO-04-39](#) (Washington, D.C.: Dec. 11, 2003); GAO, *High-Risk Series: An Update*, [GAO-11-278](#) (Washington, D.C.: February 2011); Department of Defense, *Eleventh Quadrennial Review of Military Compensation* (June 2012); Department of Defense, *DOD Diversity and Inclusion Strategic Plan 2012-2017* (2012).

<sup>10</sup> The seven key principles are listed in figure 3 of this report.

<sup>11</sup> [GAO/AIMD-00-21.3.1](#).

## Purpose and Benefits of S&I Pays

The Department of Defense’s military compensation package includes a collection of pays and benefits used to retain and recruit active duty servicemembers, including basic pay, allowances for housing and subsistence, and federal tax advantages. In addition, servicemembers can be provided with compensation for specific duties and occupations or conditions of service in the form of S&I pays. As we reported in 2011, DOD and the services are authorized to offer various S&I pays that provide targeted monetary incentives to specific groups of personnel to influence the numbers of personnel in specific situations in which less costly methods have proven inadequate or impractical.<sup>12</sup>

## S&I Pay Programs Used to Help Meet Staffing Targets for Three High-Skill Occupations

The services use a variety of S&I pay programs to help meet staffing targets for the three high-skill occupations we selected as case studies for this review (see table 1). These S&I pay programs are generally used to improve accession and retention of servicemembers. We discuss the services’ use of S&I pays to support these occupations in more detail in appendixes II – IV.

**Table 1: Special and Incentive Pay Programs Used for Select Occupations, Fiscal Years 2010 – 2015**

	Officer	Enlisted
<b>Nuclear Propulsion</b>		
Navy	<ul style="list-style-type: none"> <li>Nuclear Career Accession Bonus</li> <li>Nuclear Career Annual Incentive Bonus</li> <li>Nuclear Officer Accession Bonus</li> <li>Nuclear Officer Continuation Pay</li> <li>Submarine Support Incentive Pay</li> </ul>	<ul style="list-style-type: none"> <li>Assignment Incentive Pay</li> <li>Enlisted Supervisor Retention Pay</li> <li>Sea Duty Incentive Pay</li> <li>Selective Reenlistment Bonus</li> <li>Special Duty Assignment Pay</li> </ul>
<b>Aviation</b>		
Army	<ul style="list-style-type: none"> <li>Assignment Incentive Pay</li> <li>Aviation Career Incentive Pay</li> <li>Aviation Continuation Pay</li> </ul>	<ul style="list-style-type: none"> <li>Selective Reenlistment Bonus</li> </ul>
Navy	<ul style="list-style-type: none"> <li>Aviation Career Incentive Pay</li> <li>Aviation Continuation Pay</li> </ul>	N/A
Marine Corps	<ul style="list-style-type: none"> <li>Aviation Career Incentive Pay</li> <li>Aviation Continuation Pay</li> </ul>	<ul style="list-style-type: none"> <li>Selective Reenlistment Bonus</li> </ul>

<sup>12</sup> GAO, *Military Cash Incentives: DOD Should Coordinate and Monitor Its Efforts to Achieve Cost-Effective Bonuses and Special Pays*, [GAO-11-631](#) (Washington, D.C.: June 21, 2011).

	Officer	Enlisted
Air Force	<ul style="list-style-type: none"> <li>• Assignment Incentive Pay</li> <li>• Aviation Career Incentive Pay</li> <li>• Aviation Continuation Pay</li> </ul>	N/A
<b>Cybersecurity</b>		
Army	<ul style="list-style-type: none"> <li>• Assignment Incentive Pay</li> </ul>	<ul style="list-style-type: none"> <li>• Assignment Incentive Pay</li> <li>• Selective Reenlistment Bonus</li> <li>• Special Duty Assignment Pay</li> </ul>
Navy	N/A	<ul style="list-style-type: none"> <li>• Selective Reenlistment Bonus</li> </ul>
Marine Corps	N/A	<ul style="list-style-type: none"> <li>• Selective Reenlistment Bonus</li> </ul>
Air Force	N/A	<ul style="list-style-type: none"> <li>• Selective Reenlistment Bonus</li> </ul>

Legend: N/A = Not applicable. No special and incentive pays were offered to personnel in these categories.

Source: GAO analysis of DOD data. | GAO-17-39

Note: In addition to the special and incentive pays listed above, the services also offered enlistment bonuses to enlisted personnel who served in nuclear propulsion, aviation (remotely piloted aircraft operators), and cybersecurity career fields from fiscal year 2010 through fiscal year 2015. However, this table does not include enlistment bonuses because service officials told us that at the time the servicemember enlists in the armed services enlistment bonuses are generally not linked to a servicemember's occupation. Servicemembers in these occupations do not necessarily receive these pays concurrently. The pay programs listed in this table for the aviation occupation apply only to those personnel directly responsible for the flight operations of an aircraft.

## DOD's Effort to Consolidate S&I Pay Categories

In its 2008 *Report of The Tenth Quadrennial Review of Military Compensation (QRMC)*, DOD recommended consolidating the more than 60 S&I pays into 8 broad categories in order to increase the pay system's flexibility and effectiveness as a force management tool. These categories include enlisted force management pay, officer force management pay, nuclear officer force management pay, aviation officer force management pay, health professions officer force management pay, hazardous duty pay, assignment or special duty pay, and skill incentive or proficiency pay. Prior to the release of DOD's *Tenth QRMC* in 2008, Congress authorized the consolidation of the 60 legacy authorities into 8 authorities based on the categories. This change is required to be completed by January 28, 2018. In addition to the 8 consolidated authorities, existing authorities for the 15-year career status bonus and the critical skills retention bonus were retained.<sup>13</sup> According to DOD, as of October 2016, 5 of the 8 consolidated special pay authorities had been fully or partially implemented by revising and transitioning existing S&I pay programs in conformance with the new consolidated authorities. According to a DOD official, implementation of the remaining 3

<sup>13</sup> The 8 newly created consolidated pay categories and the two retained bonus authorities are classified in chapter 5, subchapter II of Title 37 of the U.S. Code.

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consolidated authorities is expected to be completed by October 2017. In June 2011 we recommended that DOD monitor its efforts in consolidating S&I pay programs under its new authorities to determine whether consolidation resulted in greater flexibility.<sup>14</sup> DOD officials had previously stated that they would not be able to assess whether the consolidation resulted in greater flexibility until the consolidation is complete. See appendix I for additional details on DOD's implementation of the consolidation effort.

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## Roles and Responsibilities for the S&I Pay Program

Within the Office of the Secretary of Defense, the Deputy Under Secretary of Defense for Personnel and Readiness is responsible for DOD personnel policy and total force management. The Principal Deputy Under Secretary of Defense for Personnel and Readiness, under the Under Secretary of Defense for Personnel and Readiness, is responsible for providing overall guidance in the administration of the enlistment bonus, accession bonus for new officers in critical skills, selective reenlistment bonus, and critical skills retention bonus programs. It is DOD policy that the military services use enlistment, accession, reenlistment, and retention bonuses as incentives in meeting personnel requirements. The intent of bonuses is to attract and retain servicemembers in specific skills or career fields in which less costly methods have proven inadequate or impractical. According to policy, the military services must exercise this authority in the most cost-effective manner, considering bonus employment in relation to overall skill, training, and utilization requirements. Military skills selected for the award of enlistment, accession, reenlistment, and/or retention bonuses must be essential to the accomplishment of defense missions.<sup>15</sup>

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<sup>14</sup> [GAO-11-631](#).

<sup>15</sup> DOD Instruction 1304.29, *Administration of Enlistment Bonuses, Accession Bonuses for New Officers in Critical Skills, Selective Reenlistment Bonuses, and Critical Skills Retention Bonuses for Active Members* (Dec. 15, 2004), (incorporating change July 11, 2016).

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## Obligations for Special and Incentive Pays for Active Duty Personnel Have Decreased since Fiscal Year 2005, but DOD Does Not Report Comparable Data for Reserve Component Personnel

DOD has experienced an overall decrease in active duty S&I pay obligations since fiscal year 2005, but it does not report comparable data on Reserve Component S&I pay programs.<sup>16</sup> Our analysis of DOD's annual budget data shows that the obligations of S&I pays for active duty military personnel, after accounting for inflation, decreased by 42 percent from fiscal year 2005 through fiscal year 2015, from \$5.8 billion to \$3.4 billion.<sup>17</sup> The 42 percent S&I pay obligation decrease from fiscal years 2005 through 2015 also coincided with a 12 percent decline in active duty military average strengths. DOD officials attributed the decrease to a combination of reduced overseas contingency operations, a reduced annual average strength of the force, and a favorable recruiting climate. DOD does not report complete information on S&I pay obligations for the Reserve Components, in part because DOD's Reserve Components are not required to separately collect and report all S&I pay obligations in annual budget materials provided to Congress, thus limiting the extent to which we could identify and evaluate changes occurring within Reserve Components' S&I pay programs.

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## Obligations for Special and Incentive Pays for Active Duty Personnel Decreased from Fiscal Years 2005 through 2015

Our analysis of DOD budget data shows that from fiscal year 2005 through fiscal year 2015 the department's active duty S&I pay obligations decreased by 42 percent, from \$5.8 billion to \$3.4 billion (see figure 1). In comparison, during the same time, the total active duty military personnel obligations decreased by 10 percent—largely due to end strength reductions. Obligations for active duty S&I pays increased from \$5.8 billion in fiscal year 2005 to \$7.1 billion in fiscal year 2008 (by 22 percent), largely due to the increased use of S&I pays by the Army and the Marine Corps. Service officials attributed the increase to the Army and Marine Corps Grow-the-Force initiative.<sup>18</sup> After peaking in 2008, active duty S&I pay obligations declined to \$3.4 billion in fiscal year 2015. DOD officials

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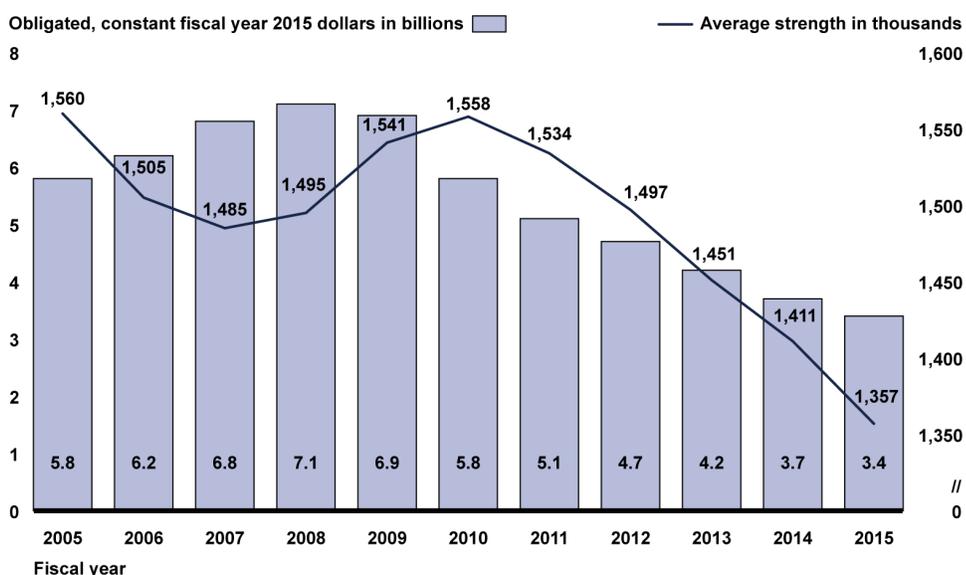
<sup>16</sup> Reserve components include the Army National Guard, the Army Reserve, the Air National Guard, the Air Force Reserve, the Navy Reserve, and the Marine Corps Reserve.

<sup>17</sup> Obligations are derived from actual obligations recorded in DOD's annual budget materials and are presented in fiscal year 2015 dollars. To convert obligations to constant dollars, we used the series of military personnel deflators for fiscal years 2005 through 2015 listed in DOD's National Defense Budget Estimates for fiscal year 2015, published by the Office of the Under Secretary of Defense (Comptroller).

<sup>18</sup> In January 2007, the President announced an initiative, referred to as "Grow-the-Force," to increase the end strengths in the Army and the Marine Corps by a combined total of 101,000 by 2013.

attributed this decrease to a combination of reduced overseas contingency operations, a drawdown in forces, and an economic recession that led to a more favorable recruiting climate and less need to offer S&I pays. As shown in figure 1, the 42 percent S&I pay obligation decrease from fiscal years 2005 through 2015 also coincided with a 12 percent decline in active duty military average strengths, demonstrating the services' ability to adjust certain S&I pays in response to changing economic conditions and labor market dynamics, as well as trends in the number of military personnel.<sup>19</sup>

**Figure 1: Active Duty Personnel Special and Incentive Pay Obligations and Total Active Duty Average Strengths, Fiscal Years 2005 - 2015**



Source: GAO analysis of Department of Defense data. | GAO-17-39

Note: Obligation amounts include obligations for overseas contingency operations and mobilized Reserve Component servicemembers. Mobilized reservists are also included in the average strength data.

## Trends Varied across S&I Pay Categories

From fiscal years 2005 through 2015, obligations for S&I pays varied across the pay categories under which legacy S&I pays are being consolidated (see figure 2). Specifically, since the peak in fiscal year 2008, obligations in all but three consolidated S&I pay categories

<sup>19</sup> "Military average strength" reflects the fiscal year average of monthly end strength data for enlisted personnel. "End strength" represents the actual number of personnel on board at the end of a fiscal year.

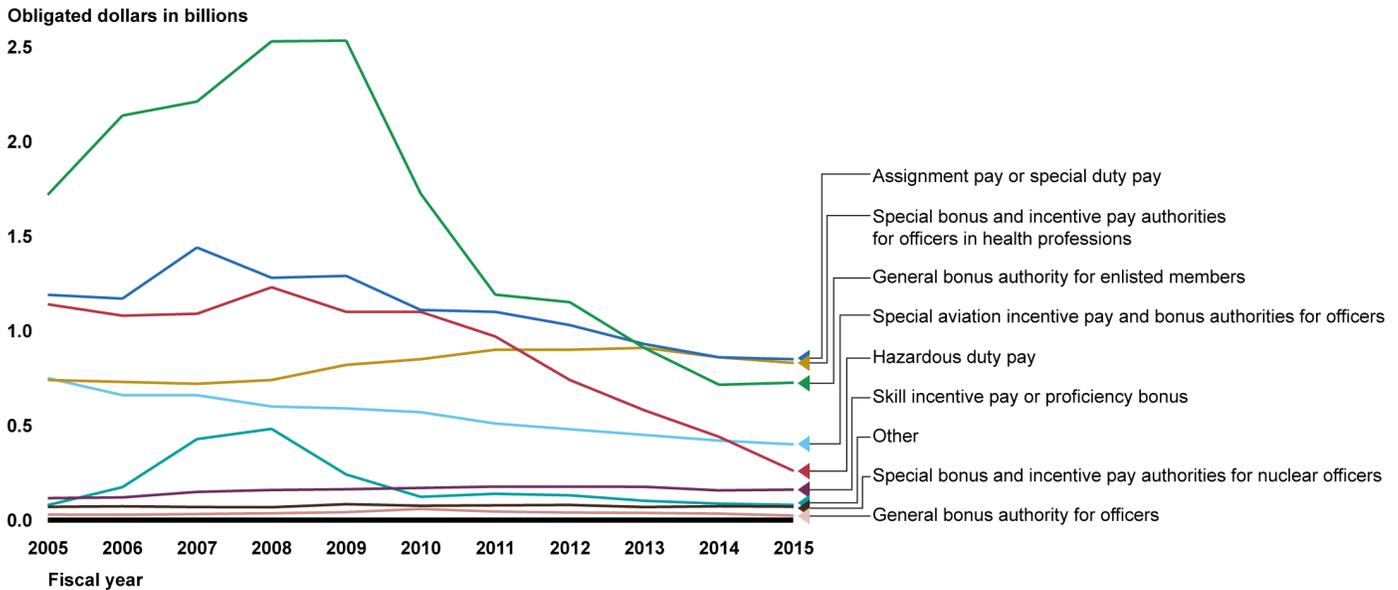
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decreased. For example, obligations for hazardous duty pay, which consolidated legacy pays that traditionally operated as entitlement authority and was paid to servicemembers performing hazardous duties enumerated in statute, peaked in fiscal year 2008 to \$1.2 billion due to the operational tempo and steadily declined as a result of the drawdown in forces to \$259 million in fiscal year 2015 (by 79 percent).<sup>20</sup> Similarly, the general bonus pay for enlisted members, which accounted for 29 percent of the total obligations for S&I pays from fiscal years 2005 through 2015, grew from \$1.7 billion in fiscal year 2005 to \$2.5 billion in fiscal year 2008 (by 47 percent) and subsequently declined to \$727 million in fiscal year 2015 (by 71 percent). Service officials attributed the increase to the Army and Marine Corps Grow-the-Force initiative, which resulted in an increased use of enlistment and retention bonuses, and attributed the subsequent decrease to the drawdown in forces and the economic recession. Service officials noted that while obligations and the number of Selective Reenlistment Bonus (SRB) contracts have declined overall since fiscal year 2008, for certain high demand specialties, such as special operations, cyber, and nuclear personnel, obligations and the numbers of bonus contracts have increased due to the need to retain these personnel.

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<sup>20</sup> "Entitlement authority" is the authority to make payments for which budget authority is not provided in advance by an appropriation act to any person under the provisions of the law containing such authority. The U.S. government is legally required to make the payments to such persons who meet the requirements established by law.

**Figure 2: Obligated Amounts for Special and Incentive Pays and Bonuses Provided to Active Duty Personnel by Special and Incentive Pay Category, Fiscal Years 2005 - 2015**



Source: GAO analysis of Department of Defense data. | GAO-17-39

Note: Obligations are reported in fiscal year 2015 constant dollars. Obligation amounts include obligations for overseas contingency operations and mobilized Reserve Component servicemembers.

## DOD Could Not Provide Complete Obligation Data on Special and Incentive Pays for All Reserve Components

The Reserve Components did not consistently collect and report complete obligation data for each S&I pay program. Specifically, the Reserve Components' budget justification materials did not contain obligation data for S&I pays provided to Guard and reserve members to the same level of detail as the active component, and the Marine Corps Reserve was the only Reserve Component able to provide total obligations for S&I pays.<sup>21</sup> Depending on the type of duty they are performing, Reserve Component members may be eligible for special and incentive pays, such as aviation career incentive pay, foreign language proficiency pay, special pays for health professionals, diving duty pay, hazardous duty pays, and others. Reservists are generally eligible for

<sup>21</sup> Our analyses of S&I pay obligations for the reserve component included part-time and full-time reservists but excluded reservists who were mobilized since they are paid out of the active component's budget. Part-time reservists are required to maintain readiness through scheduled drilling and training, usually one weekend a month (i.e., inactive duty training) and 2 weeks a year (i.e., annual training). Full-time reservists serve as full-time administration and support staff to the various reserve components.

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special and incentive pays during active duty training under the same conditions as active component personnel. Typically, they may receive a pro-rated portion of the full monthly amount corresponding to the number of days served. Reserve component members may also be eligible for special and incentive pays during inactive duty for training, and they typically receive such compensation at a rate proportional to the amount of inactive duty compensation they receive (i.e., one-thirtieth of the monthly rate for each unit training assembly).<sup>22</sup>

Our review of the services' annual budget materials found that the services did not report Reserve Component S&I pay obligations in their annual budget materials in a manner consistent with the active component. This was because DOD's *Financial Management Regulation*,<sup>23</sup> which provides guidance for a uniform budget and accounting classification that is to be used for preparing budget estimates, including the budget justification materials we reviewed, does not require the services to do so. For the active military personnel budget materials, the regulation contains guidance and a framework that require the services to separately report obligations for each S&I pay. In contrast, the regulation requires the Reserve Components to list obligations for certain bonuses but does not require them to report obligations for all S&I pays separately; instead, it specifies that many Reserve Component S&I pays be grouped together with other military personnel obligations under a single budget activity.<sup>24</sup> For example, in accordance with DOD guidance, all the Reserve Components reported obligations for accession, reenlistment, and enlistment bonuses for their administration and support personnel. In addition to the bonuses, the Navy Reserve separately identified obligations for aviation continuation pay and foreign language proficiency pay in its annual budget materials for its administration and support personnel. The Air Force Reserve also separately identified obligations for foreign language proficiency pay in its

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<sup>22</sup> A unit training assembly is generally a 4-hour period of instruction, and there are usually four unit training assemblies per drill weekend.

<sup>23</sup> Department of Defense 7000.14R, *Financial Management Regulation* (May 2015).

<sup>24</sup> DOD's *Financial Management Regulation* specifies that special pay and incentive pay for hazardous duty obligations for active duty for training personnel should be grouped with obligations for other pay and allowances, such as basic pay and basic allowance for housing, under a single budget subactivity. DOD's *Financial Management Regulation* also specifies that incentive pay for hazardous duty obligations for inactive duty for training personnel should be grouped with basic pay, retired pay accrual, and social security under a single budget subactivity.

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annual budget materials for its administration and support personnel. However, for many of the other S&I pays, the services grouped S&I pay obligations with other military personnel obligations under a single budget activity, as is allowed under the regulation.

We requested that the Reserve Components provide us with S&I pay obligation data that were not contained in annual budget materials, but the Marine Corps reserve was the only Reserve Component that was able to provide obligations for each S&I pay for all the years included in our review (fiscal years 2005 through 2015). Army, Navy, and Air Force officials told us that their systems were not originally designed to collect and report obligations for individual S&I pays for the Reserve Components. As a result, the Army and the Air Force could not provide additional data. The Navy provided some additional data, but we determined that these data were not reliable because of inconsistencies and incompleteness. For example, the Navy could not provide obligation data for all S&I pays—instead providing execution data.<sup>25</sup> Further, according to Navy officials, certain S&I pays are not consistently categorized in their system, making it difficult to identify cost trends in these S&I pays over time. Further, these services could not provide the portion of their Reserve Components' military personnel budgets that S&I pay obligations represent. S&I pay obligations for the Marine Corps Reserve accounted for roughly 2 percent (\$172 million) of its total military personnel budget on average from fiscal years 2005 through 2015. However, this percentage may not be representative of all the services' Reserve Components, as the services' reliance on S&I pays can vary, as we observed variability among the active components. Similarly to active duty S&I pay obligations, Marine Corps Reserve data also indicated that obligations peaked in fiscal year 2009 due in part to an increased offering of new enlistment bonuses. According to Marine Corps officials, this increase helped to support recruitment and retention of additional Marines required to sustain two major theater combat operations as well as to provide forces to Special Operations, Cyberspace Operations, and various headquarters staffs.

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<sup>25</sup> The term "obligation" refers to a definite commitment by a federal agency that creates a legal liability to make payments immediately or in the future. Agencies incur obligations, for example, when they award grants or sign contracts. An "expenditure" is the actual spending of money by the issuance of checks, disbursement of cash, or electronic transfer of funds made to liquidate a federal obligation. GAO, *A Glossary of Terms Used in the Federal Budget Process*, [GAO-05-734SP](#) (Washington, D.C.: Sept. 2005).

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The Office of the Under Secretary of Defense (Comptroller) has established budgetary information as a priority area for DOD's Financial Improvement and Audit Readiness Plan. The Comptroller's memorandum establishing these priorities states that, because budgetary information is used widely and regularly for management, DOD will place the highest priority on improving its budgetary information and processes.<sup>26</sup> In support of DOD's policy to use the most efficient and cost-effective processes in the military services' recruitment of new personnel, DOD components are required to track and report all resource information applicable to enlisted members and officers who join the military services, including recruitment incentives.<sup>27</sup> Furthermore, according to key statutes and accounting standards, agencies should develop and report cost information.<sup>28</sup> Besides demonstrating financial accountability in the use of taxpayer dollars by showing the full cost of federal programs, the cost information can be used by the Congress and federal executives in making decisions about allocating federal resources, authorizing and modifying programs, and evaluating program performance. The cost information can also be used by program managers in making managerial decisions to improve operating economy and efficiency.

According to the Office of the Under Secretary of Defense (Comptroller), there is no requirement to collect and report obligations separately for each of the Reserve Component's S&I pays. For example, guidance such as DOD's *Financial Management Regulation* for DOD's annual budget justification materials does not require the Reserve Components to collect and report such data. As a result, with the exception of the Marine Corps Reserve, the Reserve Components have not collected and reported S&I pay obligations separately. Furthermore, officials noted that there is no requirement to collect this information because the Reserve Component personnel generally accrue S&I pays at a much lower rate than do active duty personnel. DOD officials told us that the services would likely need to make programming changes to various financial and personnel

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<sup>26</sup> DOD, Under Secretary of Defense (Comptroller) Memorandum, "Priorities for Improving Financial Information and Processes for Achieving Audit Readiness," Aug. 11, 2009.

<sup>27</sup> DOD Instruction 1304.32, *Military Services Recruiting Related Reports* (Mar. 26, 2013).

<sup>28</sup> The Chief Financial Officer's Act, Pub. L. No. 101-576 (Nov. 15, 1990) underscores the importance of improving financial management in the federal government. Among other things, the act calls for developing and reporting cost information. Statement of Federal Financial Accounting Standard Number 4, "Managerial Cost Accounting Standards and Concepts," is aimed at providing reliable and timely information on the full cost of federal programs, their activities, and outputs.

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systems in order to separately track and report Reserve Component S&I pay obligations in their budget materials. However, DOD officials were unable to provide estimates of the costs associated with making such changes, and they told us that DOD has not explored other approaches that may be cost-effective to collect and report such information. According to federal internal control standards, agencies should have financial data to determine whether they are meeting their goals for accountability for the effective and efficient use of resources, which would apply to DOD in gauging the cost-effectiveness of changes to its financial and personnel systems for tracking and reporting S&I pay obligations for reservists.<sup>29</sup> Although S&I pay amounts provided to Reserve Component servicemembers are most likely a fraction of what is paid to the active component servicemembers, the total amounts could add to hundreds of millions of dollars over time, on the basis of data provided by the Marine Corps. Furthermore, according to Marine Corps officials, analysts were able to obtain data on S&I obligations for the fiscal years under our review using their financial pay systems without making any changes to these systems. Until DOD explores cost-effective approaches to collect and report S&I pay program data for the Reserve Components, DOD may not know the full cost of its S&I pay programs, may not be able to make fully informed decisions about resource allocation, and may not be able to evaluate program performance over time.

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<sup>29</sup> [GAO/AIMD-00-21.3.1.](#)

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## The Military Services Varied in Their Application of Key Principles of Effective Human Capital Management in S&I Pay Programs for Selected Occupations and Have Not Taken Steps to Fully Ensure Effectiveness in Program Design

The military services have largely applied key principles of effective human capital management in using S&I pay programs to retain servicemembers within our selected case study occupations (nuclear propulsion, aviation, and cybersecurity). However, the consistency with which the services applied these principles varied by service and by occupation. DOD and the services have not taken steps to fully ensure consistent application of principles of human capital management in some S&I pay programs for selected occupations and thereby ensure effectiveness in the programs' design.

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## The Military Services Largely Applied Key Principles of Human Capital Management in S&I Pay Programs, but Consistency Varied across the Services and Selected Occupations

Our review found that the military services largely applied key principles of effective human capital management in selected S&I pay programs. However, the consistency with which they applied the principles varied across the services and across selected nuclear, aviation, and cybersecurity occupations. In our March 2002 report on strategic human capital management, we stated that making targeted investments in employees is a critical success factor associated with acquiring, developing, and retaining talent.<sup>30</sup> Our report noted that, in making such investments, agencies must consider competing demands and limited resources and must balance and prioritize those factors. Similarly, in its *Eleventh QRMC*, DOD outlined a number of "core elements" for ensuring that investments in S&I pay strategies are cost-effective and optimize limited resources.<sup>31</sup> On the basis of our prior work and the recommendations from DOD's *QRMC*, we selected seven key principles of human capital management that can be applied to assess whether the services' S&I pay programs are designed to ensure their effectiveness. These seven key principles of human capital management include, among other things, decision-making about human capital investment that

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<sup>30</sup> [GAO-02-373SP](#).

<sup>31</sup> DOD, *Report of the Eleventh Quadrennial Review of Military Compensation* (June 2012).

is based largely on the expected improvement of agency results and is implemented in a manner that fosters top talent; consideration of replacement costs when deciding whether to invest in recruitment and retention programs; and assessments of civilian supply, demand, and wages that inform updates to agency plans as needed. Figure 3 lists the seven key principles and our assessment of the extent to which they were addressed in the military services' S&I pay programs for each of our three case study occupations.

**Figure 3: Assessment of Military Service Special and Incentive Pay Programs for Selected Occupations against Key Principles of Effective Human Capital Management**

	1. Criteria for human capital investments are transparent, clearly defined, well documented, and consistently applied	2. Replacement costs of personnel are considered when deciding to invest in retention programs	3. Decisions regarding human capital investments are based largely on expected improvement in agency results and implemented in a manner that fosters top talent	4. Approaches are tailored to meet organizational needs by, for example, identifying and evaluating unique staffing issues	5. Current and historical retention data are collected and reviewed as part of efforts to evaluate effects and performance of human capital investments	6. Opportunities for improvement are identified and incorporated into the next planning cycle	7. Civilian supply, demand, and wages are assessed, and plans are updated as needed
<b>Nuclear propulsion</b>							
Navy	●	●	●	●	●	●	●
<b>Aviation</b>							
Army	●	●	◐	●	◐	●	◐
Navy	●	●	●	●	●	●	●
Marine Corps	●	◐	●	●	●	●	◐
Air Force	○	●	◐	●	●	●	◐
<b>Cybersecurity</b>							
Army	●	●	◐	●	◐	●	●
Navy	●	●	●	◐	◐	●	●
Marine Corps	●	●	●	◐	●	●	◐
Air Force	●	●	◐	◐	◐	●	◐

● Met  
 ◐ Partially met  
 ○ Not met

Source: GAO analysis of Department of Defense data and information. | GAO-17-39

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Note: We reviewed a compilation of GAO's body of work on human capital management and DOD's human capital guidance. Using these sources, we selected seven key principles of human capital management that can be applied to assess the effectiveness of the services' S&I pay programs.

Based on our analysis of military service policies and guidance, annual S&I pay program proposals submitted to the Office of the Secretary of Defense (Personnel and Readiness), and interviews with officials, we determined that the services largely applied key human capital principles to the S&I pay programs for three selected occupations (nuclear propulsion, aviation, and cybersecurity). The extent to which the principles were applied varied in consistency by service and by occupation.

### Nuclear Propulsion Occupation

The Navy's nuclear propulsion program demonstrated consistent application of all seven principles throughout the use of S&I pays for both officers and enlisted personnel. We found that the Navy uses a four-part approach to planning, implementing, and monitoring its S&I pay programs for nuclear-trained personnel to ensure effectiveness in nuclear personnel recruitment and retention. Together, these practices align with the principles of effective human capital management. For example, the Navy's approach addresses key principle #2 by considering the high replacement costs of its nuclear personnel—up to \$986,000 per trainee—in justifying a strategy that prioritizes investment in retention initiatives over new accessions or recruits. In addition, the Navy sets optimal bonus amounts for nuclear officers and enlisted personnel by monitoring civilian nuclear salaries and employment demand (key principle #7), studying the effects of changes to bonus amounts on retention behavior (key principle #5), and making changes to bonus amounts as appropriate (key principle #4). Moreover, the Navy makes informed decisions about its investments in S&I pay programs for nuclear personnel by using both quantitative and qualitative models for predicting numbers of personnel and retention rates as accurately as possible (key principle #6). Finally, Navy officials perform periodic personnel audits to ensure that recipients of its nuclear-related S&I pays are continuing to meet eligibility criteria, thereby helping to ensure that only qualified members are retained (key principle #3).

### Aviation Occupation

We found that the Navy fully addressed each of the seven key principles of effective human capital management in managing its program to retain pilots. The Army, the Marine Corps, and the Air Force largely applied the principles, but we found that the extent to which the services addressed the key principles varied (see figure 3). For example, all of the services identified opportunities to improve their S&I pay programs, and incorporate these changes into the next planning cycle (key principle #6). The Navy and the Marine Corps addressed key principle #6 for their

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Aviation Continuation Pay (ACP) program by (1) offering different pay amounts to pilots by specific platform (the model of aircraft a pilot operates) and (2) reducing or suspending the pay when staffing goals had been achieved. In contrast, the Air Force offered ACP to broad categories of pilots across multiple platforms, and it generally offered the maximum amount allowed by law. Only the Navy and Marine Corps fully incorporated quality measures into decisions to offer S&I pays to pilots (key principle #3). For example, the Navy incorporated quality into its ACP program by targeting the bonus to pilots on track for Department Head positions and canceling bonus contracts for pilots who were not promoted to Department Head. In contrast, the Air Force considered the expected positive effect on retention as a factor for offering ACP, but did not specifically consider the relative quality of pilots within a targeted community as a factor for awarding an ACP contract.

In addition, the services varied in how they incorporated a review of the civilian aviation sector in their decisions to offer retention bonuses to pilots (key principle #7). For example, the Army has not reviewed or considered commercial aviation in the context of its S&I pay program for pilots—largely because the Army provided ACP only to special operations pilots, and the skillset required for this mission does not have a clear civilian-sector equivalent.<sup>32</sup> The Navy fully addressed this principle by specifically identifying comparable salary levels for commercial aviation pilots. The Air Force and the Marine Corps partially addressed this principle by considering the relationship between the compensation offered to their pilots and to commercial aviation pilots, but they did not specifically identify comparable salary levels and use them to determine retention bonus amounts. In addition, the services reached different conclusions about the extent to which the civilian aviation sector competes with the military for pilots. Specifically, the Navy stated that airline compensation would have to increase in order to have a significant impact on the retention of Navy pilots, and the Marine Corps reported that the potential increase in hiring by commercial airlines did not warrant the offering of ACP bonuses in fiscal year 2013. In contrast, the Air Force's reports endorsing aviator retention bonuses stated that civilian aviation compensation factored into the Air Force's decision to keep bonus amounts at the statutory limit of \$25,000 per year. In February 2014, we reported that commercial aviation compensation decreased by almost 10

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<sup>32</sup> In fiscal year 2011, the Army also offered ACP to instructor pilots for Apache helicopters.

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percent in constant dollars from 2000 to 2012.<sup>33</sup> In July 2016, DOD reported to Congress on aviation-related S&I pays.<sup>34</sup> DOD's report stated that the military has experienced high levels of pilot retention as a result of decreased civilian airline pilot salaries, significantly reduced civilian airline pilot hiring, increased military pay and benefits, and an increased sense of duty and patriotism after the events of September 11, 2001. However, the report added that the department anticipated that increased hiring by commercial airlines over the ensuing 5 to 7 years could necessitate increasing bonus amounts from \$25,000 per year to a range of \$38,500 to \$62,500 per year. As such, DOD's report requested that Congress consider increasing the rates of Aviation Career Incentive Pay, and specifically increase the maximum authorized level of Aviation Continuation Pay from \$25,000 per year to \$35,000 per year.

## Cybersecurity Occupation

Similar to our findings with regard to aviation-related S&I pay programs, we found that the services are also not consistently applying the principles of effective human capital management in implementing S&I pay programs for their cybersecurity personnel. As shown in figure 3 above, our assessment found that although none of the services fully addressed all seven principles for the cybersecurity occupation, they all addressed each principle at least partially. Each service consistently addressed three of the seven principles, including having clear and consistently applied criteria (key principle #1), considering the replacement cost of personnel (key principle #2), and identifying opportunities for improvement and incorporating them in planning (key principle #6). For example, the Army, the Navy, the Air Force and the Marine Corps have all addressed several principles through their development of criteria to guide their decisions to invest in SRBs for cybersecurity personnel. Examples of those criteria include growing requirements; personnel replacement costs (including training); and mission criticality of the skill set. Service officials stated that they considered replacement costs and noted that replacing these personnel would be more costly than offering an SRB. According to service officials, depending on the military occupational specialty, after initial military training, specialized training may take from 8 months to 3 years. Service officials cited costs to train their cyberforces as ranging from about

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<sup>33</sup> GAO, *Aviation Workforce: Current and Future Availability of Airline Pilots*, [GAO-14-232](#) (Washington, D.C.: Feb. 2014).

<sup>34</sup> DOD, Office of the Deputy Under Secretary of Defense for Military Personnel Policy, *Report To Congress In Support of Increasing Special And Incentive Pays for Aviation Officers* (July, 2016).

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\$23,000 to over \$500,000. We found that the Navy and the Marine Corps have taken steps to implement their S&I pay programs in a way that would help retain the most valuable personnel in the cybersecurity occupation in terms of top performance (key principle #3). For example, in order to retain the most qualified personnel, in fiscal year 2012 the Marine Corps began to use a rating system that would help decision-makers to differentiate Marines' performance during the reenlistment process. According to Army and Air Force officials, the purpose of the SRB program is to retain adequate numbers of qualified enlisted personnel serving in critical skills, and the bonus generally was not designed to target top performers. Further, we found that only the Army has tailored its SRB program to target cybersecurity personnel within non-designated cyber career fields (key principle #4). Specifically, the Army further targets personnel in career fields by location and skill, which enables it to target cybersecurity personnel in non-designated cyber career fields. The Marine Corps and the Air Force do not target cybersecurity personnel in non-designated cyber career fields. According to Navy officials, they do not have designated cybersecurity career fields and do not directly target cybersecurity personnel when offering bonuses. In addition, the services varied in how they incorporated a review of the civilian cybersecurity occupation in their decisions to offer S&I pays to cybersecurity personnel (key principle #7). For example, as part of determining the amount to offer, the Army and the Navy considered the wage of civilians in cyber-related career fields. The Navy noted in its justification for offering selective reenlistment bonuses that sailors within cyber-related career fields could qualify for positions in the civilian workforce with salaries starting at \$90,000 with a \$5,000 to \$10,000 sign-on bonus. According to Marine Corps and Air Force officials, the Marine Corps and the Air Force did not consider civilian wages in cyber-related career fields when determining whether to offer a retention bonus.

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### DOD And the Military Services Did Not Take Steps to Fully Ensure the Effectiveness of S&I Pay Programs' Design

As noted above, the military services largely incorporated key principles of effective human capital management into the S&I pay programs used for nuclear propulsion, aviation, and cybersecurity occupations. However, our review found that DOD and the services have not taken steps to fully ensure consistent application of the principles in some S&I pay programs for these selected occupations and to ensure effective program design. First, although DOD reports have stated that S&I pays are used efficiently, we found that DOD has not taken steps to support this conclusion. Specifically, DOD has not reviewed whether its S&I pay programs have incorporated the key principles of human capital management that we identified, or whether they have used resources

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efficiently because DOD officials told us that the services and different occupations have unique needs that make comparison and assessment difficult. DOD guidance pertaining to enumerated S&I pay programs generally requires the Assistant Secretary of Defense for Personnel and Readiness, using delegated authority, to monitor and propose revisions to bonus and special pay programs. For example, DOD Directive 1304.21 directs the Principal Deputy Under Secretary of Defense for Personnel and Readiness, acting under the Under Secretary of Defense for Personnel and Readiness, to monitor bonus programs of the military services and recommend measures required to attain the most efficient use of resources devoted to programs on enlistment bonuses, accession bonuses for new officers in critical skills, selective reenlistment bonuses, and critical skills retention bonuses for active members.<sup>35</sup> Consistent with the policy, the Office of the Under Secretary of Defense for Personnel and Readiness monitors the services' S&I pay programs, including bonuses. However, on the basis of interviews with DOD officials, we found that DOD has not systematically included in its monitoring efforts a review of whether S&I pay programs have used resources efficiently, nor has it developed measures required to attain efficient use of S&I pay program resources.<sup>36</sup> The officials stated that DOD has contracted with a research organization to develop a quantitative modeling tool that would enable the services to set cost-efficient bonus amounts. Such a tool may help the services to consistently apply human capital management principle #3 in instances where they are not already doing so in their S&I pay programs for aviation and cybersecurity (see figure 3). This principle calls for investment decisions to be based on expected improvement in agency

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<sup>35</sup> DOD Directive 1304.21, *Policy on Enlistment Bonuses, Accession Bonuses for New Officers in Critical Skills, Selective Reenlistment Bonuses, and Critical Skills Retention Bonuses for Active Members* (Jan. 31, 2015).

<sup>36</sup> DOD policy requires the services to provide annual execution reports on the enlisted bonus program, but the information in these reports is limited. In November 2015 we reported that, although Department of the Army and National Guard regulations require monitoring and evaluation of the effectiveness of authorized pay incentives—including enlistment and reenlistment bonuses—in achieving overall objectives, the Army and Army National Guard have not evaluated and documented the effectiveness of the programs. Moreover, we reported that incentives were not always being used to fill military occupational specialties that were consistently below authorized levels and that incentives were being sometimes used for military occupational specialties that were consistently above approved levels. We recommended that the Army take six actions, including evaluating and documenting the effectiveness of the Army National Guard's incentives program in meeting its goals. GAO, *Military Recruiting: Army National Guard Needs to Continue Monitoring, Collect Better Data, and Assess Incentives Programs*, [GAO-16-36](#) (Washington, D.C.: Nov. 17, 2015).

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results and implemented in a manner that fosters top talent. Depending on the inputs to the modeling tool, once developed, it could also help the Army, the Marine Corps, and the Air Force to address principle #7 by assessing civilian supply, demand, and wages and by updating their plans as needed for their S&I pay programs. According to DOD officials, however, progress on this effort has been slowed by competing priorities—that is, by the department’s focus on adjusting the military retirement system. In the absence of measures for ensuring efficiency in S&I pay programs, DOD and the services generally assess their S&I pay programs’ effectiveness by the extent to which they achieve desired staffing targets. However, this approach does not ensure that S&I pay programs are using resources in the most efficient manner, as DOD guidance requires. Until DOD reviews whether its S&I pay programs have incorporated the key principles of human capital management that we identified, reviews whether the programs have used resources efficiently, and prioritizes and completes the establishment of measures for efficient use of resources, DOD and the services may lack assurance that S&I pay programs are effective and that resources are optimized for the greatest return on investment.

Secondly, on the basis of our interviews with DOD officials, we found that the department has not assessed the extent to which its non-monetary incentives could result in the retention of personnel at a lower cost than S&I pays and with equal or better effectiveness. An assessment of this kind would help the services to consistently apply human capital principles #4 and #5 in its cybersecurity S&I pay programs (see figure 3). Specifically, an assessment of non-monetary incentives would help ensure that approaches are tailored to meet the services’ needs by identifying and evaluating unique staffing issues, and by collecting and reviewing historical retention data to evaluate the effects and performance of S&I pay programs. In our case study review of S&I pay programs associated with the nuclear propulsion program, Navy officials told us that changes to S&I pays provide only short-term solutions when retention shortfalls are caused by servicemembers’ quality-of-life concerns about things like deployment lengths and geographic instability. As a result, Navy officials told us that they use a variety of non-monetary incentives to complement S&I pays for retention purposes, including guarantees for shore duty and graduate education opportunities. We found that DOD and the services also take steps to understand what non-monetary incentives improve servicemember satisfaction and retention. For example, through its periodic Status of Forces surveys, DOD collects information from servicemembers on their satisfaction with non-monetary incentives and their plans to leave or stay in the military, among other

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things. In addition, DOD officials told us that the services collect feedback from servicemembers who are separating to understand their reasons for leaving. However, according to DOD officials, they have not taken steps to routinely leverage existing feedback mechanisms and evaluate whether these non-monetary approaches can be expanded as less costly alternatives to address retention challenges, because they believe that S&I pay programs may be more efficient than non-monetary incentives. Without conducting routine assessments of the impact of non-monetary incentive approaches on retention behavior and on the necessary levels of S&I pays, DOD and the services do not know whether they are using the most efficient and effective combination of incentives for achieving retention objectives at the lowest possible cost.

Third, with regard to key principle #3, department-level guidance on S&I pay programs does not explicitly incorporate personnel performance into eligibility criteria or retention decisions as a way to foster top talent and improve program results. For example, DOD guidance we reviewed on critical skills retention bonuses does not include explicit provisions addressing personnel performance that would ensure that monetary incentives are targeted to top performers.<sup>37</sup> At the service-level, some but not all S&I pay programs for the three case study occupations included direction for targeting pays to personnel based on their levels of performance, consistent with principle #3. For example, the Navy reported that they implement their program for awarding aviation retention bonuses to pilots to explicitly connect the bonus contract to a pilot's successful promotion to a department head position. If the pilot fails to be promoted, the bonus contract is canceled.<sup>38</sup> In addition, the Navy's instruction on its nuclear officer incentive pay program considers performance by excluding servicemembers who are undergoing disciplinary actions, who failed to maintain nuclear qualifications, or who failed to be selected for promotions, among other things.<sup>39</sup> DOD officials

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<sup>37</sup> DOD Directive 1304.21, *Policy on Enlistment Bonuses, Accession Bonuses for New Officers in Critical Skills, Selective Reenlistment Bonuses, and Critical Skills Retention Bonuses for Active Members* (Jan. 31, 2005); DOD Instruction 1304.29, *Administration of Enlistment Bonuses, Accession Bonuses for New Officers in Critical Skills, Selective Reenlistment Bonuses, and Critical Skills Retention Bonuses for Active Members*. (Dec. 15, 2004), (incorporating change July 11, 2016); DOD Instruction 1304.34, *General Bonus Authority for Officers* (July 11, 2016).

<sup>38</sup> Assistant Secretary of the Navy (Manpower and Reserve Affairs), *Report to Congress on Fiscal Year 2014 Aviation Continuation Pay Program* (Dec. 4, 2014).

<sup>39</sup> OPNAVINST 7220.11E, *Nuclear Officer Incentive Pay Program* (Dec. 29, 2014).

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told us that S&I pay programs were not designed to target top performers and that the services use other means to recognize performance, such as promotions. Federal internal control standards emphasize the importance of establishing clear and consistent agency objectives, which would apply to DOD's determination about incorporating personnel performance into eligibility criteria or retention decisions for its S&I pay programs.<sup>40</sup> Until the services clarify existing guidance for S&I pay programs regarding the extent to which personnel performance should be incorporated into retention decisions where appropriate, consistent with principle #3, the application and understanding of the guidance may be inconsistent among service officials responsible for managing S&I pay programs.

Finally, with regard to key principle #4, which calls for tailoring approaches for meeting organizational needs by evaluating unique staffing issues, we found that the military services have awarded SRBs to cybersecurity personnel in accordance with their broader military occupational specialty rather than tailoring the awards toward the skill sets within those specialties that have specific or unique staffing shortfalls. According to information received from service officials, the services have some cybersecurity specific career fields; however, each military service continues to assign cybersecurity personnel to military occupational specialties that include other types of personnel skill sets, such as intelligence or information technology. However, the Army recently began to tailor its SRB program to target cybersecurity personnel. The Navy, the Marine Corps, and the Air Force—unlike the Army—have not imposed other conditions by which to direct SRBs to personnel with specific cybersecurity skill sets within a broader military occupational specialty. According to service officials, cybersecurity is an emerging occupation, and the services have not yet assigned all of their cybersecurity personnel to cybersecurity-designated career fields. Marine Corps officials told us, for example, that cybersecurity within the enlisted community is often a secondary skill set associated with other primary specialties. According to DOD officials, the Marine Corps has the ability to target SRBs to a secondary skill; however according to Marine Corps officials, the Marine Corps has not begun to do this for the cybersecurity community. As a result, these services have not awarded SRBs to personnel with cybersecurity skill sets without also awarding it to other skill sets within the same occupational specialty that may not have the same staffing needs. DOD's policy on the enlisted bonus program states

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<sup>40</sup> [GAO/AIMD-00-21.3.1.](#)

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that the SRB may be used to obtain the reenlistment or voluntary extension of an enlistment in exchange for a member's agreement to serve for a specified period in at least one of the following reenlistment or extension categories: a designated military skill, career field, unit, or grade; or to meet some other condition or conditions imposed by the Secretary of the Military Department concerned. Until the services develop approaches to directly target SRBs to personnel with cybersecurity skill sets, they may award SRBs to specialties that include non-cybersecurity personnel for whom the SRB is unneeded. Further, without consistently targeting their SRBs toward specific skill sets, the services may not be using the SRBs as cost-effectively as possible.

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## Conclusions

Strategic management of S&I pay programs is important to support DOD's ability to sustain its all-volunteer force, providing a suite of flexible compensation approaches that can be used to address staffing issues more efficiently than basic pay increases. In addition, the effective use of S&I pay programs, like other components of military compensation, is important for the efficient use of budgetary resources. As DOD officials seek to efficiently manage the department's budget, S&I pay programs are likely to be a continued area in which to find efficiencies and cost savings. However, without exploring cost-effective approaches to collect and report complete obligation data for each S&I pay program for the Reserve Components, DOD may not know the full cost of its S&I pay programs, may not be able to make fully informed decisions about resource allocation, and may not be able to evaluate program performance over time. According to DOD officials, DOD has also not reviewed the extent to which the services' S&I pay programs incorporate key principles of effective human capital management, or whether S&I pay programs have used resources efficiently; nor has it prioritized and completed the establishment of measures for ensuring the efficient use of resources. Furthermore, the military services do not consistently apply key human capital management principles to their S&I pay programs, such as by using non-monetary incentives to retain personnel or incorporating personnel performance into eligibility criteria or retention decisions as a way to foster top talent and improve program results. In addition, service officials told us that the military services have not completely identified cyber workforces, thereby limiting their ability to target S&I pays to critical specialties. Without addressing these issues, DOD and the services may not be able to ensure that S&I pay programs are effectively designed and that resources are optimized for the greatest return on investment.

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## Recommendations for Executive Action

To facilitate DOD's oversight of the military services' S&I pay programs, and to fully ensure the effectiveness of these programs, we recommend that the Secretary of Defense take the following five actions:

- Direct the Under Secretary of Defense (Comptroller), in coordination with the military services, to explore cost-effective approaches to collect and report S&I pay program data for the Reserve Components;
- Direct the Under Secretary of Defense for Personnel and Readiness, in coordination with the military services, to
  - review whether S&I pay programs have incorporated key principles of effective human capital management and used resources efficiently, and prioritize and complete the establishment of measures for the efficient use of resources;
  - routinely assess the impact of non-monetary incentive approaches on retention behavior and on the necessary levels of S&I pays;
  - clarify existing guidance for S&I pay programs regarding the extent to which personnel performance should be incorporated into retention decisions; and
- Direct the Secretaries of the Military Departments to develop approaches to directly target SRBs to cybersecurity skill sets.

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## Agency Comments and Our Evaluation

We provided a draft of this report to DOD for review and comment. In its written comments, reproduced in appendix VI, DOD concurred with three of our recommendations and partially concurred with two. DOD also provided technical comments on the draft report, which we incorporated as appropriate.

In regard to our first recommendation—to explore cost-effective approaches to collect and report S&I pay program data for the Reserve Components—DOD concurred, adding that it will maintain its focus on the recruiting and retention pays for both the active and reserve components, and will continue to work with the Reserve Components to strengthen the collection of the remaining special and incentive pays. This action could meet the intent of our recommendation if it results in DOD exploring approaches to collect and report more complete and consistent data on S&I pays for the Reserve Components.

In regard to our second recommendation—to review whether S&I pay programs have incorporated key principles of effective human capital management and used resources efficiently, and to prioritize and

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complete the establishment of measures for the efficient use of resources—DOD partially concurred, stating in its written comments that DOD does use key principles of effective human capital management, and although not articulated as GAO's principles, share common goals and results. We agree there are similarities and as noted in the report DOD has demonstrated that it has used many of them. DOD stated that it will support the opportunity to review and improve upon the principles and methods to assess the efficiency of its S&I pay programs, and, where appropriate, will incorporate these principles in future DOD policy issuances and updates. We continue to believe that fully implementing the key principles of effective human capital management that we identified would help DOD and the services to ensure that S&I pay programs are effectively designed and that resources are optimized for the greatest return on investment.

In regard to our third and fourth recommendations—to routinely assess the impact of non-monetary incentive approaches on retention behavior and on the necessary levels of S&I pays, and to clarify existing guidance for S&I pay programs regarding the extent to which personnel performance should be incorporated into retention decisions—DOD concurred. In written comments, DOD provided examples of non-monetary incentives used by the services as alternatives to cash pays and bonuses. DOD also noted that the department will clarify existing guidance regarding the extent to which personnel performance will be incorporated into retention decisions.

In regard to our fifth recommendation—to develop approaches to directly target SRBs to cybersecurity skill sets—DOD partially concurred. In written comments, DOD stated that the services are responsible for developing their personnel requirements in order to meet individual service needs, and that it has provided the services with the necessary staffing tools to recruit and retain servicemembers in the cybersecurity skill sets. DOD also noted that it is crucial for the services to retain their flexibility to utilize these pays and benefits to address service-specific shortfalls within their cybersecurity workforce and noted that it will assist the services in growing and maintaining their cybersecurity workforce through existing and future DOD policies. We recognize that the services are responsible for their specific personnel requirements and that flexibility is important. However, as noted in our report, each military service has assigned cybersecurity personnel to military occupational specialties that include other types of personnel skill sets, such as intelligence or information technology. As a result, because the services offer SRBs by military occupational specialty, the services may award

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SRBs to specialties that include non-cybersecurity personnel for whom the SRB is unneeded. Therefore, we continue to believe that there are benefits to developing approaches to target cybersecurity personnel in non-designated cybersecurity fields.

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We are sending copies of this report to the appropriate congressional committee, the Secretary of Defense, the Under Secretary of Defense for Personnel and Readiness, the Secretaries of the Army, the Navy, and the Air Force, and the Commandant of the Marine Corps. In addition, this report will be available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions regarding this report, please contact me at (202) 512-3604 or [farrellb@gao.gov](mailto:farrellb@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix VII.



Brenda S. Farrell  
Director  
Defense Capabilities and Management

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# Appendix I: DOD's Progress in Consolidating Special and Incentive Pays

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In its September 2008 *Tenth Quadrennial Review of Military Compensation*, the Department of Defense (DOD) reported that the basic pay table provided limited flexibility to tailor the department's human capital approaches. DOD also noted that for many special pays, detailed eligibility rules and precise payment amounts are set in statute and could only be changed by congressional action. As a result, when staffing needs or market conditions change, managers sometimes could not adjust special and incentive (S&I) pay eligibility criteria or payment levels in response to those changing circumstances.<sup>1</sup> DOD recommended that the more than 60 S&I pays be replaced with 8 broad categories. In addition to these 8 categories, existing authorities for the 15-year career status bonus and the critical skills retention bonus would be retained. The review identified three benefits of consolidation: (1) increasing the services' flexibility to allocate resources to those areas that would most effectively meet staffing needs; (2) decreasing the number of pays and therefore reducing the administrative burden of managing over 60 different pays with different sets of rules and funding streams; and (3) authorizing the services to allocate S&I pay to their highest priority staffing needs which would allow the services to respond quickly to changing staffing needs throughout the fiscal year. The National Defense Authorization Act for Fiscal Year 2008 authorized the consolidation and required DOD to complete the transition by January 28, 2018.<sup>2</sup> DOD began implementing the consolidation in 2008, and according to a DOD official, expects the process to be completed by October 2017 (see figure 4).

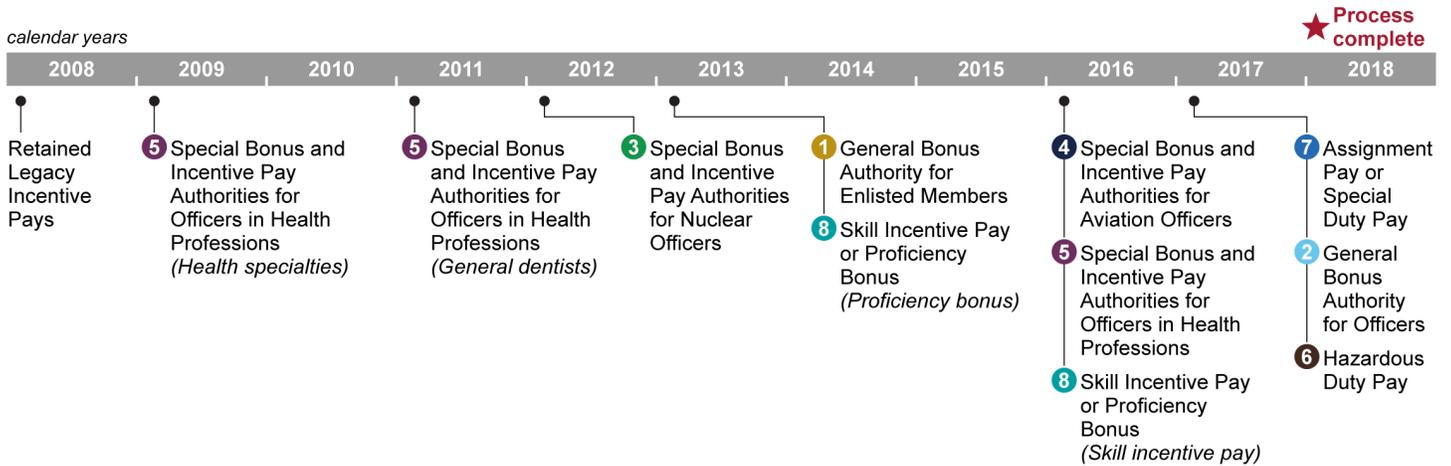
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<sup>1</sup>DOD, *Report of The Tenth Quadrennial Review of Military Compensation* (Sept. 2008).

<sup>2</sup>Pub. L. No. 110-181 div. A, title VI, subtitle F (Jan. 28, 2008).

**Appendix I: DOD's Progress in Consolidating Special and Incentive Pays**

**Figure 4: DOD's Timeline for Implementing Consolidation of Special and Incentive Pays into Eight Categories**



Source: GAO analysis of Department of Defense information. | GAO-17-39

According to DOD officials and our analysis of updated DOD guidance, as of October 2016, DOD has at least partially transitioned 5 of the 8 consolidated S&I pay program authorities (see table 2). DOD has also fully transitioned the authorities for the 2 legacy pays that were retained. According to a DOD official, implementation of the remaining 3 consolidated authorities is expected to be completed by October 2017.

**Table 2: GAO Analysis of DOD Special and Incentive Pays Consolidation Status**

Special and Incentive Pay Category	DOD Initial Estimated Completion Date	GAO Analysis of Current Status (as of October 2016)
<b>1. General Bonus Authority for Enlisted Members, 37 U.S.C. § 331</b>	September 30, 2013 <sup>a</sup>	
• Enlistment in the Armed Forces (37 U.S.C. § 308i; 37 U.S.C. § 309)		
• Enlistment in or Affiliation with a Reserve Component (37 U.S.C. § 308c; 37 U.S.C. § 308g)		√
• Reenlistment or Extension of Enlistment in a Designated Career Field or Unit (37 U.S.C. § 308; 37 U.S.C. § 308b; 37 U.S.C. § 308h; 37 U.S.C. § 326)		√
• Transfers between a Regular and Reserve component in the Same Service		√
• Transfers to a Regular or Reserve Component in Another Service (37 U.S.C. § 327)		√
<b>2. General Bonus Authority for Officers, 37 U.S.C. § 332</b>	January 11, 2017	
• Accession into the Armed Forces (37 U.S.C. § 324; 37 U.S.C. § 330; 37 U.S.C. § 308j(b))		○
• Affiliation with a Reserve Component (37 U.S.C. § 308j(a))		○

**Appendix I: DOD's Progress in Consolidating  
Special and Incentive Pays**

<b>Special and Incentive Pay Category</b>	<b>DOD Initial Estimated Completion Date</b>	<b>GAO Analysis of Current Status (as of October 2016)</b>
• Remain on Active Duty or Serve in an Active Status (37 U.S.C. § 317; 37 U.S.C. § 318; 37 U.S.C. § 319; 37 U.S.C. § 321; 37 U.S.C. § 315)		○
• Transfers Between a Regular and Reserve Component in the Same Service		○
• Transfers to a Regular or Reserve Component in Another Service (37 U.S.C. § 327)		○
<b>3. Special Bonus and Incentive Pay Authorities for Nuclear Officers, 37 U.S.C. § 333<sup>b</sup></b>	July 3, 2012	
• Nuclear Officer Bonus (37 U.S.C. § 312; 37 U.S.C. § 312b)		√
• Nuclear Officer Incentive Pay (37 U.S.C. § 312c)		√
<b>4. Special Aviation Incentive Pay and Bonus Authorities for Officers, 37 U.S.C. § 334<sup>c</sup></b>	October 20, 2016	
• Aviation Incentive Pay (37 U.S.C. § 301a )		√
• Aviation Bonus (37 U.S.C. § 301b)		√
<b>5. Special Bonus and Incentive Pay Authorities for Officers in Health Professions, 37 U.S.C. § 335</b>	December 31, 2016 <sup>d</sup>	
• Accession Bonuses (37 U.S.C. § 302h, 37 U.S.C. § 302j; 37 U.S.C. § 302d)		√
• Critical Skill Accession Bonus (37 U.S.C. § 302k; 37 U.S.C. § 302l)		√
• Retention Bonus (37 U.S.C. § 301d; 37 U.S.C. § 301e; 37 U.S.C. § 302a(b); 37 U.S.C. § 302g; 37 U.S.C. § 302i)		√
• Incentive Pays (37 U.S.C. § 302(a)(2); 37 U.S.C. § 302(a)(3); 37 U.S.C. § 302(h); 37 U.S.C. § 302b(a)(2); 37 U.S.C. § 302b(a)(3); 37 U.S.C. § 308c; 37 U.S.C. § 302f; 37 U.S.C. § 302a(a)(2); 37 U.S.C. § 303(a); 37 U.S.C. § 302(a)(4); 37 U.S.C. § 302(b); 37 U.S.C. § 302b(a)(4); 37 U.S.C. § 302b(a)(6); 37 U.S.C. § 302b(g); 37 U.S.C. § 302e; 37 U.S.C. § 302g(a))		√
• Board Certified Pay (37 U.S.C. § 302(a)(5); 37 U.S.C. § 302b(a)(5); 37 U.S.C. § 302c; 37 U.S.C. § 303(b))		√
<b>6. Hazardous Duty Pay, 37 U.S.C. § 351</b>		
• Hostile Fire (37 U.S.C. § 310(a)(2)(A); 37 U.S.C. § 310(a)(2)(B); 37 U.S.C. § 310(a)(2)(C))	October 1, 2017	○
• Hazardous Duty (37 U.S.C. § 301(a)(1); 37 U.S.C. § 301(a)(2); 37 U.S.C. § 301(a)(3); 37 U.S.C. § 301(a)(4); 37 U.S.C. § 301(a)(5); 37 U.S.C. § 301(a)(6); 37 U.S.C. § 301(a)(7); 37 U.S.C. § 301(a)(8); 37 U.S.C. § 301(a)(9); 37 U.S.C. § 301(a)(10); 37 U.S.C. § 301(a)(11); 37 U.S.C. § 301(a)(12); 37 U.S.C. § 301(a)(13); 37 U.S.C. § 301(c); 37 U.S.C. § 305b)		○
• Imminent Danger (37 U.S.C. § 310(a)(2)(D))		○
<b>7. Assignment Pay or Special Duty Pay, 37 U.S.C. § 352</b>	October 1, 2017	
• Submarine Duty, Hardship Duty, Career Sea Duty, and Assignment Pays (37 U.S.C. § 301c; 37 U.S.C. § 305; 37 U.S.C. § 305a(a); 37 U.S.C. § 305a(c); 37 U.S.C. § 306; 37 U.S.C. § 306a; 37 U.S.C. § 307; 37 U.S.C. § 307a; 37 U.S.C. § 308d; 37 U.S.C. § 314)		○
<b>8. Skill Incentive Pay or Proficiency Bonus, 37 U.S.C. § 353</b>		

**Appendix I: DOD's Progress in Consolidating  
Special and Incentive Pays**

<b>Special and Incentive Pay Category</b>	<b>DOD Initial Estimated Completion Date</b>	<b>GAO Analysis of Current Status (as of October 2016)</b>
• Career Skill Pay	October 20, 2016	√
• Proficiency Bonus	May 21, 2013	√
<b>Retained Legacy Incentive Pays</b>		
15-year Career Status Bonus for members Entering Service on or After August 1, 1986, 37 U.S.C. § 354 (37 U.S.C. § 322)	January 28, 2008	√
Retention Incentives for Members Qualified in Critical Military Skills or Assigned to High Priority Units, 37 U.S.C. § 355 (37 U.S.C. § 323)	March 14, 2008	√

Legend: √ fully or partially implemented; ○ not yet implemented.

Source: GAO analysis of DOD data. | GAO-17-39

<sup>a</sup>The services completed the consolidation of the General Bonus Authority for Enlisted members on March 12, 2013.

<sup>b</sup>The Navy is the only service eligible for Nuclear Pays.

<sup>c</sup>Only the Marine Corps Reserve has completed full consolidation of Aviation S&I Pays.

<sup>d</sup>Consolidation for medical specialties such as licensed clinical psychologists, licensed clinical social workers, physician assistants, licensed veterinary officers, and public health officers occurred on July 23, 2009. Consolidation for general dentists occurred on April 29, 2011.

# Appendix II: Case Study on Nuclear Propulsion Pays

## Overview of the Nuclear Propulsion Occupation

Officers and enlisted personnel in the Navy's nuclear propulsion program are tasked with safely operating and maintaining the nuclear reactors that power the Navy's fleet of aircraft carriers and submarines (see figure 5).

**Figure 5: Sailors in the Navy's Nuclear Propulsion Program Operate and Maintain the Nuclear Reactors That Power Aircraft Carriers and Submarines**



Source: Defense Video and Imagery Distribution System. | GAO-17-39

Navy officials described the nuclear propulsion program as rigorous, technically demanding, and staffed with highly trained and skilled personnel. Sailors in the nuclear propulsion occupation totaled nearly 23,000 in fiscal year 2016 (about 6 percent of the Navy's active and Reserve Component personnel), including approximately 5,700 officers and about 17,200 enlisted members.<sup>1</sup> The cadre of nuclear officers includes specialties such as surface warfare officers; submarine warfare officers; engineering duty officers; naval reactor engineers; pilots; and naval flight officers. Enlisted personnel in the nuclear propulsion program serve as operators and supervisors in the following types of skills, among others: electronics technicians; electrician's mates; engineering laboratory technicians; and machinist's mates.

<sup>1</sup> The nuclear propulsion program also includes government civilian and contractor employees.

Before their assignment to a nuclear billet, officers and enlisted personnel attend 6 months of classroom study at the Navy's nuclear power school, and another 6 months of nuclear prototype training, where they acquire hands-on experience. Navy officials estimate that the cost of nuclear training was about \$405,000 per officer or enlisted student as of fiscal year 2016. In addition, the cost of accessing and retaining a nuclear officer through his or her initial service obligation, including expenses for undergraduate education and salary, is estimated to have been \$581,000 as of fiscal year 2016.

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## Civilian Nuclear Employment

As of 2016, the U.S. nuclear industry includes 60 commercially operating nuclear power plants across 30 states and more than 100,000 employees. The median pay for a civilian nuclear engineer was about \$103,000 per year in 2015, according to the U.S. Bureau of Labor Statistics. Officers and enlisted members of the Navy's nuclear propulsion program can transition easily to civilian employment in the nuclear industry for several reasons, according to Navy officials. First, officials stated that civilian nuclear jobs are directly correlated with skills that nuclear personnel acquire in the Navy, and officers can complete civilian nuclear certifications on their first attempt nearly twice as frequently as can other new hires. Second, officials told us that civilian employers can train a new employee hired from the Navy with fewer resources and about half the time compared with training an employee hired from outside the nuclear propulsion program. Finally, Navy officials told us that, due to a wave of expected civilian retirements through 2021, more than 45,000 civilian nuclear jobs may become available. On the basis of feedback from nuclear personnel leaving the Navy, Navy officials also told us that high salaries in the civilian sector and the appeal of geographic stability are factors that influence retention in the nuclear propulsion program. The Navy estimates that about 80 percent of transitioning nuclear officers accept jobs in technical management in the civilian nuclear industry.

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## The Navy's Special and Incentive Pays for Nuclear Propulsion Personnel

To help meet retention and recruitment goals, the Navy has maintained a long-standing program of special and incentive (S&I) pays for nuclear propulsion personnel. Navy officials told us that these pays are a last line of defense, coupled with non-monetary incentives, for mitigating declining retention in the nuclear community.

Currently, there are 11 S&I pays available in the Navy for the recruitment and retention of nuclear personnel. Five of the 11 pays are limited to officers in the nuclear propulsion community and are described in table 3.

The other 6 pays, for enlisted personnel, are discussed later in this appendix.

**Table 3: Special and Incentive Pays Available to Officers in the Navy’s Nuclear Propulsion Occupation**

Frequency and Amount(s) per Payment, 2015 <sup>a</sup>	Overview of Eligibility-Criteria <sup>b</sup>	Range of Annual Recipients (numbers of personnel, fiscal years 2010-2015)
<b>1. Nuclear Officer Accession Bonus (NOAB)</b> (37 U.S.C. § 333; OPNAVINST 7220.11E, Nuclear Officer Incentive Pay Program (Dec. 29, 2014))		
<ul style="list-style-type: none"> <li>One-time</li> <li>\$15,000</li> </ul>	Unrestricted line officers or prospective unrestricted line officers (midshipmen, reserve officer training corps candidates, or enlisted sailors) who are accepted for nuclear officers’ training leading to qualification for duty in connection with the supervision, operation, and maintenance of naval nuclear propulsion plants.	513 – 713
<b>2. Nuclear Career Accession Bonus (NCAB)</b> (37 U.S.C. § 333; OPNAVINST 7220.11E, Nuclear Officer Incentive Pay Program (Dec. 29, 2014))		
<ul style="list-style-type: none"> <li>One-time</li> <li>\$2,000</li> </ul>	Unrestricted line officers on active duty who have successfully completed the nuclear propulsion training program leading to qualification for duty in connection with the supervision, operation, and maintenance of naval nuclear propulsion plants.	<sup>c</sup>
<b>3. Nuclear Officer Continuation Pay (COPAY)</b> (37 U.S.C. § 333, OPNAVINST 7220.11E, Nuclear Officer Incentive Pay Program (Dec. 29, 2014))		
<ul style="list-style-type: none"> <li>Annual installments</li> <li>\$30,000 or \$35,000</li> </ul>	Nuclear surface warfare officers or nuclear submarine officers on active duty and currently qualified for duty in connection with the supervision, operation, and maintenance of naval nuclear propulsion plants. Officers must have completed minimum service requirements, are generally serving in at least the pay grade of O-3 and not higher than O-6, who agree to a contract of generally 3 to 7 years of service.	2,068 – 2,359 <sup>c,d</sup>
<b>4. Nuclear Career Annual Incentive Bonus (AIB)</b> (37 U.S.C. § 333; OPNAVINST 7220.11E, Nuclear Officer Incentive Pay Program (Dec. 29, 2014))		
<ul style="list-style-type: none"> <li>Annual installments</li> <li>\$10,000, \$12,500, or \$22,000</li> </ul>	Unrestricted line officers, limited duty officers and chief warrant officers on active duty, currently qualified for duty in connection with the supervision, operation, and maintenance of naval nuclear propulsion plants, having completed minimum service requirements as an officer and continuing on active duty after completion of other existing service contracts. Participants must be serving in pay grade W-2 through W-5 or O-1 through O-6, and must not be serving in a period of obligated service incurred as a result of accepting COPAY. Also, participants must not be entitled to receive aviation career incentive pay.	<sup>c</sup>
<b>5. Submarine Support Incentive Pay (SSIP)</b> (37 U.S.C. § 355; NAVADMIN 293-10, Submarine Support Incentive Pay Program (Aug. 30, 2010)) <sup>e</sup>		
<ul style="list-style-type: none"> <li>Annual installments</li> <li>\$15,000, \$20,000, or \$25,000</li> </ul>	Officers on active duty who screened for commanding officer, submarine support, having completed at least 20 years of active service but not more than 25 years, and currently serving in paygrades O-5 or O-6, who agree to a contract of 1, 2, or 3 years. Participants must be previously nuclear trained as an officer but not currently qualified for the supervision, operation, or maintenance of nuclear propulsion plants.	18 – 77 <sup>d</sup>

Source: GAO analysis of Navy policies and budget data. | GAO-17-39

Notes: The Navy completed the consolidation of authority for NOAB, NCAB, COPAY, and AIB pays on July 3, 2012. Authority to enter into new SSIP agreements pursuant to 37 U.S.C. § 355 expires December 31, 2017.

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## Appendix II: Case Study on Nuclear Propulsion Pays

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<sup>a</sup>The amounts shown were established in Navy guidance for nuclear personnel in 2015. The actual statutory caps may be higher.

<sup>b</sup>The overview of eligibility criteria is derived from cited service-level policy, Navy budget justification materials, and interviews with Navy officials. It represents a summary of some, but not all, of the requirements that a recipient of each pay must meet. Complete criteria are identified in cited service-level policy. Officers may not receive any of the above pays concurrently.

<sup>c</sup>Recipients and obligations associated with the NCAB, COPAY, and AIB pays are reported collectively in the Navy's annual budget justification documents as Nuclear Officer Incentive Pay (NOIP). The NOAB is part of the NOIP program, but the Navy reports data for recipients and obligations separately in its annual budget justification documents.

<sup>d</sup>The range of recipients includes officers who received initial payments and those who received anniversary award payments.

<sup>e</sup>Although officers eligible for the SSIP program may not be currently nuclear qualified, unlike eligibility criteria in the other four nuclear propulsion pay programs, participants must have been previously nuclear trained and be screened for commanding officer submarine support. The Navy uses this program to retain skilled personnel for critical submarine support billets, ensuring that submarine officers are available to fill positions both at sea and ashore. Participating officers are ineligible to receive either COPAY or AIB.

Of the five pays shown in table 3, nuclear officers may receive only one at a time. A nuclear officer will generally receive one or more of these pays over his or her career. The Navy manages the first four pays in table 3 collectively and refers to them as the Nuclear Officer Incentive Pay (NOIP) program. Compared with S&I pays available to officers in other Navy occupations, the community of nuclear propulsion officers ranks second to the medical community in terms of total possible S&I pay compensation over a 30-year career. Specifically, the Navy estimated that in fiscal year 2015, a medical officer could earn about \$1.6 million in S&I pays over his or her career, while a nuclear propulsion officer could earn approximately \$1.1 million over a career. The total amount of possible career S&I pays for a nuclear officer is about twice that of the next highest compensated career group—about \$530,000 for a Sea, Air, Land (SEAL) officer over his or her career.

There are 6 S&I pays available to enlisted nuclear personnel in connection with their service in nuclear occupations. These 6 pays are shown in table 4 and are discussed in further detail below.

**Table 4: Special and Incentive Pays Available to Enlisted Personnel in the Navy’s Nuclear Propulsion Occupation**

Frequency and Amount(s) per Payment, 2015 <sup>a</sup>	Overview of Eligibility-Criteria <sup>b</sup>	Range of Annual Recipients (numbers of personnel, fiscal years 2010-2015)
<b>1. Selective Reenlistment Bonus (SRB)</b> (37 U.S.C. § 331, General bonus authority for enlisted members; OPNAVINST 1160.8A, Selective Reenlistment Bonus Program (Jan. 30, 2007))		
<ul style="list-style-type: none"> <li>Annual (lump sum and annual installments)</li> <li>Variable, capped at \$75,000 or \$100,000 depending on rating, Navy Enlisted Classification, years of service, and reenlistment period</li> </ul>	Completion of at least 17 continuous months of active service, but not more than 10 years; eligible to reenlist or voluntarily extend an enlistment for 3 or more years; serving in select ratings, Navy Enlisted Classifications, and skills.	1,000 – 1,650 <sup>c</sup>
<b>2. Enlisted Supervisor Retention Pay (ESRP)</b> (37 U.S.C. § 331, Enlisted Bonus Program; Navy Memorandum, Delegation of Authority to Administer a Nuclear-Trained Enlisted Supervisor Selective Retention Bonus Program (Jul. 18, 2016))		
<ul style="list-style-type: none"> <li>Initial and annual installments</li> <li>Variable, depending on rating, Navy Enlisted Classification, years of service and reenlistment period, and capped at \$200,000 in a career</li> </ul>	Nuclear rated petty Officers E-5 or above on active duty, eligible to reenlist for a minimum of 2 years or up to 6 years, and having completed at least 10 years but not more than 23 years of naval service.	297 – 406 <sup>c</sup>
<b>3. Special Duty Assignment Pay (SDAP)</b> (37 U.S.C. 307, Special pay: Special duty assignment pay for enlisted members; OPNAVINST 1160.6B, Special Duty Assignment Pay Program (Dec. 29, 2006))		
<ul style="list-style-type: none"> <li>Monthly</li> <li>\$150, \$300, \$375, or \$450, depending on billet</li> </ul>	Enlisted personnel on active duty in pay grade E-3 or higher, assigned to and working in a designated special duty assignment.	8,878 – 9,754
<b>4. Sea Duty Incentive Pay (SDIP)</b> (37 U.S.C. 307a, Special pay: Assignment Incentive Pay; NAVADMIN 231/12, Sea Duty Incentive Pay Program (July 30, 2012))		
<ul style="list-style-type: none"> <li>Monthly</li> <li>\$450 or \$1,000, depending on rating or billet</li> </ul>	Enlisted personnel on active duty currently who volunteer to serve in specific enlisted communities undermanned at sea. Participants may either extend their sea duty assignment or curtail their current shore duty assignment and return to sea duty early. Specifically for the nuclear program, must be an Engineering Department Master Chief (generally E-8 or E-9) or Leading Engineering Laboratory Technician (generally E-5 or E-6).	<sup>d</sup>
<b>5. Assignment Incentive Pay (AIP)</b> (37 U.S.C. 307a, Special pay: Assignment Incentive Pay; Navy Policy Memorandum 003-06, Assignment Incentive Pay (Dec. 7, 2006))		
<ul style="list-style-type: none"> <li>Monthly, paid in lump sum depending on tour length</li> <li>\$166.67</li> </ul>	Active duty personnel having completed the first permanent duty assignment following initial training, applied for select assignments (i.e., specifically for the nuclear propulsion program, AIP-eligible assignments are only for the Nuclear Power Training Unit), and serving in grades E-5 to E-9.	<sup>d</sup>
<b>6. Enlistment Bonus</b> (37 U.S.C. 331, General bonus authority for enlisted members; OPNAVINST 1160.9, Enlistment Bonus (EB) Program (Apr. 5, 2007))		

**Appendix II: Case Study on Nuclear Propulsion Pays**

Frequency and Amount(s) per Payment, 2015 <sup>a</sup>	Overview of Eligibility-Criteria <sup>b</sup>	Range of Annual Recipients (numbers of personnel, fiscal years 2010-2015)
<ul style="list-style-type: none"> <li>One-time</li> <li>\$11,000</li> </ul>	Initial enlistees in the Navy and certain prior-service members selected for the nuclear field program who successfully complete the course of instruction; enlist for up to 6 years; and meet all requirements for the nuclear field program.	2698 – 3161

Source: GAO analysis of Navy policies and budget data. | GAO-17-39

Notes: The Navy has not yet completed consolidation of the SDAP, SDIP, and AIP. Until consolidation is complete, these programs are authorized under legacy S&I pay statutes. Authority to enter into new ESRP agreements under 37 U.S.C. § 355 expires December 31, 2017.

<sup>a</sup>The amounts shown were established in Navy guidance for nuclear personnel in 2015. The actual statutory caps may be higher.

<sup>b</sup>The overview of eligibility criteria for nuclear personnel is derived from cited service-level policy, Navy budget justification materials, and interviews with Navy officials. It represent a summary of some, but not all, of the requirements that an applicant for (or recipient of) each pay must meet. Complete criteria are identified in cited service-level policy.

<sup>c</sup>The range of recipients for the SRB and ESRP includes personnel who received initial contract awards but not personnel who received anniversary payments.

<sup>d</sup>We did not collect data on the number of recipients of SDIP and AIP. Because we determined that these pays are limited in scope and purpose, we excluded them from our analysis.

Of the 6 S&I pays for enlisted nuclear personnel shown in table 4, all but Enlisted Supervisor Retention Pay (ESRP) are also offered across the Navy to select occupations or specialties outside of the nuclear field. Enlistees selected for nuclear training may be eligible for an enlistment bonus if they complete training and attain their nuclear rating. After attaining their nuclear rating, nuclear-trained enlisted personnel are then eligible to receive monthly Special Duty Assignment Pay (SDAP) of up to \$600 per month, depending on their billet.<sup>2</sup> Many enlisted nuclear personnel will also apply for and receive one or more reenlistment bonuses over their careers. Specifically, eligible members may receive a Selective Reenlistment Bonus (SRB) if they have fewer than 10 years of service and an ESRP bonus once they have more than 10 years of service.

In addition to monthly SDAP and one or more SRB and ESRP bonuses, nuclear-trained enlisted personnel may also be eligible for monthly Sea Duty Incentive Pay (SDIP) and monthly Assignment Incentive Pay (AIP) at some point (or points) in their career. SDIP and AIP are limited to

<sup>2</sup> The statutory cap on SDAP is set at \$600 per month. However, the Navy may choose to offer a lesser amount. In 2015, the Navy offered up to \$450 per month under the SDAP program.

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sailors who apply and are selected to fill certain critical billets. Within the nuclear propulsion program, SDIP payments of either \$450 or \$1,000 per month are limited to two specific types of supervisory billets on submarines at sea. As of 2016, AIP amounts are \$166.67 per month and are available only to sailors who volunteer to serve as Nuclear Power Training Unit instructors.

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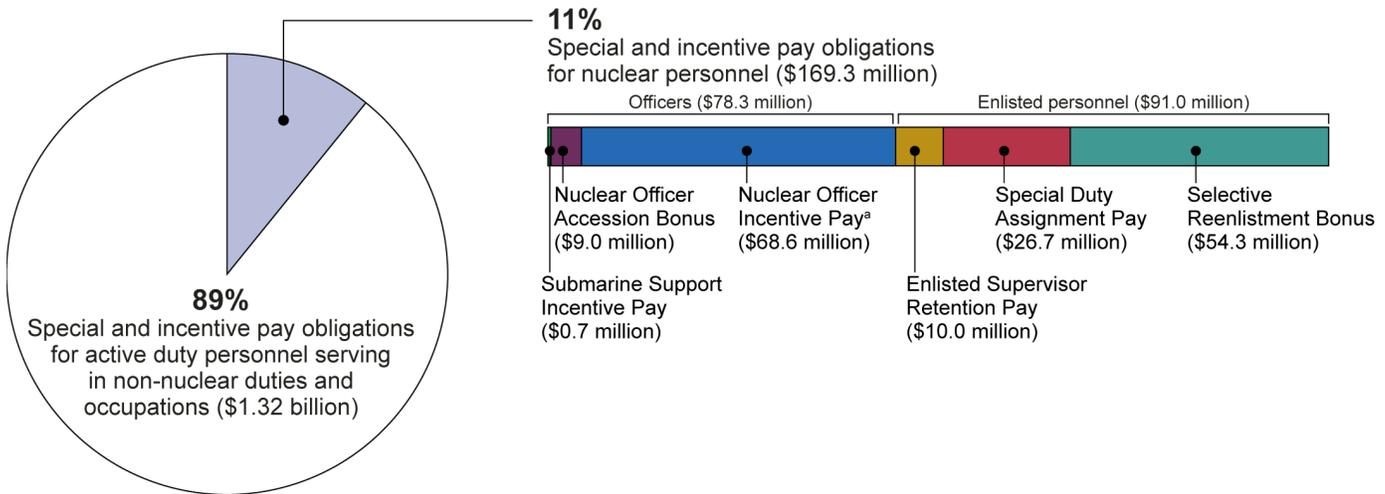
## Retention Bonuses Represented the Largest Portion of the Navy's S&I Pay Obligations for the Nuclear Propulsion Occupation in Fiscal Years 2010 through 2015

The Navy obligated more than \$169 million per year in constant 2015 dollars, on average, on nuclear-related S&I pays from fiscal years 2010 through 2015.<sup>3</sup> This \$169 million average amount represented approximately 11 percent of the Navy's average annual obligations for special and incentive pays to all of its active duty personnel during that same period. Although for fiscal years 2010 through 2015 the Navy's total annual obligations for all S&I pays declined by about 17 percent, S&I pays for nuclear personnel increased by 2 percent over the same period in constant 2015 dollars. Retention bonuses for officers and enlisted personnel—specifically, NOIP and SRB—accounted for the largest total obligations of the Navy's S&I pays that we analyzed further for the nuclear occupation (see figure 6).

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<sup>3</sup> This total includes obligations for 8 of 11 pays shown in tables 3 and 4, excluding Sea Duty Incentive Pay (SDIP), Assignment Incentive Pay (AIP), and the enlistment bonus for nuclear enlisted personnel. We did not include SDIP and AIP in our analysis because of their limited purpose for influencing personnel assignments to select billets as opposed to being used for retention or recruitment for the nuclear propulsion program more broadly. We did not include the enlistment bonus because Navy officials told us that up to one-third of enlisted trainees drop out of training each year and do not receive the bonus as a result. They told us that, consequently, the Navy disburses less funding than what it obligates for these bonuses. Because the scope of our review is limited to analysis of obligations for S&I pays, excluding disbursement data, our analysis of enlistment bonus obligations may have been misleading given the lower disbursement rates, and therefore we omitted this from our scope.

**Figure 6: Average Annual Obligations for Navy’s S&I Pays for Nuclear Personnel and for Other Active Duty Personnel and Activities, Fiscal Years 2010 - 2015**  
(Constant 2015 dollars)



Source: GAO analysis of Navy budget data. | GAO-17-39

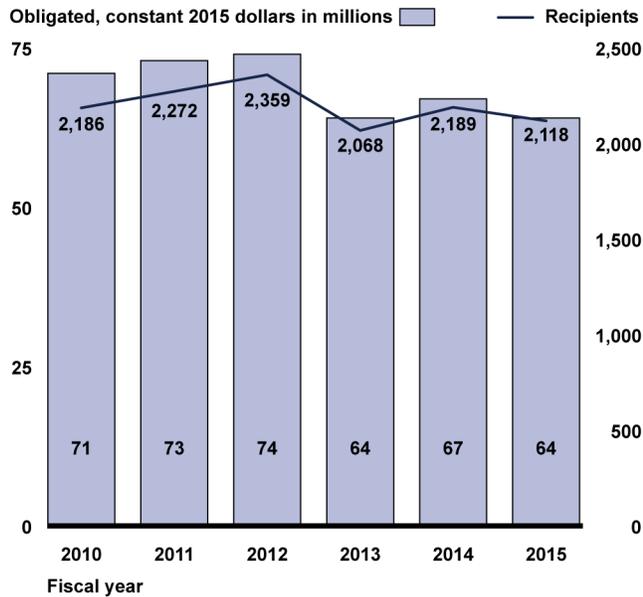
<sup>a</sup>The Nuclear Officer Incentive Pay (NOIP) obligations shown include obligations for Nuclear Officer Continuation Pay, the Nuclear Career Annual Incentive Bonus, and the Nuclear Career Accession Bonus.

## S&I Pay Obligations for Nuclear Officers

For fiscal years 2010 through 2015, total obligations for officer S&I pays declined by approximately 7 percent, from approximately \$80 million to about \$75 million in constant 2015 dollars. NOIP obligations accounted for about 99 percent of those obligations. By contrast, SSIP comprised around 1 percent of obligations over that period because of its limited use by the Navy for retaining a goal of 25 O-5 or O-6 submarine officers each year.<sup>4</sup> As shown in figure 7, NOIP obligations for Nuclear Officer Continuation Pay (COPAY), Nuclear Career Annual Incentive Bonuses (AIB), and Nuclear Career Accession Bonuses (NCAB), in particular, varied in accordance with yearly changes in the number of recipients for those pays.

<sup>4</sup> Navy officials told us that they are currently evaluating the need to continue offering this pay.

**Figure 7: Annual Obligations for and Recipients of the Navy’s Nuclear Officer Incentive Pay Program, Including—Nuclear Officer Continuation Pay, Nuclear Career Annual Incentive Bonus, and Nuclear Career Accession Bonus, Fiscal Years 2010 - 2015**



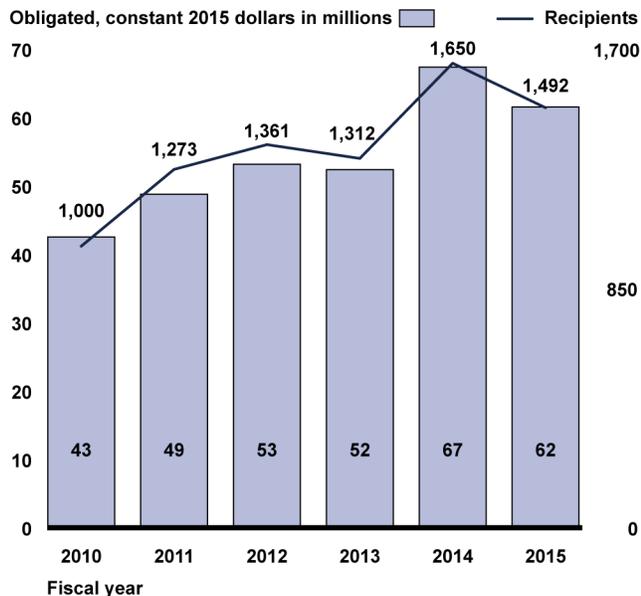
Source: GAO analysis of Navy budget data. | GAO-17-39

Obligations for COPAY, AIB, and NCAB increased in fiscal years 2011 and 2012 following years in which the Navy fell short of officer retention goals. Because retention levels for nuclear surface warfare officers declined each year from 2010 to 2014, according to NOIP program documentation, the Navy increased the COPAY rate for this group of officers from \$30,000 to \$35,000 (in nominal dollars) per year in December 2014.

### S&I Pay Obligations for Nuclear Enlisted Personnel

For fiscal years 2010 through 2015, total obligations for S&I pays for nuclear enlisted personnel increased by nearly 11 percent, from about \$85 million to approximately \$94 million in constant 2015 dollars. SRB obligations accounted for about half or more of those total obligations each year. As shown in figure 8, SRB obligations generally increased in proportion with yearly changes in the number of recipients, rising overall by about 45 percent from fiscal year 2010 to fiscal year 2015 in constant 2015 dollars.

**Figure 8: Annual Obligations for and Recipients of the Navy’s Selective Reenlistment Bonus for Nuclear Personnel, Fiscal Years 2010 - 2015**



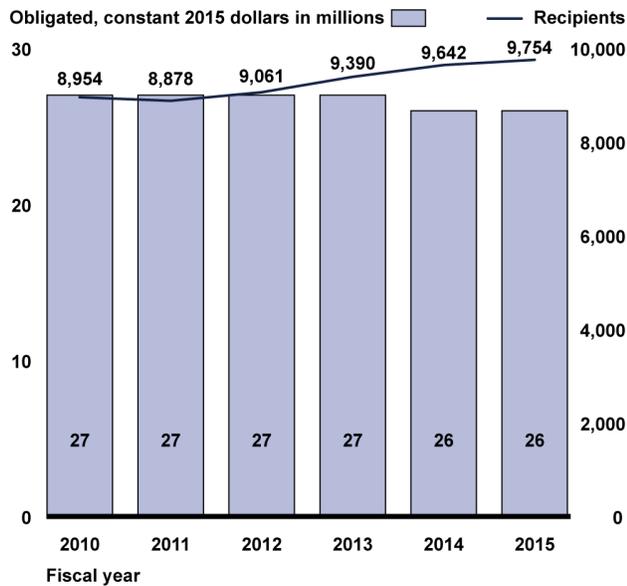
Source: GAO analysis of Navy budget data. | GAO-17-39

SRB obligations for nuclear personnel also varied from year to year because of changes the Navy made to the program in terms of the possible amounts that sailors were eligible to receive. Specifically, award ceilings and bonus multiples were increased or decreased for certain nuclear ratings and reenlistment “zones” at different times.<sup>5</sup> For example, in April 2014 seven different nuclear ratings became eligible for an increased, newly established ceiling of \$100,000. The Navy also increased the multiples associated with a few ratings and reenlistment zones at that time. On the other hand, in September 2012 the Navy decreased the bonus multiples for three nuclear ratings.

Figure 9 shows that, for fiscal years 2010 through 2015, total obligations for SDAP to nuclear enlisted personnel decreased overall from \$27 million to \$26 million (about 5 percent) in constant 2015 dollars, while the numbers of recipients increased (by approximately 9 percent).

<sup>5</sup> Eligibility for the Selective Reenlistment Bonus (SRB) is limited to members with 17 months of continuous active duty but not more than 14 years of active duty. This time period is further divided into three zones. Participants may receive only one bonus per zone during a career. However, nuclear-trained sailors who have 10 to 23 years of service are eligible to apply for Enlisted Supervisor Retention Pay (ESRP) instead of the SRB.

**Figure 9: Annual Obligations for and Recipients of the Navy’s Special Duty Assignment Pay for Nuclear Personnel, Fiscal Years 2010 - 2015**

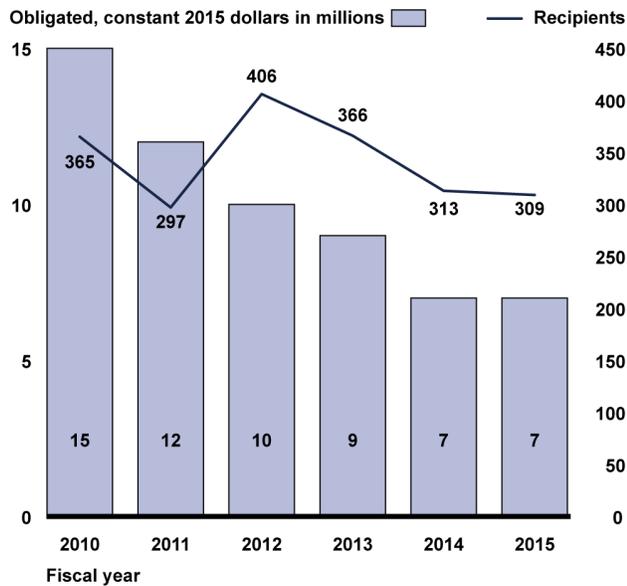


Source: GAO analysis of Navy budget data. | GAO-17-39

Our analysis showed that the downward trend in SDAP obligations relative to the increased number of recipients is attributable in part to the effects of inflation. The SDAP award levels have remained the same since December 2006.

The Navy’s obligations for ESRP declined steadily each year from fiscal years 2010 to 2014 in constant 2015 dollars (see figure 10).

**Figure 10: Annual Obligations for and Recipients of the Navy’s Enlisted Supervisor Retention Pay for Nuclear Personnel, Fiscal Years 2010 - 2015**



Source: GAO analysis of Navy budget data. | GAO-17-39

Figure 10 also shows that ESRP recipients declined in all years except fiscal year 2012. The increase in that year corresponded with the Navy’s January 2012 restructuring of the ESRP program. Specifically, the Navy increased the maximum eligibility period for enlisted personnel in terms of their years of service from 20 to 23. This change increased the number of sailors eligible for the bonus and ultimately increased the total number of reenlistments. In addition, the Navy reconfigured its reenlistment zones for ESRP at that time, including narrowing the zone associated with its most expensive contracts and thereby decreasing their associated costs. According to Navy program documents we reviewed, the reconfiguration of ESRP incentivized retention of the most qualified senior enlisted sailors and linked ESRP eligibility to continued achievement of career milestones. The result, according to the program documents, has been an overall improvement in program outcomes in terms of the sailors retained, with lower yearly costs.

# Appendix III: Case Study on Aviation Pays

## Overview of the Aviation Occupation

Each of the military services relies on pilots to operate aircraft (see figure 11). For the purpose of this case study, we define “pilot” as a servicemember directly responsible for the flight operations of an aircraft. We include both traditionally piloted aircraft (aircraft with crew on board, both fixed-wing and rotary-wing) and remotely piloted aircraft (aircraft without crew on board). However, due to data limitations, we have included non-pilot aviators in some trend analyses and have noted when we have done so.<sup>1</sup>

Figure 11: Examples of Military Pilots



Source: Defense Video and Imagery Distribution System. | GAO-17-39

Before qualifying to operate aircraft for military missions, pilots must complete a series of training requirements. The lengths associated with this training vary by specific type of aircraft and range from 18 weeks for remotely piloted aircraft (RPA) operators on certain platforms to 5 years for a fighter jet pilot. The cost of replacing an experienced pilot can be significant. For example, in 2014 the Army estimated the cost of replacing a special operations rotary-wing pilot with 6 years of experience at \$8.8

<sup>1</sup> Non-pilot aviators include those personnel responsible for navigation or weapon systems on traditionally piloted aircraft. These include Naval Flight Officers in the Navy and the Marine Corps and Combat Systems Officers and Air Battle Managers in the Air Force. Similarly, for the RPA community, some datasets included non-pilot aviators, such as those personnel operating weapon systems or sensors rather than the aircraft.

million, and in 2014 the Air Force estimated the cost of replacing a fighter pilot with 5 years of experience at \$9 million.

## Civilian Pilot Employment

According to the U.S. Bureau of Labor Statistics, the U.S. civilian-sector aviation industry employed 238,400 airline and commercial pilots, copilots, and flight engineers in 2014. The U.S. military employed approximately 34,100 active-duty pilots in the same timeframe.<sup>2</sup> In February 2014, we reported that U.S. airlines have historically recruited military pilots and that these pilots can be competitive in the commercial aviation sector due to their accumulation of flying hours while in the military. However, we also noted that, according to some airline representatives, the percentage of pilots with military experience who were hired by airlines declined from about 70 percent prior to 2001 to about 30 percent as of 2013.<sup>3</sup> Most of the services discussed the relationship between their military pilot workforces and the civilian aviation sector in their annual reports analyzing the effects of the Aviation Continuation Pay (ACP) program and its impact on retention.<sup>4</sup> Our analysis found that the services' conclusions about the level of competition represented by recruitment from the commercial aviation sector varied. Specifically, the Air Force concluded that it needed to increase bonus amounts to retain sufficient numbers of pilots, while the Navy and the Marine Corps concluded that they did not. For example, in reports supporting the ACP programs in fiscal years 2010 through 2015, the Air Force consistently stated that it expected increased recruitment of pilots from the commercial aviation sector, and cited this as justification for continued offerings of retention bonuses. In contrast, the Navy stated that airline compensation would have to increase in order to have a significant impact on the retention of Navy pilots. Also, the Marine Corps reported that the potential increase in hiring by commercial airlines did not warrant the reinstatement of ACP bonuses for fiscal year 2013. The fiscal year 2016 National Defense Authorization Act required the Department of Defense (DOD) to report to Congress by February 1, 2016, on a market-based compensation approach to the retention of aviation officers that

<sup>2</sup> This figure does not include RPA pilots.

<sup>3</sup> GAO, *Aviation Workforce: Current and Future Availability of Airline Pilots*, [GAO-14-232](#) (Washington D.C.: February 28, 2014).

<sup>4</sup> Annual reports are submitted to the Secretary of Defense and Congress pursuant to 37 U.S.C. § 301b(i), which is the legacy S&I provision authorizing special pay for aviation career officers extending their period of active duty.

considers the pay and allowances offered by commercial airlines to pilots and the propensity of pilots to leave the Air Force to become commercial airline pilots.<sup>5</sup> DOD responded in July 2016 with a report in support of increasing aviation-related S&I pays.<sup>6</sup> DOD's report noted that the military has experienced high levels of pilot retention as a result of decreased civilian airline pilot salaries, significantly reduced civilian airline pilot hiring, increase military pay and benefits, and an increased sense of duty and patriotism after the events of September 11<sup>th</sup>, 2001. However, the report added that the department—based on a study by the RAND Corporation—anticipated that increased hiring by commercial airlines over the next 5 to 7 years would require bonus amounts to increase from \$25,000 per year to a range of \$38,500—62,500 per year. As such, DOD requested that Congress consider increasing the rates of Aviation Career Incentive Pay, and increase the maximum authorized level of Aviation Continuation Pay from \$25,000 per year to \$35,000 per year.

## Aviation Workforce Mix

According to DOD officials, all traditionally piloted aircraft are operated by officers, while some RPAs are operated by enlisted personnel. Specifically, the Marine Corps and the Army rely on enlisted personnel to operate their RPAs, while officers generally operate Air Force and Navy RPAs.<sup>7</sup> The Air Force initially assigned servicemembers from the traditionally piloted aircraft community to pilot RPAs until a dedicated RPA-pilot career track was established. The Navy uses only pilots rated on traditionally piloted aircraft to fly RPAs and, according to officials, does not plan to create a designated RPA career track. These differences in how the services staff RPA positions, combined with statutory and policy limitations on offering aviation-specific S&I pays for the RPA community, have led to a variety of S&I pays being used to retain RPA operators. Specifically, per statute and DOD policy, only pilots rated on traditionally piloted aircraft have been provided Aviation Career Incentive Pay (ACIP). In addition, the decision of the Army and the Marine Corps to use enlisted personnel to operate RPAs has meant that these pilots cannot receive

<sup>5</sup> Pub. L. No. 114-92, § 617(e) (Nov. 25, 2015).

<sup>6</sup> DOD, Office of the Deputy Under Secretary of Defense for Military Personnel Policy, *Report To Congress In Support Of Increasing Special And Incentive Pays For Aviation Officers* (July, 2016).

<sup>7</sup> In December 2015 the Air Force announced plans to use enlisted personnel to operate certain types of RPA. According to a Navy official, some enlisted Navy personnel operate small tactical RPAs.

ACIP or ACP, as only officers qualify for these pays. Instead, the Army and the Marine Corps have used the Selective Reenlistment Bonus (SRB) to retain these pilots. In April 2014 we reported on the need for the Air Force to assess its workforce mix for RPA operators. Specifically, we recommended that the Air Force develop a recruiting and retention strategy for RPA operators and evaluate using alternative personnel populations to operate RPAs.<sup>8</sup> The Air Force concurred with our recommendation to develop a recruiting and retention strategy, stating that it expected to have a recruiting and retention strategy that was tailored to the specific needs and challenges of RPA pilots by October 2015. However, this has not been completed. The Air Force partially concurred with our recommendation to evaluate the viability of using alternative personnel populations as RPA pilots, but as of December 2016 this recommendation has not been implemented.

## Special and Incentive Pays for Pilots

The military services used a variety of special and incentive pay programs to retain pilots in fiscal years 2010 through 2015, including combinations of up to four different types of pays (see table 5).

**Table 5: Special and Incentive Pays Provided to Pilots, Fiscal Years 2010 – 2015**

	Army	Air Force	Navy	Marine Corps
Aviation Career Incentive Pay (ACIP) (37 U.S.C. § 301a)	√	√	√	√
Aviation Continuation Pay (ACP) (37 U.S.C. § 301b)	√	√	√	√ <sup>a</sup>
Selective Reenlistment Bonus (SRB) (37 U.S.C. § 331 (a)(3))	√ <sup>b</sup>	N/A	N/A	√ <sup>a</sup>
Assignment Incentive Pay (AIP) (37 U.S.C. § 307a)	√ <sup>b</sup>	√ <sup>c</sup>	N/A	N/A

Legend: √ = Pay is used by the service; N/A = Not applicable. No special and incentive pays were offered to personnel in these categories.

Source: GAO analysis of DOD data. | GAO-17-39

<sup>a</sup>The Marine Corps suspended offering new ACP contracts in fiscal year 2012. According to officials, the Marine Corps offered SRB to enlisted personnel operating RPAs.

<sup>b</sup>According to officials, the Army offered SRB to enlisted personnel operating RPAs, and AIP to pilots in the Special Operations Aviation Regiment.

<sup>8</sup> GAO, *Air Force: Actions Needed to Strengthen Management of Unmanned Aerial System Pilots*, [GAO-14-316](#) (Washington, D.C.: Apr. 10, 2014).

<sup>c</sup>According to officials, the Air Force offered AIP to pilots only qualified on RPA platforms.

## Pilot-Specific Pays

### Aviation Career Incentive Pay (ACIP)

ACIP is offered only to officers. DOD defines this pay as a financial incentive for officers to pursue a military career as aviators.<sup>9</sup> The pay was first offered in 1974, in part to compensate aviators for the inherent dangers associated with military flight. Until October 2016, DOD policy for ACIP did not recognize operation of an RPA as aerial flight, and therefore RPA pilots who were not graduates of traditional undergraduate pilot training were not authorized to receive ACIP.<sup>10</sup> From fiscal years 2010 through 2015, the pay levels for ACIP established in statute varied by years of aviation service, and ranged from \$125 to \$840 per month (\$1,500 - \$10,080 per year) for pilots rated on traditionally piloted aircraft.<sup>11</sup> For example, the rate for pilots with over 6 to 14 years of aviation service (which accounted for 37 percent of military pilots for fiscal years 2010 through 2015) has not changed since 1989, which due to inflation equates to a net 57 percent decrease in the purchasing power of this benefit. Recent statutory changes have allowed DOD to begin offering ACIP to RPA pilots, to a maximum of \$1,000 per month (\$12,000 per year).<sup>12</sup> DOD has updated guidance to reflect this change, and has also provided the services with the option not to provide ACIP to all pilots.<sup>13</sup> Our analysis of ACIP obligations from fiscal years 2010 through 2015 shows an overall decrease of 15 percent. Figure 12 displays how obligations for ACIP decreased across all four military services from fiscal

<sup>9</sup> DOD Instruction 7730.57, *Aviation Incentive Pays and Continuation Bonus Program* (Aug. 12, 2008). As part of DOD's effort to consolidate S&I pay authorities, this instruction was cancelled by DOD Instruction 7730.67, *Aviator Incentive Pays and Bonus Program* (Oct. 20, 2016). However, it was applicable from fiscal year 2010 through fiscal year 2015.

<sup>10</sup> DOD Instruction 7730.67, *Aviator Incentive Pays and Bonus Program* (Oct. 20, 2016).

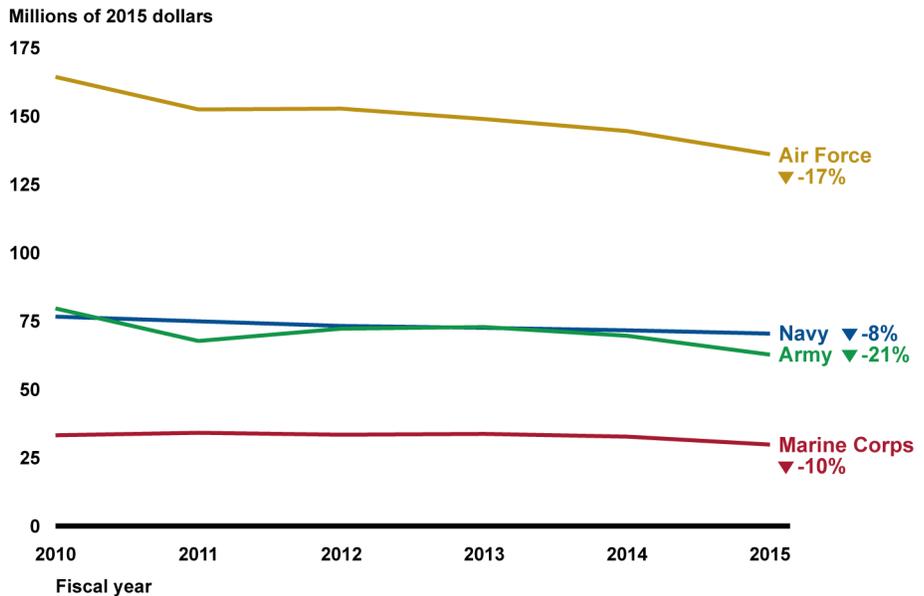
<sup>11</sup> The National Defense Authorization Act for Fiscal Year 2017 increased the maximum monthly rate to \$1,000. Pub. L. No. 114-328, § 616(a) (Dec. 23, 2016).

<sup>12</sup> In Fiscal Year 2016, Congress authorized aviation special pays for RPA pilots, setting the maximum pay at \$1000 per month for ACIP. National Defense Authorization Act for Fiscal Year 2016, Pub. L. No. 114-92 (Nov. 25, 2015).

<sup>13</sup> DOD Instruction 7730.67, *Aviator Incentive Pays and Bonus Program* (Oct. 2016). This Instruction also changed the name of this pay from Aviation Continuation Incentive Pay (ACIP) to Aviation Incentive Pay (AvIP).

years 2010 through 2015. During this time the population of active duty pilots operating traditionally piloted aircraft declined by 5 percent.

**Figure 12: Total Funds Obligated for Aviation Career Incentive Pay by Service, Fiscal Years 2010 – 2015**



Source: GAO analysis of Department of Defense data. | GAO-17-39

Note: Obligations are reported in fiscal year 2015 constant dollars. Data include non-pilot aviators.

### Aviation Continuation Pay (ACP)

ACP is offered only to officers. The pay was first authorized in fiscal year 1981, and DOD defines it as a financial incentive to retain qualified, experienced officer aviators who have completed—or are within 1 year of completing—any active duty service commitment incurred for undergraduate aviator service. According to DOD officials, in practice, pilots generally qualify for ACP at approximately 10 years of aviation service—the end of their initial active duty service obligation. From fiscal year 2010 through 2015 the level of pay was set by each service and was capped at \$25,000 per year for pilots operating traditionally piloted aircraft.<sup>14</sup> During this time, most of the services offered contracts up to 5

<sup>14</sup> The National Defense Authorization Act for Fiscal Year 2016 authorized ACP for RPA pilots and set the annual cap at \$35,000 for RPA pilots only. Pub. L. No. 114-92 (Nov. 25, 2015). The National Defense Authorization Act for Fiscal Year 2017 authorized all ACP eligible pilots to receive up to \$35,000 annually. Pub. L. No. 114-328, § 616(a) (Dec. 23, 2016).

or 6 years long, but in fiscal year 2013, the Air Force began offering 9-year contracts to fighter pilots for a total contract amount of \$225,000. Starting in fiscal year 2015, the Air Force offered 9-year contracts to all pilots for a total contract amount of up to \$225,000.

The services may target ACP to specific groups of aviators, adjust the pay amounts on an annual basis, or choose not to offer the pay at all. Table 6 shows that the services implemented ACP differently for pilots of different types of aircraft, and that their implementation approaches generally varied from year to year.

**Table 6: Active Duty Aviation Continuation Pay Contract Amounts**

(Range of Contract Amounts Offered by Fiscal Year)

		FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Air Force	Fixed	\$45,000- \$125,000	\$45,000- \$125,000	\$45,000- \$125,000	\$45,000- \$225,000	\$125,000- \$225,000	\$125,000- \$225,000
	Rotary	\$45,000- \$125,000	\$45,000- \$125,000	\$45,000- \$125,000	\$45,000- \$125,000	\$125,000	\$125,000- \$225,000
	RPA	-	-	\$125,000	\$125,000	\$125,000	\$125,000- \$225,000
Navy	Fixed	\$125,000	\$25,000- \$125,000	\$50,000- \$125,000	\$50,000- \$125,000	\$75,000- \$125,000	\$75,000- \$125,000
	Rotary	\$125,000	\$50,000	\$25,000- \$75,000	\$75,000	\$75,000	\$75,000
	RPA	-	-	-	-	-	-
Marine Corps	Fixed	\$15,000- \$90,000	\$25,000- \$50,000	-	-	-	-
	Rotary	\$6,000- \$85,000	\$0- \$60,000	-	-	-	-
	RPA	-	-	-	-	-	-
Army	Fixed	-	-	-	-	-	-
	Rotary	\$12,000- \$150,000	\$12,000- \$150,000	\$12,000- \$150,000	\$12,000- \$150,000	\$12,000- \$150,000	\$12,000- \$150,000
	RPA	-	-	-	-	-	-

Legend: FY = fiscal year; RPA = remotely piloted aircraft, — = Aviation Continuation Pay contracts were not offered to pilots in these categories for the specified fiscal year.

Source: GAO analysis of DOD data. | GAO-17-39

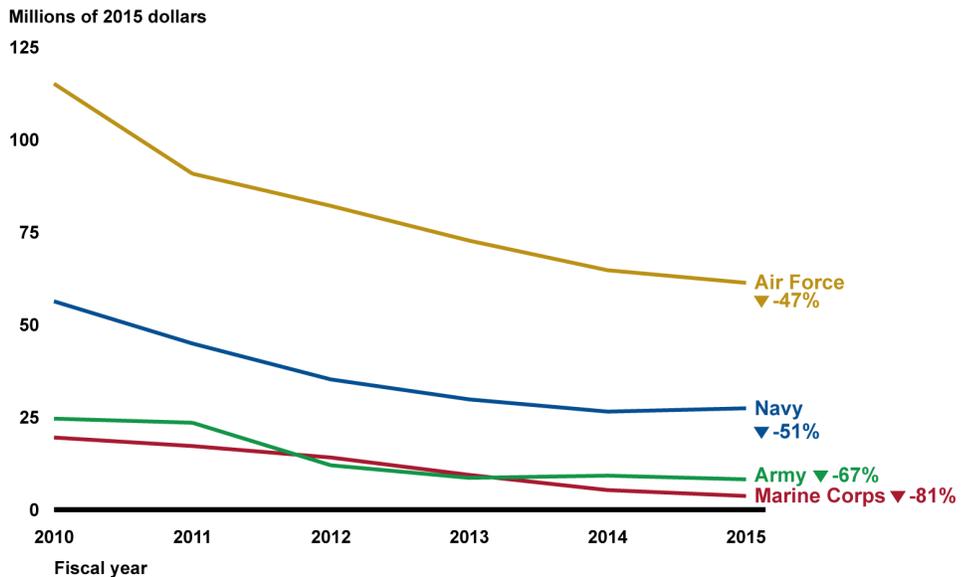
Note: The amounts listed are the range of amounts offered over the contract term for each platform, for the specific fiscal year offering. Aviation Continuation Pay contracts offered to non-pilot aviators are not included.

The Reserve Components also provided ACP to pilots. Specifically, the Marine Corps Reserve, the Air Force Reserve, the Air National Guard, and the Navy Reserve all offered ACP to pilots for at least a portion of

fiscal years 2010 through 2015. Similarly to the active component, the Reserve Components used ACP to retain pilots to help personnel inventories meet requirements.<sup>15</sup>

For fiscal years 2010 through 2015, obligations for ACP decreased by 53 percent across DOD. Figure 13 shows how the extent of this decrease varied for each of the services, largely due to different policy decisions at the service level about how to implement the pay. These implementation approaches are discussed in further detail below.

**Figure 13: Total Obligations for Aviation Continuation Pay, Fiscal Years 2010 – 2015**



Source: GAO analysis of Department of Defense data. | GAO-17-39

Notes: Obligations are reported in fiscal year 2015 constant dollars. Data include non-pilot aviators. Data include obligations both for new contracts and contracts signed in prior years.

We found that each of the services took a different approach to implementing ACP. Specifically, there are differences in how the services identified the target population and established the contract amounts offered. These approaches resulted in different amounts of ACP offered

<sup>15</sup> While we obtained and reviewed documentation of the Reserve Component ACP programs for fiscal years 2010 through 2015, as noted in our report we found limitations with overall Reserve Component S&I pay data. As such, our focus in this case study is on the S&I pays provided to active duty pilots.

(see table 6). Some of the primary differences we identified are that the Air Force offered ACP to broad categories of pilots (for example, fighter pilots, RPA pilots), while the Navy and Marine Corps offered ACP by specific platform (that is, the model of aircraft a pilot operates). The Army offered ACP to a small group of elite special operations rotary-wing pilots. Also, the Marine Corps suspended ACP offerings in fiscal year 2012, and is the only service to have done so.<sup>16</sup>

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## Additional Special and Incentive Pays Offered to Pilots

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### Selective Reenlistment Bonus (SRB)

The SRB is available only to enlisted personnel and therefore is used as an aviation pay only by the Army and the Marine Corps, because the Navy and the Air Force do not generally use enlisted personnel to pilot aircraft. DOD defines this pay as an incentive for enlisted personnel to reenlist in positions experiencing retention challenges. The level of pay is set by each service, not to exceed \$30,000 for each year of obligated service on active duty.<sup>17</sup> The Army and the Marine Corps have offered the SRB to enlisted personnel operating RPAs. Specifically, in fiscal years 2010 through 2015 the Army provided 783 bonuses to RPA operators, at an average rate of \$9,501 per year, and the Marine Corps provided 123 bonuses to RPA operators, at an average rate of \$2,376 per year.

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### Assignment Incentive Pay (AIP)

Both officers and enlisted personnel may qualify for AIP. DOD defines this as a pay used to encourage members to volunteer for difficult-to-fill jobs or assignments in less desirable locations. The level of pay is set by each service, up to a cap of \$3,000 per month (\$36,000 per year).<sup>18</sup> For fiscal years 2010 through 2015, according to service officials, the Army offered AIP to pilots in the Special Operations Aviation Regiment, and the Air Force offered AIP to RPA operators. Air Force officials told us that their intent was to use AIP to allow pilots only rated on RPAs to be

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<sup>16</sup> The Marine Corps Reserve offered ACP in fiscal years 2013 through 2015.

<sup>17</sup> 37 U.S.C. § 331.

<sup>18</sup> 37 U.S.C. § 307a.

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compensated at a comparable level to those RPA operators who were rated on traditionally piloted aircraft and who were receiving ACIP.

# Appendix IV: Case Study on Cyber Workforce Pays

## DOD's Cybersecurity Workforce Mix

The Department of Defense's (DOD) cybersecurity workforce includes military personnel within the active and Reserve Components, DOD civilians, and contractors who all work together to accomplish DOD's three primary cyber missions: (1) to defend DOD networks, systems, and information; (2) to defend the U.S. homeland and U.S. national interests against cyberattacks of significant consequence; and (3) to provide cyber support to military operational and contingency plans.<sup>1</sup> The cybersecurity workforce includes various roles, such as designing and building secure information networks and systems, monitoring and detecting unauthorized activity in the cyberspace domain, and performing offensive and defensive cyberspace operations in support of the full range of military operations (see figure 14).

**Figure 14: Sailors Assigned to the Navy Cyber Defense Operations Command**



Source: Defense Video and Imagery Distribution System. | GAO-17-39

<sup>1</sup> DOD defines its cybersecurity workforce as personnel who secure, defend, and preserve data, networks, net-centric capabilities, and other designated systems by ensuring that appropriate security controls and measures are in place and taking internal defensive actions. DOD Directive 8140.01, *Cyberspace Workforce Management* (Aug. 11, 2015).

In November 2011 we reported that DOD faced challenges in determining the appropriate size for its cybersecurity workforce because of variations in how work is defined and the lack of a designated cybersecurity career field identifier for all of its cybersecurity personnel.<sup>2</sup> Further, we reported that DOD had established a cybersecurity workforce plan, but that the plan only partially described strategies to address gaps in human capital approaches and critical skills and competencies, and that it did not address performance management or recruiting flexibilities. In addition, the plan only partially described building the capacity to support workforce strategies. We recommended that DOD either update its departmentwide cybersecurity workforce plan or ensure that departmental components have plans that appropriately address human capital approaches, critical skills, competencies, and supporting requirements for its cybersecurity workforce strategies. DOD concurred and implemented this recommendation by updating its cybersecurity workforce plan. DOD policy calls for maintaining a total force management perspective to provide qualified cyberspace government civilian and military personnel to identified and authorized positions, augmented where appropriate by contracted services support. These personnel function as an integrated workforce with complementary skill sets to provide an agile, flexible response to DOD requirements.<sup>3</sup> In May 2011 we reported that DOD needed to define cybersecurity personnel with greater specificity in order for the military services to organize, train, and equip cyber forces. We recommended that DOD develop and publish detailed policies and guidance pertaining to categories of personnel who can conduct the various forms of cyberspace operations.<sup>4</sup> DOD agreed with this recommendation and has taken steps to implement it. DOD asked the Institute for Defense Analyses to assess the current and projected total force mix for DOD's Cyber Mission Force and, if possible, to suggest alternative staffing plans. The Institute for Defense Analyses issued its report in August 2016.

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<sup>2</sup> GAO, *Cybersecurity Human Capital: Initiatives Need Better Planning and Coordination*, [GAO-12-8](#) (Washington D.C.: Nov. 29, 2011).

<sup>3</sup> DOD Directive 8140.01, *Cyberspace Workforce Management* (Aug. 11, 2015).

<sup>4</sup> GAO, *Defense Department Cyber Efforts: More Detailed Guidance Needed to Ensure Military Services Develop Appropriate Cyberspace Capabilities*, [GAO-11-421](#) (Washington, D.C.: May 20, 2011).

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## Employment of Civilian Cybersecurity Personnel

According to the U.S. Bureau of Labor Statistics, in 2014 more than 82,000 information security analysts were employed in the United States, and in 2015 the median annual wage for information security analysts was \$90,120.<sup>5</sup> According to information obtained from the services, there is a need to offer S&I pays to the cybersecurity military workforce in order to compete with the civilian sector, which includes government, DOD contractors, and corporations. For example, the Navy noted in its justification for offering selective reenlistment bonuses (SRBs) that sailors within cyber-related career fields could qualify for positions in the civilian workforce with salaries starting at \$90,000 with a \$5,000 to \$10,000 sign-on bonus.

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## Special and Incentive Pays to Retain Cybersecurity Personnel

Service officials told us that for fiscal years 2010 through 2015 the monetary incentive they have primarily relied on to retain cybersecurity personnel is the SRB. In addition to the SRB, starting in fiscal year 2015 the Army offered assignment incentive pay (AIP) and special duty assignment pay (SDAP) to a select group of cybersecurity personnel working at the Army Cyber Command. Starting in fiscal year 2016 the Air Force offered SDAP to those in a designated cybersecurity career field. Of the retention bonuses and assignment pays being offered to cybersecurity personnel, officers are eligible only for AIP. According to services officials, during this same period S&I pays to officers in cybersecurity career fields were not as necessary as they were for enlisted personnel because the services had not experienced the same growth and retention concerns as they had with the enlisted personnel. However, an Air Force official noted that due to low staffing for Cyberspace Operations officers, the Air Force is currently assessing whether to offer the officer retention bonus. According to service officials, the services have the flexibility they need to effectively use S&I pays to address retention issues in the cybersecurity workforce. Table 7 shows the different monetary S&I pays that the services have used to incentivize cybersecurity personnel to remain in cyber-related career fields for fiscal years 2010 through 2015.

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<sup>5</sup> The median wage is the wage at which half the workers in an occupation earned more than that amount and half earned less. According to the U.S. Bureau of Labor Statistics, for information security analysts in May 2015, the lowest 10 percent earned less than \$51,280, and the highest 10 percent earned more than \$143,770.

**Table 7: Special and Incentive Pays Provided to Retain Cyber Personnel, Fiscal Years 2010–2015**

	Army	Navy	Marine Corps	Air Force
<b>Enlisted</b>				
Selective Reenlistment Bonus (SRB) (37 U.S.C. §331)	√	√	√	√
Special Duty Assignment Pay (SDAP) (37 U.S.C. §307)	√ <sup>a</sup>	N/A	N/A	N/A <sup>c</sup>
Assignment Incentive Pay (AIP) (37 U.S.C. §307a)	√ <sup>b</sup>	N/A	N/A	N/A
<b>Officers</b>				
Assignment Incentive Pay (AIP) (37 U.S.C. §307a)	√ <sup>b</sup>	N/A	N/A	N/A

Legend: √ = Pay is used by the service; N/A = Not applicable. No special and incentive pays were offered to personnel in these categories.

Source: GAO analysis of DOD data. | GAO-17-39

<sup>a</sup>Starting in fiscal year 2015 the Army began to offer special duty assignment pay to Army enlisted soldiers who are certified as an Army Cyber apprentice, journeyman, or master permanently assigned to an authorized Army Cyber Mission Force position.

<sup>b</sup>Starting in fiscal year 2015 the Army began to offer assignment incentive pay to Army enlisted soldiers, warrant officers, and commissioned officers who are permanently assigned to an authorized Army Cyber position.

<sup>c</sup>Starting in fiscal year 2016 the Air Force began to offer special duty assignment pay to Air Force personnel in career field Cyber Warfare Operations (1B4X1). However, this was not included in our case study because it is outside our scope.

## Selective Reenlistment Bonus

For fiscal years 2010 through 2015, the services offered SRBs to cyber-related career fields. According to DOD, the SRB is the primary monetary force-shaping tool to achieve required enlisted retention requirements by occupation or skill set. The level of pay is set by each service and is limited by the cap placed by DOD of \$25,000 for each year of obligated service in an active component. The maximum amount of SRB payments that servicemembers can receive is \$100,000 per contract for the active component.<sup>6</sup> Factors that military service officials cited for determining SRB bonuses for cyber-related career fields include growing requirements, mission criticality of the skill set, and replacement costs. Officials also noted that they take into account previous retention trends, current budget constraints, and input from community managers. All of the services offer bonuses by career field identifier, which identifies the

<sup>6</sup> DOD Instruction 1304.31, *Enlisted Bonus Program (EBP)* (March 12, 2013).

basic skills and training the servicemember holds. The Navy also may offer SRBs by rating<sup>7</sup> and offers bonuses to personnel within the Cryptologic Technician (Networks) and Information Systems Technician ratings. As a result, all qualified personnel in a career field within the rating would be eligible for the bonus. According to Navy officials, they only offer by rating when necessary and in most cases the Navy uses the combination of rating, career field, and zone. Based on our review of 13 SRB bonus announcements for fiscal years 2010 through 2015, the Navy offered a bonus to those in Cryptologic Technician (Networks) rating in all 13 announcements and those in Information Systems Technician rating in 11 of the 13 announcements. The Army adjusts the amount of the SRB based on rank, additional skills above the basic skills required for the career field, and location; the Navy and the Air Force adjust the bonus multiplier<sup>8</sup> based on zone; and the Marine Corps adjusts the amount based on rank and zone.<sup>9</sup> For example, the Army's award amounts for Cryptologic Network Warfare Specialists for a 4-year reenlistment varied from \$8,000 to \$41,800 for fiscal years 2010 through 2015, depending on the rank, zone, skill, and location. Table 8 depicts the amounts offered for fiscal years 2010 through 2015 for selected career fields.

**Table 8: Comparison of Services' Use of Selective Reenlistment Bonuses Offered for a 4-Year Contract for Selected Cyber-Related Career Fields, Fiscal Years 2010–2015**

Dollars in thousands

Occupation	Other	Rank	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015
Army: 35Q		E-3	-	-	\$19.9	\$19.9	\$8.0	\$13.9
Cryptologic		E-4	-	-	\$21.6	\$21.6	\$8.8	\$15.1
Network Warfare		E-5	-	-	\$23.8	\$23.8	\$9.7	\$16.7
Specialist		E-6 to E-7	-	-	\$26.7	\$26.7	\$10.8	\$18.7

<sup>7</sup> Ratings are broad identifiers for a collection of related career fields. They identify career fields that encompass related aptitude, training, experience, knowledge, and skills for the purpose of career development and advancement.

<sup>8</sup> The Navy and the Air Force determine reenlistment bonus amounts by multiplying (1) a servicemember's current monthly basic pay by (2) the member's number of additional years (or fractions of year) of obligated service by (3) a bonus multiplier (the higher the factor, the greater the bonus). These three factors are multiplied together to derive a servicemember's SRB award. The amount is limited by the maximum amount offered.

<sup>9</sup> The services may use eligibility zones for the payment of Selective Reenlistment Bonuses. These zones are defined in terms of years of active duty service. Zone A includes reenlistments falling from 17 months to 6 years of active duty; zone B, from 6 to 10 years; zone C, from 10 to 14 years; and zone E, from 18 to 20 years.

**Appendix IV: Case Study on Cyber Workforce Pays**

Occupation	Other	Rank	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015
	Exploitation analyst within a specified location	E-3	-	-	-	-	-	\$19.9
		E-4	-	-	-	-	-	\$21.6
		E-5	-	-	-	-	-	\$23.8
		E-6 to E-7	-	-	-	-	-	\$26.7
	Interactive On-net operator within a specified location	E-3	-	-	-	-	-	\$31.1
		E-4	-	-	-	-	-	\$33.8
		E-5	-	-	-	-	-	\$37.3
		E-6 to E-7	-	-	-	-	-	\$41.8
Navy: 9308 Interactive ON-NET Operator	Zone A	Any	5	5	5	5	7	7
	Zone B	Any	5	5	5	5	5	6
	Zone C	Any	5	5	5	5	5	6
Marine Corps: 0689 Cyber Security Technician	Zone A	E-5 to E-9	\$58.5	\$38.8	\$49.0	\$44.8	\$60.8	\$51.0
		E-5	\$36.0	\$16.5	\$28.0	\$45.5	\$46.3	\$52.5
	Zone C	E-6 to E-9	\$40.0	\$18.3	\$31.0	\$50.3	\$51.3	\$58.0
		E-5	\$27.0	\$11.8	\$11.8	\$18.0	-	-
		E-6	\$31.0	\$13.3	\$13.5	\$20.5	\$35.0	\$35.3
	E-7 to E-9	\$34.5	\$14.8	\$15.0	\$22.8	\$38.8	\$39.3	
Air Force: 1B4X1 Cyber Warfare Operations	Zone A	Any	-	1	1	0	2	2
	Zone B	Any	-	0	0	1	4	4
	Zone C	Any	-	0	0	0	3	3
	Zone E	Any	-	0	0	0	0	0

Legend: FY = fiscal year; - = No special and incentive pays were offered. The Army's 35Q career field was established in fiscal year 2012 and the Army started to offer by skill and location starting in fiscal year 2015. The Air Force's 1B4X1 career field was established in fiscal year 2011.

Source: GAO analysis of DOD data. | GAO-17-39

Notes: An amount shown for a given fiscal year is the maximum amount the service offered over the life of the contract. For the Navy and the Air Force, the amounts shown are multipliers used to calculate the bonus amount. For example, an E-6 with a monthly basic pay of \$3,400 who reenlisted for 4 years could receive a bonus of \$13,600 if the multiplier were 1. If the multiplier were 7, the bonus amount would be \$95,200. However, if the calculated amount exceeded the maximum amount allowed, the bonus amount would be reduced to the maximum amount allowed.

**Other S&I Pays to Incentivize Cybersecurity Personnel**

In addition to offering SRBs, the Army has recently begun to offer AIP and SDAP to select cybersecurity personnel, and the Air Force has recently begun to offer SDAP. In 2015 the Army first approved the use of SDAP and AIP to target certain cybersecurity personnel. As of February 2015 these pays targeted qualified cybersecurity personnel within the Army Cyber Command's Cyber Mission Force. According to Army documentation, SDAP was approved because those in the Army's Cyber Mission Force require special qualifications met through rigorous screening or special schooling. Also according to Army documentation, AIP was approved because positions within the Army's Cyber Mission

Force were considered difficult to fill. According to DOD policy, AIP is a temporary compensation tool to provide an additional monetary incentive to encourage servicemembers to volunteer for select difficult-to-fill or less desirable assignments, locations, or units designated by, and under the conditions of service specified by, the Secretary concerned. According to Army officials, the Army is exploring other approaches to further incentivize cybersecurity personnel within the Army Cyber Command's Cyber Mission Force. Unlike the bonuses that are offered to soldiers qualified in a specified career field, the Army does not offer AIP or SDAP by career field and instead offers these pays only to personnel who are permanently assigned to authorized positions within the Cyber Mission Force and have completed the appropriate training and certifications. According to an Army official, in fiscal year 2015 the Army obligated \$151,000 for 85 soldiers within the Cyber Mission Force to receive SDAP and obligated \$310,000 for 128 personnel within the Cyber Mission Force to receive AIP. As noted in table 9, eligible cyber personnel receive monthly payments of between \$350 and \$800.

**Table 9: Special Duty Assignment Pay and Assignment Incentive Pay Offered to Army Cybersecurity Personnel in Army Cyber Command, Fiscal Year 2015**

	Special Duty Assignment Pay monthly rate	Assignment Incentive Pay monthly rate	Total monthly rate	Total annual rate
<b>Enlisted personnel</b>				
Apprentice	\$150	\$200	<b>\$350</b>	<b>\$4,200</b>
Journeyman	\$225	\$300	<b>\$525</b>	<b>\$6,300</b>
Master	\$300	\$500	<b>\$800</b>	<b>\$9,600</b>
<b>Officers</b>				
Apprentice	N/A	\$200	<b>\$200</b>	<b>\$2,400</b>
Journeyman	N/A	\$300	<b>\$300</b>	<b>\$3,600</b>
Master	N/A	\$500	<b>\$500</b>	<b>\$6,000</b>

Legend: N/A = Not applicable. Special duty assignment pay is authorized for enlisted personnel only.  
Source: GAO analysis of DOD data. | GAO-17-39

According to an Air Force official, in fiscal year 2016 the Air Force first offered SDAP to cybersecurity personnel in career field Cyber Warfare Operations (1B4X1). The Air Force offered SDAP because servicemembers in career field 1B4X1 are considered to have highly specialized training and skill sets. Eligible cyber enlisted personnel receive monthly payments of between \$150 and \$225.

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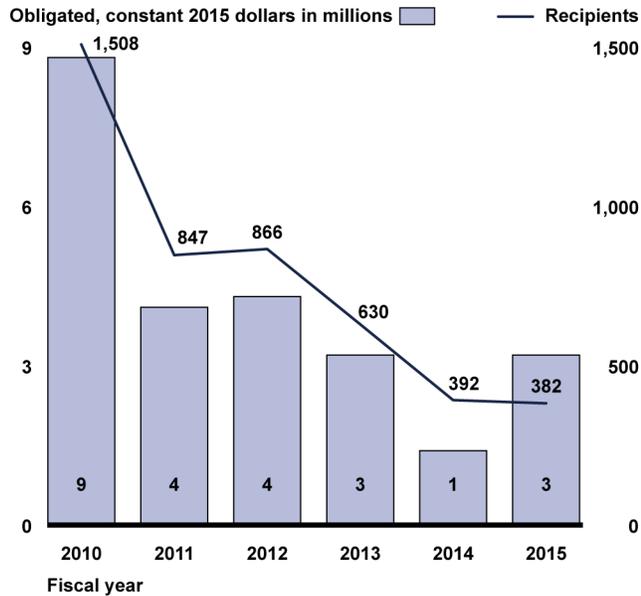
## Total Obligations for Selective Reenlistment Bonuses for Enlisted Cybersecurity Personnel Have Increased in Recent Years

As noted earlier, total obligations for all enlisted SRBs have been declining; however, SRB obligations for certain cybersecurity career fields have increased in recent years. For example, as shown in figure 15, after a significant decline from fiscal year 2010, Army obligations for cyber-related SRBs have been increasing since fiscal year 2014, and as shown in figures 16 and 17, Navy and Marine Corps obligations for cyber-related SRBs have been increasing since fiscal year 2012. According to Army officials, the Army did not start to target cyber until 2013. The higher obligation amount seen in figure 15 for fiscal year 2010 was not due to a focus on cyber but was in part due to shortages in high density career fields, such as 25B and 25U. As noted earlier, in addition to cyber personnel, these career fields contain other types of personnel, such as information technology personnel. According to Navy officials, the decrease in fiscal year 2012 and the subsequent increase reflect the reenlistment need for the skills at the given time. According to Marine Corps officials, obligations for cyber-related fields decreased in fiscal years 2011 and 2012 because of reductions in force structure. The Marine Corps was reaching its reduced 2012 overall inventory goal, but for certain career fields containing cybersecurity personnel there was an increase in force structure for fiscal year 2015 to support the Cyber Mission Force build-up,<sup>10</sup> which DOD began in 2012. The Air Force was unable to provide reliable SRB obligations for its cyber-related career fields.

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<sup>10</sup> Among DOD's cyber personnel and forces is the Cyber Mission Force. DOD's Cyber Mission Force is to carry out DOD's cyber missions. Once fully operational, Cyber Mission Force is projected to include nearly 6,200 military, civilian, and contractor support personnel from across the military departments and defense components.

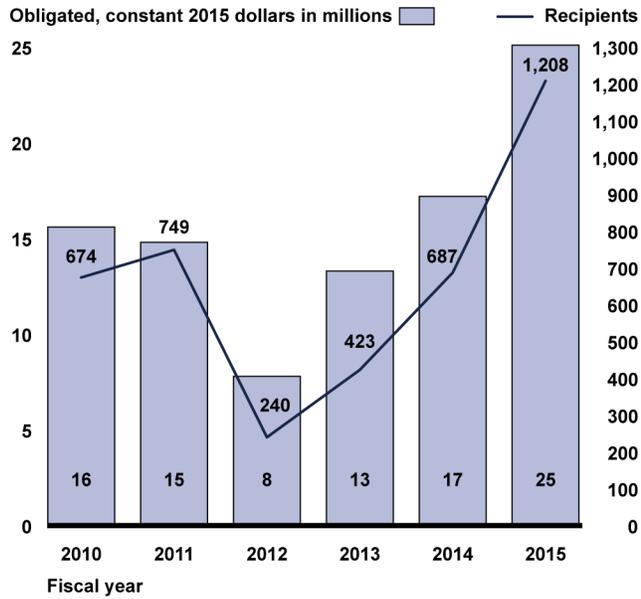
**Figure 15: Number of Selective Reenlistment Bonus Recipients and Total Dollars Obligated for Selective Reenlistment Bonuses for Career Fields Identified to Include Cybersecurity Army Personnel, Fiscal Years 2010–2015**



Source: GAO analysis of Army data. | GAO-17-39

Notes: Obligations are reported in fiscal year 2015 constant dollars. Cyber-related career fields include the following: 25B Information Technology Specialist; 25D Cyber Network Defender; 35Q Cryptologic Network Warfare Specialist; 25U Signal Support Systems Specialist; and 35T Military Intelligence Systems Maintainer/Integrator. Obligations and number of recipients includes all personnel within each career field noted, not just cybersecurity personnel.

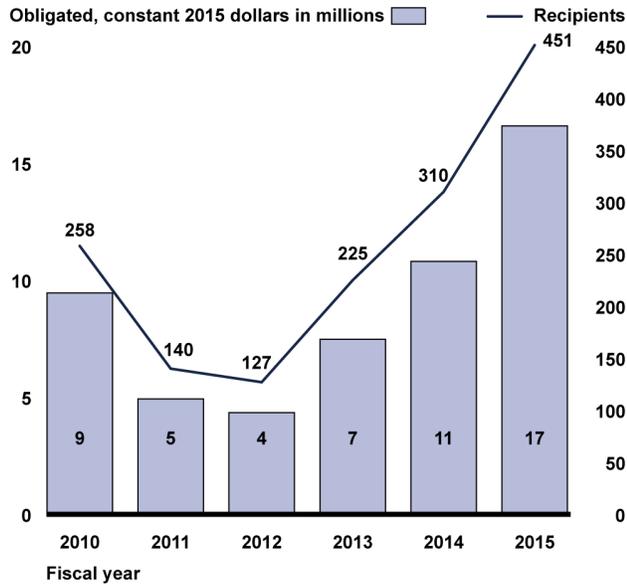
**Figure 16: Number of Selective Reenlistment Bonus Recipients and Total Dollars Obligated for Selective Reenlistment Bonuses for Career Fields Identified to Include Cybersecurity Navy Personnel, Fiscal Years 2010–2015**



Source: GAO analysis of Navy data. | GAO-17-39

Notes: Obligations are reported in fiscal year 2015 constant dollars. Cyber-related career fields and ratings include the following: Cryptologic Technician (Networks) and Information Systems Technician Ratings. Obligations and number of recipients includes all personnel within each career field noted, not just cybersecurity personnel.

**Figure 17: Number of Selective Reenlistment Bonus Recipients and Total Dollars Obligated for Selective Reenlistment Bonuses for Career Fields Identified to Include Cybersecurity Enlisted Marine Corps Personnel, Fiscal Years 2010–2015**



Source: GAO analysis of Marine Corps data. | GAO-17-39

Note: Obligations are reported in fiscal year 2015 constant dollars. Cyber-related career fields include the following: 0651 Cyber Network Operator, 0659 Cyber Network Systems Chief, 0681 Information Security Technician, 0689 Cyber Security Technician, 2651 Special Intelligence System Administrator/Communicator, and 6694 Aviation Logistics Information Management System Specialist. Obligations and number of recipients include all personnel within each career field noted, not just cybersecurity personnel.

The average per-person SRB amounts the services offered to cyber-related career fields for fiscal years 2010 through 2015 varied, as shown in table 10, ranging from about \$2,277 to about \$71,788. During this time, the Navy’s Interactive Operators have consistently on average received the highest amounts, ranging from about \$58,594 to \$71,788. The Army on average paid the lowest bonus amounts to personnel within cyber-related career fields.

Appendix IV: Case Study on Cyber Workforce Pays

**Table 10: Average Per-Person Rate of Selective Reenlistment Bonuses for Cyber-Related Career Fields/Ratings by Service, Fiscal Years 2010–2015**

Career field/rating	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015
<b>Army</b>						
25B Information Technology Specialist	\$6,832	\$5,109	\$5,192	\$4,406	\$2,277	\$6,206
25D Cyber Network Defender	\$0	\$0	\$0	\$0	\$0	\$11,975
35Q Cryptologic Network Warfare Specialist	\$0	\$0	\$18,778	\$13,269	\$8,198	\$16,570
25U Signal Support Systems Specialist	\$5,116	\$4,174	\$3,521	\$3,951	\$2,818	\$6,266
35T Military Intelligence Systems Maintainer/Integrator	\$3,302	\$8,106	\$10,276	\$5,496	\$6,190	\$7,778
<b>Navy</b>						
27XX Information Systems Technician Personnel	\$5,113	0	\$35,694	\$35,025	\$31,264	\$39,555
9308 Interactive ON-NET Operator	\$69,759	\$71,788	\$59,445	\$58,594	\$66,095	\$66,938
Cryptologic Technician (Networks)	\$45,162	\$35,173	\$28,577	\$35,411	\$41,425	\$41,473
Information Systems Technician	\$13,180	\$14,792	\$22,126	\$20,643	\$16,351	\$15,496
<b>Marine Corps</b>						
0651 Cyber Network Operator	\$37,400	\$22,031	\$26,546	\$17,472	\$29,327	\$33,378
0659 Cyber Network Systems Chief	\$34,775	\$13,047	\$36,049	\$28,797	\$29,442	\$30,696
0681 Information Security Technician	\$39,494	\$38,875	\$14,907	\$22,867	\$13,174	\$13,000
0689 Cyber Security Technician	\$42,781	\$48,098	\$41,104	\$51,565	\$52,889	\$50,298
2651 Special Intelligence System Administrator/Communicator	\$31,763	\$44,947	\$45,790	\$28,535	\$22,199	\$14,234
6694 Aviation Logistics Information Management System Specialist	\$22,181	\$30,253	\$14,013	\$17,845	\$15,633	\$15,289

Legend: FY = fiscal year.

Source: GAO analysis of DOD data. | GAO-17-39

Note: Average rates are reported in fiscal year 2015 constant dollars.

According to service officials, the Reserve Components may also use retention bonuses to retain personnel in cyber-related career fields. However, according to information received from service officials, the number of S&I pays that have been offered to retain cybersecurity personnel within the Reserve Components is relatively small. For example, according to documentation provided by the Navy, for fiscal years 2010 through 2015, the Navy Reserve expended about \$379,000 to retain 68 personnel in cyber-related career fields. According to Marine Corps officials, the Marine Corps Reserve offers those in the Cyber Security Technician career field a retention bonus, and the current requirement for this career field is 12 personnel. Further, according to Air Force officials, the Air National Guard has not offered bonuses in the past to cyber-related career fields, and the Air Force Reserve did not offer

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cyber-related career field bonuses in fiscal year 2015 and did not have plans to offer bonuses in fiscal year 2016. For these reasons, we did not include the Reserve Components in our case study for cybersecurity.

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# Appendix V: Objectives, Scope, and Methodology

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A Senate Armed Services Committee report accompanying a bill for the National Defense Authorization Act for Fiscal Year 2016 included a provision that we review the effectiveness of the Department of Defense's (DOD) special and incentive (S&I) pay programs.<sup>1</sup> This report assesses (1) trends in DOD obligations for S&I pay programs for fiscal years 2005 through 2015 and the extent to which DOD reports such obligations department-wide and (2) the extent to which the military services applied key principles of effective human capital management in the design of S&I pay programs for recruitment and retention of servicemembers in selected high-skill occupations for fiscal years 2010 through 2015.

To address our first objective, we analyzed obligations for S&I pays from the military services' active and Reserve Component military personnel accounts for fiscal years 2005 through 2015. We selected this timeframe to enable us to evaluate trends over time, and fiscal year 2015 was the most recent year of available obligations data at the time of our review. We obtained these data from the annual budget justification materials that DOD and the military services published in connection with their military personnel appropriations requests. We normalized S&I pay obligations data to constant fiscal year 2015 dollars using the series of military personnel deflators for fiscal years 2005 through 2015 published in DOD's *National Defense Budget Estimates for Fiscal Year 2015*. To analyze trends in S&I pay obligations over time across the active military service components, we obtained obligations for the more than 60 S&I pays across the services and grouped them into nine categories in accordance with the consolidated pay categories authorized by Congress

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<sup>1</sup> S. Rep. 114-49 at 147 (2015) accompanying S. 1376, a proposed bill for the National Defense Authorization Act for Fiscal Year 2016. In this report, we use the term "special and incentive pays" to refer to those pays and bonuses in chapter 5 of Title 37 of the U.S. Code.

in the National Defense Authorization Act for Fiscal Year 2008.<sup>2</sup> We compared each active component's total S&I pay obligations from fiscal years 2005 through 2015 with each service's total military personnel obligations. In addition, we obtained average strength numbers from the annual budget justification materials and compared these data with the services' S&I pay obligations and assessed any possible correlation.<sup>3</sup> We discussed with service officials the factors that may have contributed to trends we identified in the S&I pay obligations data we reviewed. To assess the reliability of the data on S&I pays, we assessed the completeness of the data and compared the data against other data sources. GAO has designated DOD's financial management area as high risk due to long-standing deficiencies in DOD's systems, processes, and internal controls. Since some of these systems provide the data used in the budgeting process, there are limitations to the use of DOD budget data.<sup>4</sup> However, based on discussions with appropriate DOD officials and our comparison of the trends in the budget data against other data sources, we determined that the S&I pay obligation data for the active component are sufficiently reliable for showing overall trends for S&I pays. However, we determined that data for Reserve Component S&I pays were unreliable due to incompleteness or inconsistency, as described earlier in this report. We compared the available Reserve Component data with guidance established in DOD's *Financial Management Regulation*, which provides guidance for a uniform budget and accounting classification that is to be used for preparing budget

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<sup>2</sup> Pub. L. No. 110-181 div. A, title VI, subtitle F (Jan. 28, 2008). The nine categories include (1) General bonus authority for enlisted members (e.g., Selective Reenlistment Bonus and enlistment bonus); (2) Assignment pay or special duty pay (e.g., Assignment Incentive Pay, Special Duty Assignment Pay, and Career Sea Pay); (3) Hazardous duty pay (e.g., Hostile Fire and Imminent Danger Pay); (4) Special bonus and incentive pay for officers in health professions; (5) Special aviation incentive pay and bonus authorities (e.g., Aviation Career Incentive Pay and Aviation Continuation Pay); (6) Skill incentive pay or proficiency bonus (e.g., Foreign Language Proficiency Pay, Career Enlisted Flyer Incentive Pay, and Diving Pay); (7) Special bonus and incentive pay authorities for nuclear officers (e.g., Nuclear Officer Incentive Pay and Nuclear Career Accession Bonus); (8) General bonus authority for officers (e.g., Accession Bonus for New Officers in Critical Skills and Judge Advocate Continuation Pay); and (9) Existing authorities which were retained (e.g., Critical Skills Retention Bonus and Combat-related Injury Rehabilitation Pay).

<sup>3</sup> "Military average strength" reflects the fiscal year average of monthly end strength data for enlisted personnel. "End-strength" represents the actual number of personnel on board at the end of a fiscal year.

<sup>4</sup> [GAO-15-290](#), *High Risk Series: An Update*, (Washington, D.C.: Feb. 11, 2015).

estimates, including the budget justification materials we reviewed.<sup>5</sup> Further, we examined DOD policy, key statutes and accounting standards for developing and reporting cost information to determine the extent to which they were followed by DOD when reporting on S&I pay obligations.<sup>6</sup> We compared the available Reserve Component data with guidance established in DOD's *Financial Management Regulation* and with federal internal control standards to determine the extent to which the guidance was followed.<sup>7</sup>

To address our second objective, we selected a non-generalizable sample of three high-skill occupations from across the military services to review in greater detail as case studies. For the purposes of this review, we limited the scope and definition of "high-skill occupations" to the six occupations identified in Senate Report 114-49: nuclear maintenance and engineering (i.e., nuclear propulsion), pilots (i.e., aviation), critical language skills, information technology, cyber warfare (i.e., cybersecurity), and special operations. In selecting case studies from this pool of occupations, we sought to include (1) a mix of S&I pay programs associated with an occupation-specific pay authority and S&I pay programs that apply authorities that are available across occupation types; (2) programs containing pays in varying stages of implementing the consolidation authorities established in the National Defense Authorization Act for Fiscal Year 2008; and (3) at least one emerging occupation. On the basis of these three criteria, we selected nuclear propulsion, aviation, and cybersecurity as case studies. We selected nuclear because there are occupation-specific pays for nuclear personnel and the consolidation special bonus and incentive pay authorities for nuclear officers were completely implemented. We selected aviation because there are occupation-specific pays for aviators and the consolidation special aviation incentive pay and bonus authorities have not been fully implemented. In addition, we selected aviation because of the recent policy changes for aviation-related S&I pays involving remotely

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<sup>5</sup> Department of Defense 7000.14R, *Financial Management Regulation* (May 2015).

<sup>6</sup> The Chief Financial Officer's Act, Pub. L. No. 101-576 (Nov. 15, 1990), underscores the importance of improving financial management in the federal government. Among other things, it calls for developing and reporting cost information. Statement of Federal Financial Accounting Standards Number 4, "Managerial Cost Accounting Standards and Concepts," is aimed at providing reliable and timely information on the full cost of federal programs, their activities, and outputs.

<sup>7</sup> GAO, *Standards for Internal Control in the Federal Government*, [GAO/AIMD-00-21.3.1](#) (Washington, D.C.: Nov. 1999).

piloted aircraft pilots. Lastly, we selected cybersecurity because it is an emerging career field.

While the information obtained from the case studies is not generalizable for all occupations across DOD, it enabled us to obtain the perspectives of how the services use their S&I pay programs for the three high-skill occupations we selected.

To determine the extent to which the military services applied key principles of effective human capital management in the design of their S&I pay programs associated with our selected occupations, we reviewed DOD and service policies and guidance on the special and incentive pays used for the three occupations we selected. We analyzed available data and reports from the military services on the eligibility criteria, pay amounts, and numbers of recipients in each of the occupations, and we discussed with cognizant officials the context for changes to the S&I pay programs targeting these occupations. For our selected occupations, we reviewed the services' retention, assignment, and officer accession S&I pay obligations to analyze trends and to understand reasons for any fluctuations we identified from fiscal years 2010 through 2015.<sup>8</sup> To identify key principles of effective human capital management, we reviewed a compilation of GAO's body of work on human capital management, DOD's *Eleventh Quadrennial Review of Military Compensation*, and the DOD *Diversity and Inclusion Strategic Plan 2012 - 2017*.<sup>9</sup> Using these sources, we assembled a list of seven key principles of effective human capital management.<sup>10</sup> To identify the extent to which the services met these key principles in the design of their S&I pay programs, we reviewed the principles and compared them with service-provided documentation on the S&I pay programs for our three case studies, including policies and guidance, administrative messages, program proposals and justifications, as well as with information obtained through interviews with service

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<sup>8</sup> We did not include enlistment bonuses in our analyses for our second objective because service officials told us that at the time the servicemember enlists in the armed services, enlistment bonuses are generally not linked to a servicemember's occupation..

<sup>9</sup> GAO, *A Model of Strategic Human Capital Management*, [GAO-02-373SP](#); (Washington, D.C.: Mar. 15, 2002); GAO, *Human Capital: Key Principles for Effective Strategic Workforce Planning*, [GAO-04-39](#); (Washington, D.C.: Dec. 11, 2003); GAO, *High-Risk Series: An Update*, [GAO-11-278](#) (Washington, D.C.: Feb. 2011). Department of Defense, *Eleventh Quadrennial Review of Military Compensation* (June 2012). Department of Defense, *DOD Diversity and Inclusion Strategic Plan 2012-2017* (2012).

<sup>10</sup> The seven key principles are listed in figure 3 of this report.

officials. The analysts then used this comparison between the principles and the service information to determine whether each service's approach to the pay programs for our case studies was consistent with each principle. Specifically, for each case study of S&I pay programs associated with nuclear propulsion, aviation, and cyber operations, an analyst independently assessed whether each service's processes for planning, implementing, and monitoring the pay programs addressed, partially addressed, or did not address the seven principles of human capital management. By addressed, we mean the principle was applied throughout the program and demonstrated through documentation and testimonial information from interviews with service officials; by partially addressed, we mean one or more parts of the principle, but not all parts, were explicitly addressed (e.g., the principle is addressed for one or a few pays within a program, but not for all; or the principle is demonstrated through policy but not through implementation); and by not addressed, we mean that no part of the principle was explicitly addressed from reviewing program documentation or interviews with officials. Following the initial case study assessments, a second analyst reviewed all available documentation and testimonial evidence for each principle and each service's programs and made an assessment about the extent to which the principle was addressed. Where the two analysts disagreed, they discussed the evidence and reached consensus on the extent to which the principle in question was addressed. Once the assessment process was completed, we reviewed our results with cognizant DOD and service officials and incorporated their feedback or additional information where appropriate. In addition to the key principles for effective human capital management, we also compared aspects of DOD's application of S&I pay program guidance with federal internal control standards that emphasize the importance of establishing clear and consistent agency objectives.<sup>11</sup>

To determine DOD's progress in consolidating S&I pay programs from legacy statutory authorities to new authorities established in the National Defense Authorization Act for Fiscal Year 2008, we met with cognizant DOD officials and we obtained and reviewed documentation related to DOD's implementation and status of the pay consolidation, such as updated or new DOD instructions resulting from the consolidation effort.<sup>12</sup>

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<sup>11</sup> [GAO/AIMD-00-21.3.1](#).

<sup>12</sup> Pub. L. No. 110-181 (Jan. 28, 2008).

We interviewed officials or, where appropriate, obtained documentation at the organizations listed below:

Office of the Secretary of Defense

- Office of the Under Secretary of Defense for Personnel and Readiness
- Office of the Under Secretary of Defense, Comptroller
- Office of the Assistant Secretary of Defense for Manpower and Reserve Affairs
- Office of the Assistant Secretary of Defense for Health Affairs
- Defense Manpower Data Center

Department of the Air Force

- Office of the Assistant Secretary of the Air Force for Financial Management and Comptroller
- Office of the Deputy Chief of Staff for Manpower, Personnel and Services (A1)

Department of the Army

- Army Budget Office
- Office of the Deputy Chief of Staff of the Army, G-1
- Army Human Resources Command
- Office of the Chief of the Army Reserve
- Office of the Director of the Army National Guard

Department of the Navy

- Office of the Assistant Secretary of the Navy for Manpower and Reserve Affairs
- Office of the Deputy Chief of Naval Operations for Manpower, Personnel, Training, and Operations (N1)
- Office of the Deputy Commandant of the Marine Corps for Programs and Resources
- Office of the Deputy Commandant of the Marine Corps for Manpower and Reserve Affairs

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We conducted this performance audit from July 2015 to February 2017 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

# Appendix VI: Comments from the Department of Defense



MANPOWER AND  
RESERVE AFFAIRS

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE  
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DEC 16 2016

Ms. Brenda S. Farrell  
Director, Defense Capabilities and Management  
U.S. Government Accountability Office  
441 G Street, NW  
Washington DC 20548

Dear Ms. Farrell:

This is the Department of Defense's (DoD) response to the Government Accountability Office (GAO) Draft Report GAO-17-39, "MILITARY COMPENSATION: Additional Actions Are Needed to Better Manage Special and Incentive Pay Programs," dated November 18, 2016 (GAO Code 100242).

DoD is providing official written comments for inclusion in the report. DoD concurs with three of the report recommendations and partially concurs with the remaining two. We will continue to work with the Military Services to develop guidance in addressing GAO's recommendations. This guidance will be promulgated in DoD issuances and the DoD Financial Management Regulation 7000.14R.

The enclosure contains detailed departmental comments on each of the five recommendations made by GAO and a consolidated listing of technical and substantive comments. DoD appreciates the opportunity to comment on the draft report.

Sincerely,

A handwritten signature in black ink, appearing to read "L. J. Hebert".

L. J. Hebert  
Principal Director  
(Military Personnel Policy)

Enclosure:  
As stated

GAO DRAFT REPORT DATED NOVEMBER 18, 2016  
GAO-17-39 (GAO CODE 100242)

“MILITARY COMPENSATION: ADDITIONAL ACTIONS ARE NEEDED TO BETTER  
MANAGE SPECIAL AND INCENTIVE PAY PROGRAMS”

DEPARTMENT OF DEFENSE COMMENTS  
TO THE GAO RECOMMENDATION

**RECOMMENDATION:** To facilitate DoD’s oversight of the military services’ S&I pay programs, and to fully ensure the effectiveness of these programs, the GAO recommends that the Secretary of Defense direct the Under Secretary of Defense (Comptroller), in coordination with the military services, to explore cost-effective approaches to collect and report S&I pay program data for the Reserve Components.

**DoD RESPONSE:** Concur. DoD will maintain its focus on the recruiting and retention pays for both the active and reserve components, and will continue to work with the Reserve Components to strengthen the collection of the remaining special and incentive pays.

**RECOMMENDATION:** To facilitate DoD’s oversight of the military services’ S&I pay programs, and to fully ensure the effectiveness of these programs, the GAO recommends that the Secretary of Defense direct the Under Secretary of Defense for Personnel and Readiness, in coordination with the military services, to:

- review whether S&I pay programs have incorporated key principles of effective human capital management and used resources efficiently and prioritize and complete the establishment of measures for the efficient use of resources;
- routinely assess the impact of non-monetary incentive approaches on retention behavior and on the necessary levels of S&I pays;
- clarify existing guidance for S&I pay programs regarding the extent to which personnel performance should be incorporated into retention decisions.

**DoD RESPONSE:** The Department has addressed each recommendations independently.

1. Review whether S&I pay programs have incorporated key principles of effective human capital management and used resources efficiently and prioritize and complete the establishment of measures for the efficient use of resources.

Partially concur. The Department S&I pay programs currently do use key principles of effective human capital management, and although they are not articulated in the same manner as GAO’s principles, they do share common goals and results. For example, the Department’s principle of flexibility, the ability to adjust quickly to changing conditions, is closely aligned to GAO seventh principle; Civilian supply, demand, and wages are assessed, and plans are updated as needed. These similarities are apparent in GAO’s assessment in which the S&I pay programs evaluated either met or partially met 98 percent of GAO’s key principles of effective human

capital management. The Department supports the opportunity to review and improve upon the principles and methods to assess the efficiency S&I pay programs, and where appropriate, incorporate these principles in future DoD policy issuances and updates.

2. Routinely assess the impact of non-monetary incentive approaches on retention behavior and on the necessary levels of S&I pays.

Concur. The Services offer non-monetary benefits such as choice of duty location, unit assignments, education benefits, Post 9-11 GI Bill transferability, and career intermission programs as practical alternative to cash bonuses and incentives. Both the Army and Navy have utilized such incentives with the Army's Captain Critical Skill Retention Bonus and the Navy's Special Warfare Incentive program. Each of the Services offer and many of our service members have benefitted through the Post 9-11 GI Bill transferability program. Additionally, through Congressional authorization, the Departments expanded the career intermission program to all service members.

3. Clarify existing guidance for S&I pay programs regarding the extent to which personnel performance should be incorporated into retention decisions

Concur. The Department will clarify existing guidance regarding the extent to which personnel performance will be incorporated into retention decisions.

**RECOMMENDATION:** To facilitate DoD's oversight of the military services' S&I pay programs, and to fully ensure the effectiveness of these programs, the GAO recommends that the Secretary of Defense direct the Secretaries of the Military Departments to develop approaches to directly target SRBs to cybersecurity skillsets

**DoD RESPONSE:** Partially concur. The Services are responsible for developing their manpower requirements in order to meet individual Service operational and wartime needs. The Department has provided the Services with the necessary manpower tools, in the form of special and incentive pays and non-monetary benefits, to recruit and retain Service members in the cybersecurity skillsets. The pays associated with accession, enlistment, and retention bonuses for enlisted members and officers are outlined in DoD Instructions 1304.31, Enlisted Bonus Program, and 1304.34, General Bonus Authority for Officers. It is crucial for the Services to retain their flexibility to utilize these pays and benefits to address Service-specific shortfalls within their cybersecurity workforce, and it is equally important for the Services to have the ability to discontinue these pays when they have a surplus of cyber professionals. The Department will assist the Services in growing and maintaining their Cybersecurity workforce through existing and future DoD policies.

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# Appendix VII: GAO Contact and Staff Acknowledgments

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## GAO Contact

Brenda S. Farrell, (202) 512-3604 or [farrellb@gao.gov](mailto:farrellb@gao.gov)

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## Staff Acknowledgments

In addition to the contact named above, key contributors to this report were Beverly Schladt, Assistant Director; Melissa Blanco, Aica Dizon, Farrah Graham, Foster Kerrison, Amie Lesser, Felicia Lopez, Martin Mayer, Shahrzad Nikoo, Stephanie Santoso, John Van Schaik , and Cheryl Weissman.

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# Related GAO Products

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*Unmanned Aerial Systems: Further Actions Needed to Fully Address Air Force and Army Pilot Workforce Challenges.* [GAO-16-527T](#). Washington D.C.: March 16, 2016.

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*Unmanned Aerial Systems: Actions Needed to Improve DOD Pilot Training.* [GAO-15-461](#). Washington, D.C.: May 14, 2015.

*Human Capital: DOD Should Fully Develop Its Civilian Strategic Workforce Plan to Aid Decision Makers.* [GAO-14-565](#). Washington, D.C.: July 9, 2014.

*Air Force: Actions Needed to Strengthen Management of Unmanned Aerial System Pilots.* [GAO-14-316](#). Washington, D.C.: April 10, 2014.

*Imminent Danger Pay: Actions Needed Regarding Pay Designations in the U.S. Central Command Area of Responsibility.* [GAO-14-230R](#). Washington, D.C.: January 30, 2014.

*Human Capital: Additional Steps Needed to Help Determine the Right Size and Composition of DOD's Total Workforce.* [GAO-13-470](#). Washington, D.C.: May 29, 2013.

*Cybersecurity Human Capital: Initiatives Need Better Planning and Coordination.* [GAO-12-8](#). Washington, D.C.: November 29, 2011.

*Military Cash Incentives: DOD Should Coordinate and Monitor Its Efforts to Achieve Cost-Effective Bonuses and Special Pays.* [GAO-11-631](#). Washington, D.C.: June 21, 2011.

*Military Personnel: Military and Civilian Pay Comparisons Present Challenges and Are One of Many Tools in Assessing Compensation.* [GAO-10-561R](#). Washington, D.C.: April 1, 2010.

*Military Personnel: DOD Needs to Improve the Transparency and Reassess the Reasonableness, Appropriateness, Affordability, and Sustainability of Its Military Compensation System.* [GAO-05-798](#). Washington, D.C.: July 19, 2005.

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**Related GAO Products**

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*A Model of Strategic Human Capital Management.* [GAO-02-373SP](#),  
Washington, D.C.: March 15, 2002.

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