United States Government Accountability Office

Report to the Chairman, Subcommittee on Government Operations, Committee on Oversight and Reform, House of Representatives

July 2020

VETERAN FEDERAL EMPLOYMENT

OPM and Agencies Could Better Leverage Data to Help Improve Veteran Retention Rates

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Why GAO Did This Study

Approximately 200,000 servicemembers transition from military service to civilian life each year, according to the Department of Defense. A 2009 executive order created a government-wide initiative to increase veteran federal employment. While veteran hiring has increased since 2009, OPM has raised concerns about retention and job satisfaction of newly hired veterans.

GAO was asked to analyze veteran federal employment data. This report analyzes (1) recent trends in attrition for veterans and non-veterans, and (2) key factors that may affect a veteran employee's decision to leave federal employment. GAO conducted a statistical analysis comparing attrition for veterans and similar non-veterans for fiscal years 2014 through 2018 (the most current data available). GAO conducted a literature review to identify potential drivers of retention and used regression methods to analyze OPM FEVS data to identify key drivers for veterans and non-veterans. GAO also interviewed OPM officials and veteran service organizations.

What GAO Recommends

GAO recommends that OPM assist the 24 CFO Act agencies by using OPM FEVS data to analyze the key drivers of veterans' retention. OPM partially concurred with the recommendation because of concerns about its scope and, in response, we modified it.

View GAO-20-592. For more information, contact Yvonne D. Jones at (202) 512-2717 or jonesy@gao.gov.

What GAO Found

From fiscal years 2014 through 2018, veterans left federal government jobs at a higher rate than non-veterans, according to GAO analysis of Office of Personnel Management (OPM) data. After controlling for key demographic and employment factors, GAO estimated that on average, 6.7 percent of veterans left the federal government compared to 5 percent of similar non-veterans. While veterans primarily left to retire, veterans resigned from federal service at 1.6 times the rate of similar non-veterans. GAO also estimated that 18.7 percent of veterans resigned within their first 5 years of federal service compared to 11.1 percent of similar non-veterans. Each of the 24 Chief Financial Officer Act agencies experienced higher rates of attrition among veteran employees than similar non-veteran employees.

GAO identified six workplace factors associated with veterans' intentions to leave federal service. These factors—or drivers of retention—are based on an analysis of data from the OPM Federal Employee Viewpoint Survey (OPM FEVS), a tool for collecting employees' perceptions of their federal work experiences.

Key Workplace Factors Associated with Veterans Considering Leaving Federal Service

Source: GAO analysis of 2017 Office of Personnel Management Federal Employee Viewpoint Survey data. | GAO-20-592

More than half of both veterans and non-veterans reported being satisfied with five of the six factors. More than half of both veterans and non-veterans reported not being satisfied with opportunities for advancement at their agencies. Overall we found that veterans were slightly less satisfied with these factors than non-veterans, which could in part explain the higher attrition rates for veterans. Improvements in employee satisfaction in these areas may lead to higher retention rates.

Performing analyses similar to those in this report could help agencies identify and strengthen strategies for improving veteran retention. However, challenges exist for agencies using OPM FEVS data on their own to identify drivers of retention among their workforces. OPM could help agencies with these analyses so they could use data to address veteran retention issues and other workforce challenges.

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Abbreviations

CFO	Chief Financial Officers
EHRI	Enterprise Human Resources Integration
OPM	Office of Personnel Management
OPM FEVS	Office of Personnel Management Federal Employee Viewpoint Survey

U.S. GOVERNMENT ACCOUNTABILITY OFFICE

441 G St. N.W.
Washington, DC 20548

July 22, 2020

The Honorable Gerald E. Connolly
Chairman
Subcommittee on Government Operations
Committee on Oversight and Reform
House of Representatives

Dear Mr. Chairman:

Approximately 200,000 servicemembers transition from military service to civilian life each year, according to the Department of Defense. A key part of that transition is securing employment. The federal government has established programs to facilitate the hiring, placement, and advancement of veterans. In November 2009, Executive Order 13518 created the Veterans Employment Initiative and the Council on Veterans Employment to coordinate a government-wide effort to increase the employment of veterans in the federal government.[1]

The Office of Personnel Management (OPM) reports an increased hiring of veterans in the years since the executive order was implemented. As of September 2017, almost 32 percent of the roughly 2 million federal employees are veterans, up from 26 percent in 2009.[2] However, according to OPM's annual reports on veteran federal employment, some agencies have challenges retaining veterans at similar rates as non-veterans.[3]

You asked us to analyze and compare trends in federal employment and attitudes about job satisfaction for veteran and non-veteran federal employees. This report analyzes (1) recent trends in attrition for veterans and non-veterans, and (2) workplace factors that might be key drivers affecting a veteran's decision to leave federal employment compared to non-veterans.

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[1]Exec. Order No. 13518, *Employment of Veterans in the Federal Government*, 74 Fed. Reg. 58533 (Nov. 13, 2009).

[2]Office of Personnel Management, *Employment of Veterans in the Federal Executive Branch: Fiscal Year 2017* (Washington, D.C.: February 2019).

[3]See Table 12 in OPM, *Employment of Veterans in the Federal Executive Branch: Fiscal Year 2017*.

To describe attrition trends between veterans and non-veterans, we analyzed OPM's Enterprise Human Resources Integration (EHRI) system for fiscal years 2014 through 2018, the most recent, complete fiscal year of data at the time of our review. EHRI data contain information on personnel actions and other data for most federal civilian employees, including employees of the 24 Chief Financial Officers (CFO) Act agencies that represent major departments and most of the executive branch workforce.[4]

To compare veterans and non-veterans on equal terms, we created a matched sample of veterans and non-veterans who were similar on key demographic and employment factors. The matched comparison group mitigates potential biases from other factors that could be associated with veteran status and attrition. We estimated average attrition rates—including resignations, retirements, and terminations—among matched groups of similar veterans and non-veterans during fiscal years 2014 through 2018, government-wide and by CFO Act agency.[5]

We also used matched comparison groups to estimate average attrition rates among new hires for fiscal years 2014 through 2018. This group includes individuals who were both hired and left federal service within the 5-year period (see appendix I for more information on the EHRI analysis).

To identify key drivers that may increase the likelihood of retention, and the extent to which those drivers are different for veteran and non-veteran federal employees, we used multivariate regression methods to analyze

[4]The 24 agencies are those identified in the Chief Financial Officers Act of 1990, as amended (31 U.S.C. § 901(b)), which generally are the largest federal agencies. The 24 CFO Act agencies are the U.S. Departments of Agriculture, Commerce, Defense, Education, Energy, Health and Human Services, Homeland Security, Housing and Urban Development, the Interior, Justice, Labor, State, Transportation, the Treasury, and Veterans Affairs, as well as the U.S. Agency for International Development, Environmental Protection Agency, General Services Administration, National Aeronautics and Space Administration, National Science Foundation, Nuclear Regulatory Commission, Office of Personnel Management, Small Business Administration, and Social Security Administration. 31 U.S.C. § 901(b).

[5]We defined attrition as all resignations, retirements, terminations, and other separations of full-time, nonseasonal permanent employees from the federal government for any reason. For the government-wide attrition analysis, we excluded transfers to another federal agency. For the analysis of individual CFO Act agencies, we included transfers in the definition of attrition. For more information see appendix I.

OPM Federal Employee Viewpoint Survey (OPM FEVS) data.[6] For this analysis, we used the 2017 OPM FEVS data. We used data for that year because the Department of Veterans Affairs stopped participating in the OPM FEVS beginning in 2018.[7]

The OPM FEVS serves as a tool for employees to share their perceptions in many critical areas including their work experiences, their agencies, and leadership. The survey asks respondents if they are considering leaving their organizations in the next year, which allows us to analyze differences and similarities between employees who say they are considering leaving the federal government (see sidebar).

To identify workplace factors that have been found to be significantly associated with employee retention (e.g., drivers of retention), we took the following steps:

- We conducted a literature review of academic, government, and research institute studies and identified potential drivers. Appendix II provides more information.

- We matched the identified drivers to specific OPM FEVS questions where possible, and in some cases developed a set of indexes, or groups of questions, that related to the driver. We selected questions and drivers we determined to be actionable by managers.[8] Using statistical methods, we tested the validity of the indexes we developed from the OPM FEVS questions to confirm that the groups of questions represented common underlying factors (see appendix III for more information about our indexes). We also solicited input from OPM officials and four veteran service organizations on the drivers we

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[6]The OPM FEVS was administered biennially prior to 2010 and annually thereafter.

[7]The Department of Veterans Affairs reported that beginning in 2018 it combined the OPM FEVS and the department's All Employee Survey to reduce staff survey fatigue, streamline reporting and action planning, and minimize duplicate efforts. The department's survey includes a question to determine if an employee is considering leaving.

[8]For example, from our literature review we identified overall job satisfaction as a driver of employee retention. However, we excluded this set of questions from the final set of models because they did not offer actionable items for employers to address. Appendix III describes our analysis of OPM FEVS data.

identified through our literature review and to identify any drivers of retention that might be specific to veterans.[9]

- We ran a series of multivariate regressions to identify which of these drivers related most strongly to an employee considering leaving federal service, controlling for other demographic and employment factors, and determined whether these drivers differed by veteran status. Appendix III provides more information on our regression analysis.

To compare veterans' satisfaction on those key drivers of retention to non-veterans, we analyzed the 2017 OPM FEVS questions and indexes our regression analysis identified as key drivers of retention. We assessed whether veterans and non-veterans responded differently on those drivers government-wide and at each CFO Act agency (see appendix IV).

We assessed the reliability of EHRI and OPM FEVS data through electronic testing to identify missing data, out-of-range values, and logical inconsistencies. We also discussed the data and our intended uses with relevant OPM officials. We compared our results to available published reports using the same data elements. We also reviewed our prior work assessing the reliability of these data. We found these data to be sufficiently reliable for the purpose of our reporting objectives.

We also examined four federal programs that aim to support hiring and skills development for veterans in the federal government: (1) OPM's Vets to Feds Career Development program, (2) the Department of Veterans Affairs' Warriors to Workforce program, (3) the Department of State's Veterans Innovation Partnership program, and (4) the Department of Energy's Federal Energy Management program. We interviewed relevant program officials and reviewed program information, such as program objectives, costs, and participants (see appendix V).

We conducted this performance audit from August 2018 to July 2020 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

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[9]We selected organizations with national membership bases and representing different veteran groups: (1) American Legion, (2) Disabled American Veterans, (3) Student Veterans of America, and (4) Wounded Warrior Project.

the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

In fiscal year 2017, OPM reported that about 31 percent (or 633,000) of the roughly 2 million federal employees were veterans. Almost 80 percent of veteran federal employees worked at the Departments of Defense, Veteran Affairs, and Homeland Security (see fig. 1). All the CFO Act agencies had some veteran employees; the Department of Health and Human Services had the fewest at almost 8 percent of its workforce and the Department of Defense had the most at 48 percent.

Figure 1: Overview of Veterans Employed in the Federal Government

Total federal employees 2,034,269 — **Veterans** 31%

All other executive branch agencies 21% total — **Veteran federal employees** 79% total

Department of Defense
Department of Veterans Affairs
Department of Homeland Security
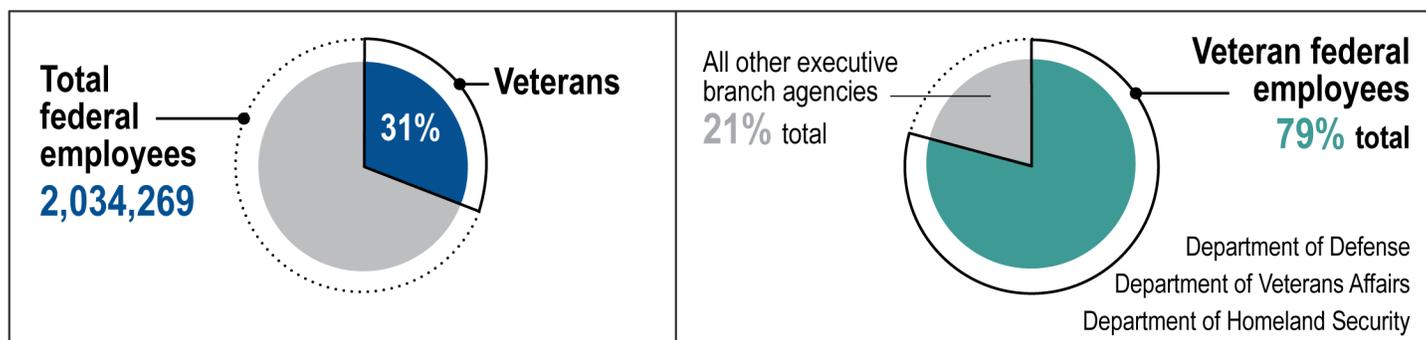
Source: GAO analysis of data reported in Office of Personnel Management, *Employment of Veterans in the Federal Executive Branch, Fiscal Year 2017.* | GAO-20-592

Executive Order 13518 on Veterans

"Our veterans, who have benefited from training and development during their military service, possess a wide variety of skills and experiences, as well as the motivation for public service that will help fulfill federal agencies' staffing needs."

Source: Exec. Order 13518, Nov. 9, 2009. | GAO-20-592

A 2009 executive order created the Council on Veterans Employment (see sidebar). The council is comprised of the 24 CFO Act agencies and is co-chaired by the Secretaries of Labor and Veterans Affairs with the Director of OPM serving as vice chair. The council's most recent strategic plan was designed to help agencies develop workforce management strategies that advance the Veterans Employment Initiative's goals to hire and retain veterans in the federal government.[10]

OPM also administers statutory and regulatory authorities, among other provisions, that govern the hiring of veterans in federal government. These include special authorities to hire veterans and veterans' preferences under the competitive hiring process. For example, one

[10]Office of Personnel Management, *Governmentwide Veterans Recruitment and Employment Strategic Plan, Fiscal Years 2014-2017* (Washington, D.C.: April 2014).

special hiring authority permits agencies to appoint qualified eligible veterans without competition to any position in the competitive service at or below the General Schedule-11 level.[11] As part of the competitive hiring process, veterans' preference requires that eligible veterans are given preference ahead of other applicants within each quality category.[12] Another provision grants eligible veterans—who served under career or career-conditional appointment for any period of time—lifetime reinstatement eligibility to any competitive service position for which they are qualified.[13]

Veterans Left Federal Government at a Higher Rate than Non-Veterans, and There Are Sizable Differences among Agencies and for New Hires

Retirement Is the Primary Source of Overall Attrition for Veterans and Non-Veterans, but Veterans Resigned at Higher Rates

Between fiscal years 2014 and 2018 we estimated that, after controlling for key demographic factors, an average of 6.7 percent of veterans left the government compared to 5 percent of similar non-veterans. To compare veterans and non-veterans on equal terms, we created a matched sample of veterans and non-veterans who were similar on key demographic and employment factors (see appendix I for more detail on the statistical methods used for this analysis). Figure 2 shows the

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[11]See 38 U.S.C. § 4214(b) and 5 C.F.R. § 307.103 (Veterans Recruitment Appointment).

[12]The competitive hiring process requires agencies to notify the public that the government will accept applications for a job, screen applications against minimum qualification standards, apply selection priorities such as veterans' preference, and assess applicants' relative competencies or knowledge, skills, and abilities against job-related criteria to identify the most qualified applicants. 5 U.S.C. §§ 3304-3319 and 5 C.F.R. parts 332 and 337. Preference eligibility for veterans in federal employment is defined in section 2108 of title 5 of the United States Code.

[13]5 C.F.R. § 315.401. Competition under an agency's merit promotion plan is required if the position is at a higher grade (or has more promotion potential) than a position previously held.

average estimated attrition rates by type of attrition for matched veteran and non-veteran federal employees.

Figure 2: Average Estimated Attrition Rates for Veteran and Similar Non-Veteran Federal Employees, Fiscal Years 2014 through 2018
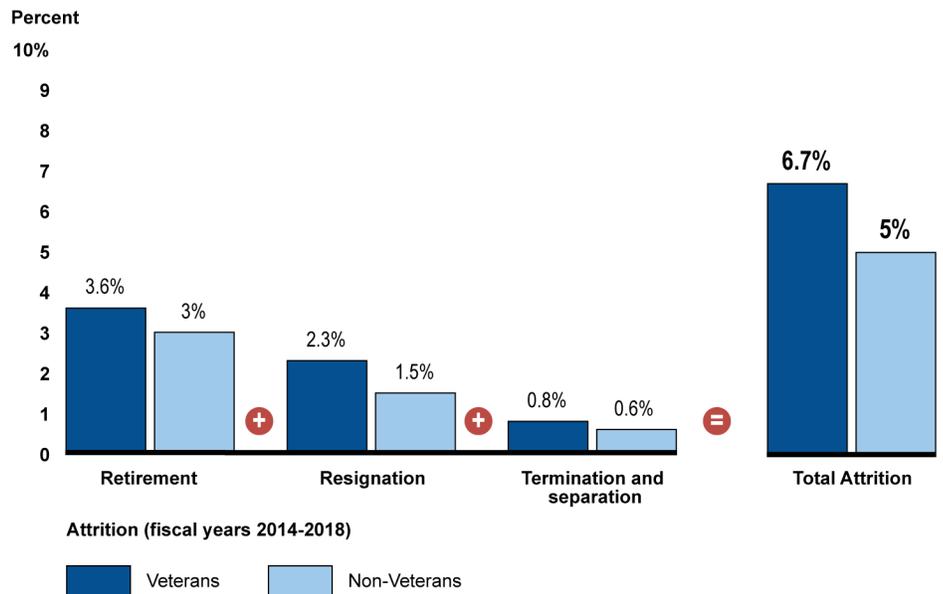
Source: GAO analysis of the Office of Personnel Management Enterprise Human Resources Integration data. | GAO-20-592

Notes: To compare veterans and non-veterans on equal terms, we created a matched sample of veterans and non-veterans who were similar on key demographic and employment factors. For this government-wide analysis, we excluded transfers to another federal agency. Termination and separation includes employees who were fired and other involuntary separations, such as reductions in force or death. These relative differences between veterans and similar non-veterans for each type of attrition outcome were statistically significant.

After controlling for key demographic and employment factors, we estimated that across all types of attrition, on average, veterans left federal service at 1.2 to 1.6 times the rate of similar non-veterans from fiscal years 2014 through 2018.

- **Retirement.** The primary type of attrition for both veterans and non-veterans was retirement. We estimated that veterans retired from federal service at 1.2 times the rate of similar non-veterans. On average, we estimated that 3.6 percent of veterans retired compared to 3 percent of similar non-veterans from fiscal years 2014 through 2018. As we have previously reported, retirements do pose challenges to agencies, but when accompanied with appropriate

strategic workforce planning, retirements may create an opportunity for agencies to align their workforces with needed skills to meet mission requirements.[14] However, agencies will need succession planning efforts as well as effective sources and methods for recruiting and retaining candidates to avoid the loss of technical expertise in mission-critical skills from retirement.[15]

- **Resignation.** We found that veterans voluntarily resigned from federal service at 1.6 times the rate of similar non-veterans. On average, we estimated that 2.3 percent of veterans voluntarily resigned from the federal government compared to 1.5 percent of similar non-veterans from fiscal years 2014 through 2018.

- **Termination and separation.** We found that veterans were terminated or separated from federal service at 1.4 times the rate of similar non-veterans. On average, we estimated that 0.8 percent of veterans were terminated or separated compared to 0.6 percent of similar non-veterans from fiscal years 2014 through 2018. Terminations and separations include employees who were fired and other involuntary separations, such as reductions in force or death.

It can be more difficult to predict resignations and other separations than retirements, so those types of attrition can leave agencies unprepared to replace critical employees.[16]

We also examined attrition among new hires using matched comparison groups and controlling for key demographic and employment factors. This group includes individuals who were both hired and left federal service within the 5-year period, fiscal years 2014 through 2018.

- **Resignation.** We found that newly-hired veterans resigned within their first 5 years of federal service at 1.7 times the rate of similar non-veterans. On average, we estimated that 18.7 percent of veterans resigned within their first 5 years of federal service, compared to 11.1 percent of similar newly hired non-veterans—a 7.6 percentage point difference.

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[14]GAO, *Federal Workforce: Key Talent Management Strategies for Agencies to Better Meet Their Missions,* GAO-19-181 (Washington, D.C.: Mar. 28, 2019).

[15]GAO, *Federal Workforce: Lessons Learned for Engaging Millennials and Other Age Groups,* GAO-16-880T (Washington, D.C.: Sept. 29, 2016).

[16]GAO, *Federal Workforce: OPM and Agencies Need to Strengthen Efforts to Identify and Close Mission-Critical Skills Gaps*, GAO-15-223 (Washington, D.C.: Jan. 30, 2015).

- **Termination and separation.** We found that newly-hired veterans were terminated or separated from federal service at 1.4 times the rate of similar non-veterans. On average, we estimated that 4.3 percent of veterans were separated or terminated within their first 5 years of federal service, compared to 3 percent of similar newly hired non-veterans.

These findings show that newly-hired veterans are choosing to leave government at higher rates than non-veterans. As we have previously reported, agencies invest significant time and resources in recruiting potential employees, training them, and providing them with institutional knowledge that may not be easy or cost effective to replace.[17]

Veteran Attrition, Including Transfers to Other Agencies, Was Higher than Non-Veteran Attrition at Every CFO Act Agency

To provide a more complete picture of veteran and non-veteran attrition rates, we conducted a similar analysis to estimate the average attrition rate—including transfers to other federal agencies—for each of the 24 CFO Act agencies from fiscal years 2014 through 2018. Table 1 shows that after controlling for key demographic and employment characteristics, each agency experienced higher rates of veteran attrition—including transfers to other federal agencies—on average during the time period reviewed.[18]

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[17]See GAO, *Federal Workforce: Opportunities Exist for OPM to Further Innovation in Performance Management*, GAO-19-35 (Washington, D.C.: Nov. 20, 2018); and *Federal Workforce: Improved Supervision and Better Use of Probationary Periods Are Needed to Address Substandard Employee Performance*, GAO-15-191 (Washington, D.C.: Feb. 6, 2015).

[18]OPM defines an agency transfer as an employee who has accepted or been appointed to a position at another agency without a break in service.

Table 1: Average Estimated Attrition Rates (Including Transfers) for Veteran and Similar Non-Veteran Federal Employees by Chief Financial Officer (CFO) Act Agency, Fiscal Years 2014 through 2018

CFO Act Agency	Average attrition rate for fiscal years 2014 through 2018 (percentage)		
	Veterans	Non-veterans	Difference
Department of Agriculture	10.3	7.2	3.1
Department of Commerce	9.0	6.4	2.6
Department of Defense	9.4	7.2	2.2
Department of Education	9.8	7.8	2.0
Department of Energy	8.6	7.5	1.1
Department of Health and Human Services	10.2	7.1	3.1
Department of Homeland Security	5.1	3.3	1.8
Department of Housing and Urban Development	9.4	7.0	2.4
Department of the Interior	11.1	7.6	3.5
Department of Justice	6.7	4.8	1.9
Department of Labor	9.5	6.6	2.9
Department of State	9.1	6.4	2.7
Department of Transportation	5.3	4.8	0.5
Department of the Treasury	9.1	6.8	2.3
Department of Veterans Affairs	8.1	5.1	3.0
Environmental Protection Agency	9.4	7.1	2.3
General Services Agency	9.8	7.0	2.8
National Aeronautics and Space Administration	8.0	5.7	2.3
National Regulatory Commission	8.2	6.5	1.7
National Science Foundation	12.5	8.6	3.9
Office of Personnel Management	9.7	7.0	2.7
Small Business Administration	13.2	8.1	5.1
Social Security Administration	8.5	5.9	2.6
U.S. Agency for International Development	10.5	7.3	3.2

Source: GAO analysis of data from the Office of Personnel Management's Enterprise Human Resources Integration data. | GAO-20-592

Note: These rates are adjusted for key demographic factors and include transfers to other federal agencies. The difference between veteran and non-veteran attrition rates at each agency is statistically significant.

The relative differences in attrition for veterans and non-veterans across the 24 CFO Act agencies ranged from 0.5 percent to 5.1 percent on average during the period we analyzed.[19] We estimated that the average

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[19]The difference between veteran and non-veteran attrition rates at each agency is statistically significant.

veteran attrition rate ranged from 5.1 percent to 13.2 percent across CFO Act agencies and exceeded 10 percent at six agencies. In contrast, we estimated that the attrition rate for similar non-veterans ranged from 3.3 percent to 8.6 percent across CFO Act agencies. As described above, preferences for veterans in federal hiring may make transferring between agencies easier for an eligible veteran than for a non-veteran. It may also make it easier for a veteran to resign from one agency and be hired at another.

Veterans and Non-Veterans Have Similar Key Drivers for Retention, and Veterans Are Slightly Less Satisfied

Key Drivers of Retention Include Satisfaction with Pay and Meaningfulness of Work

Regression Analysis

A type of multivariate analysis that estimates the unique association between an outcome variable (e.g., job satisfaction) and a given predictor variable (e.g., a driver), while controlling for other drivers and employee characteristics that might otherwise obscure these relationships in the data.

Source: GAO. | GAO-20-592

The OPM FEVS can provide agencies with valuable insights into employment trends. To understand reasons why veteran employees might leave federal service at higher rates than non-veterans, we used OPM FEVS data to measure respondents' attitudes about potential drivers of employee retention. Using regression analysis and controlling for key employee characteristics and agency size, we analyzed the relationships between these attitudes and an employee's intention to remain in federal service (see sidebar and appendix III). We identified six key drivers that were most strongly associated with an employee considering leaving federal service (see fig. 3).[20]

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[20]We viewed the decision to retire as a separate decision that is likely to be influenced by different factors than the decision to change jobs. Therefore, we excluded respondents to the OPM FEVS who responded that they planned to retire in the next year from the analysis. As such, the results can be generalized to federal employees in agencies included in the OPM FEVS who did not intend to retire in the year following the survey.

Figure 3: Key Drivers of Employee Retention, as Measured by the 2017 OPM Federal Employment Viewpoint Survey

Key Drivers of Retention	OPM FEVS Questions
Satisfaction with Pay	Q70. Considering everything, how satisfied are you with your pay?
Meaningfulness of Work	Q4. My work gives me a feeling of personal accomplishment.
Confidence in Leaders	Q53. In my organization, senior leaders generate high levels of motivation and commitment in the workforce. Q54. My organization's senior leaders maintain high standards of honesty and integrity. Q61. I have a high level of respect for my organization's senior leaders.
Opportunities for Advancement	Q67. How satisfied are you with your opportunity to get a better job in your organization?
Training and Skills Development	Q1. I am given a real opportunity to improve my skills in my organization. Q18. My training needs are assessed. Q68. How satisfied are you with the training you receive for your present job?
Relationship with Supervisor	Q44. Discussions with my supervisor about my performance are worthwhile. Q48. My supervisor listens to what I have to say. Q49. My supervisor treats me with respect. Q51. I have trust and confidence in my supervisor. Q52. Overall, how good a job do you feel is being done by your immediate supervisor?

Source: GAO analysis of 2017 Office of Personnel Management Federal Employee Viewpoint Survey (OPM FEVS) data. | GAO-20-592

Notes: Results are based on a multiple logistic regression analysis of all 2017 OPM FEVS respondents. The analysis controlled for 20 potential driver questions or indexes, individual level demographic characteristics, and agency size groups. Given the large number of cases in our government-wide analysis, most of the potential drivers were statistically significant.

We considered a question or index to be a "key driver" of retention if it had an average marginal effect of 2 percentage points or above. The criterion meant that, on average, an increase from a negative score to a positive score in the question or index was associated with at least a 2 percentage point increase in the chance that the employee would consider remaining in federal service.

GAO-20-592 Veteran Federal Employee

Based on our analysis, the following six drivers were most strongly associated with employee retention for both veteran and non-veteran employees. Our work showed that each of these key drivers were associated with at least a 2 percentage point increase in an employee's intention to remain in federal service—equal to about 30,000 employees at agencies covered by the OPM FEVS.[21] The drivers below are reported in descending order by their strength as drivers of retention.[22]

Satisfaction with Pay

Source: GAO. | GAO-20-592

Satisfaction with pay. On average, we found that veterans who were satisfied with their pay were 3.8 percentage points less likely to consider leaving federal service than veterans who were dissatisfied with their pay. We have previously reported that agencies can use special payment authorities as retention incentives to make themselves more competitive in recruiting and retaining some employees.[23]

Meaningfulness of Work

Source: GAO. | GAO-20-592

Meaningfulness of work. Veterans who felt their work gave them a feeling of personal accomplishment were 3.2 percentage points less likely, on average, to consider leaving federal service. Our prior work has found that creating a clear linkage—or "line of sight"—between individual performance and organizational success is a defining feature of high-performing organizations. This line of sight can help employees see the connection between their daily activities and organizational goals.[24]

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[21]The actual attrition rates in this report will not always match responses to the 2017 OPM FEVS question 94, which asks about employees' intentions to leave their respective organizations within the next year, due to the multivariate nature of our analysis. Survey responses do not directly predict turnover or measure concern or disaffection among those who say they are considering leaving. See appendix III for more information.

[22]We ranked the strength of the top six drivers of retention based on their average marginal effect, or the percentage by which intention to leave was reduced for veterans who felt positively about each driver. We did not determine whether the strength of each driver was statistically different from the strength of the next highest ranked driver.

[23]GAO, *Human Capital: Improving Federal Recruiting and Hiring* Efforts, GAO-19-696T (Washington, D.C.: July 30, 2019); and *Federal Pay: Opportunities Exist to Enhance Strategic Use of Special Payments,* GAO-18-91 (Washington, D.C.: Dec. 7, 2017).

[24]See GAO-19-35 and GAO, *Results-Oriented Cultures: Creating a Clear Linkage between Individual Performance and Organizational Success*, GAO-03-488 (Washington, D.C.: Apr. 4, 2003).

Confidence in leaders. We found that veterans who had a high level of respect for their leaders, believed their leaders maintain high standards of honesty and integrity, and generated high levels of motivation and commitment in their workforces were 3.2 percentage points less likely, on average, to consider leaving federal service. We have reported that leaders are the key to organizational change—they must set the direction, pace, and tone, and provide a clear, consistent rationale that brings everyone together behind a single mission.[25]

Opportunities for advancement. Veterans satisfied with opportunities to get a better job in their organizations were, on average, 3.1 percentage points less likely to consider leaving federal service. We have previously reported that upward and lateral mobility opportunities are important for retaining employees, and agencies can use details and rotations to meet employees' desire for mobility.[26]

Training and skills development. We found that veterans who viewed training and skills development at their organizations positively were 2.5 percentage points less likely, on average, to consider leaving federal service than veterans with negative views in this area. We have previously reported that the essential aim of training and development programs is to assist an agency in achieving its mission and goals by improving individual and, ultimately, organizational performance.[27]

Relationship with supervisor. We found that employees who had positive relationships with their supervisors were more likely to report intent to stay in federal service. Veterans were, on average, 2.2 percentage points less likely to consider leaving federal service than veterans who did not report positive supervisor relationships. We have previously reported that good supervisors are key to the success of any performance management system. Supervisors provide regular performance feedback to employees that can help sustain and improve

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[25]GAO, *Results-Oriented Cultures: Implementation Steps to Assist Mergers and Organizational Transformations*, GAO-03-669 (Washington, D.C.: July 23, 2003).

[26]See GAO-19-696T and GAO-19-181.

[27]See GAO-19-35 and GAO, *Human Capital: A Guide for Assessing Strategic Training and Development Efforts in the Federal Government*, GAO-04-546G (Washington, D.C.: March 2004).

the performance of more talented staff and can help marginal performers improve.[28]

These key drivers offer tangible actions for OPM and agencies to target as they work to improve retention among key employee groups. Improvements in employee satisfaction in these areas could help agencies to develop more effective strategies to address workforce challenges, such as high attrition rates among staff in mission-critical occupations. If agencies can improve satisfaction with these key drivers of retention, then veterans may be more likely to remain in federal service.

Veterans Are Slightly Less Satisfied on Key Drivers, Including Meaningfulness of Work and Training and Skills Development

Our analysis of the 2017 OPM FEVS found that the majority of both veterans and non-veterans responded positively to five of the six key drivers of retention—that is, they were satisfied with pay and found their work meaningful, for example. However, veterans reported being slightly less satisfied than non-veterans (see fig. 4).

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[28]See GAO-19-35 and GAO-15-191.

Figure 4: Veteran and Non-Veteran Satisfaction with Key Drivers of Retention, 2017 OPM Federal Employee Viewpoint Survey
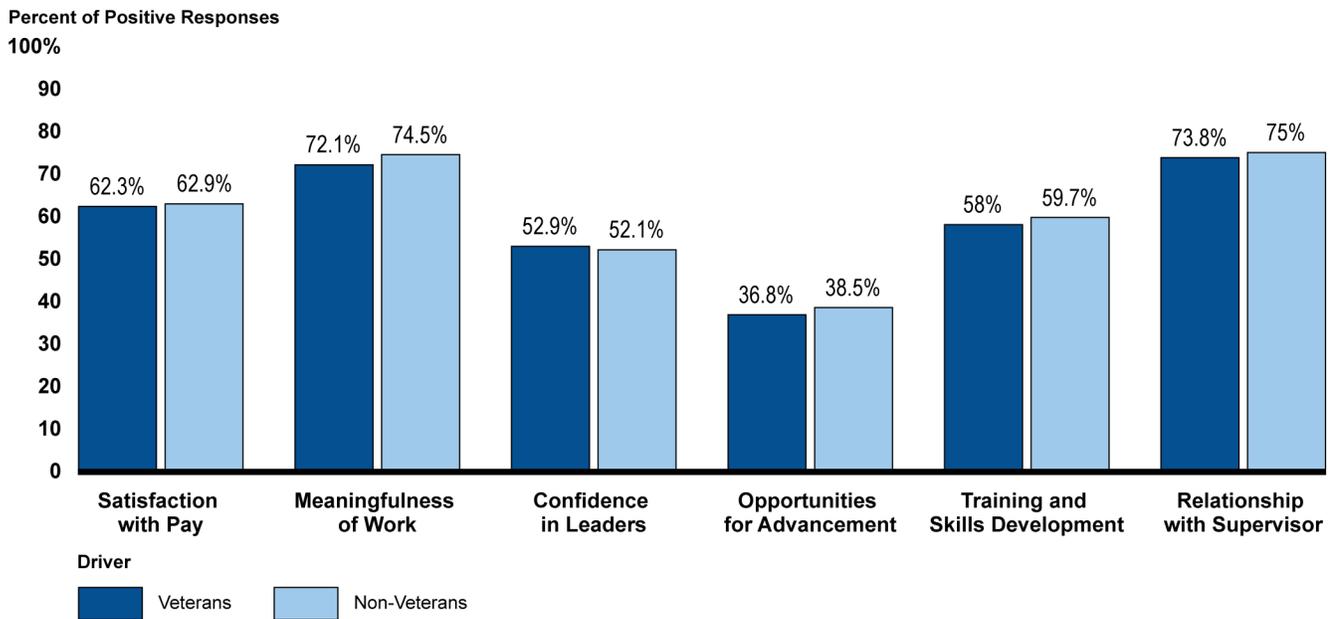
Percent of Positive Responses

Source: GAO analysis of 2017 Office of Personnel Management Federal Employee Viewpoint Survey (OPM FEVS) data. | GAO-20-592

Notes: This figure shows the average percent of positive responses for the OPM FEVS questions and indexes associated with each driver. For purposes of this report, the percent of positive responses refers to the combined percentages of respondents who answered Strongly Agree or Agree, Very Satisfied or Satisfied, or Very Good or Good, depending on the item's response categories.

For the driver indexes consisting of multiple OPM FEVS questions, we categorized employees' responses as positive if they responded positively to each question in the index. The difference between veteran and non-veteran percent of positive responses are statistically significant for each driver. The width of the 95 percent confidence intervals for these estimates did not exceed 0.6 percentage points.

While veterans generally reported lower satisfaction on these key drivers than non-veterans across the government, these differences varied at the agency level (see appendix IV). For example, veterans were 2.4 percent less likely than non-veterans government-wide to report being satisfied with the meaningfulness of their work. However, that difference ranged from -0.3 percent (veterans were more satisfied) to 8.1 percent (non-veterans were more satisfied) for specific agencies.

The slightly lower scores among veterans for these key drivers of retention may help explain why veterans are leaving federal service at higher rates. Improvements in employee satisfaction in these areas may lead to higher retention rates. For example, if an agency could improve veterans' satisfaction with the meaningfulness of their work, fewer

veterans may leave federal service. Additionally, most veterans and non-veterans reported not being satisfied with opportunities for advancement, indicating that this area may be a good opportunity for agencies to improve retention for all employees.

OPM Has Opportunities to Work with Agencies to Better Leverage Personnel and Employee Feedback Data to Improve Veteran Retention

Our analysis of the key drivers of retention suggests that agencies have opportunities to improve veterans' satisfaction with their work and increase retention. This analysis can serve as an example of the type of work OPM and agencies could do to identify specific opportunities for improvement. Agencies could use OPM's Enterprise Human Resources Integration data or their own personnel data to analyze attrition patterns and identify employee groups that may be at higher risk of leaving than other similar groups of employees. For example, knowing that veterans are leaving federal service at higher rates than non-veterans could spur agency leaders to understand the needs of this subset of the workforce—by analyzing OPM FEVS data or agency employee feedback or exit surveys—and implement strategies to improve retention.

However, challenges exist to agencies using OPM FEVS data on their own to use regression analysis to identify drivers of retention among their workforces. To protect respondents' privacy and prevent the possibility of an employee being identified, OPM does not provide agencies individual responses (i.e., record-level data) to the OPM FEVS. Individual-level data are needed to conduct regression analysis and identify drivers.[29] Agencies that have their own employee feedback data—such as the Department of Veterans Affairs—may be able to conduct regression analysis, but the executive branch agencies that rely on the OPM FEVS for insights into their employees' attitudes about their workplace are not able to perform the regression analyses needed to identify drivers of retention. As a result, agencies have to rely on OPM to provide OPM FEVS data and analyses that could identify drivers of veteran retention.

Instead of providing record-level data to agencies, OPM provides a series of technical reports and support to agencies for analyzing OPM FEVS data. This includes the Online Reporting and Analysis Tool that allows agencies to analyze aggregate responses to the survey questions. OPM also provides agencies with scores on three groups of OPM FEVS questions (called indexes) for agencies to track and monitor annually,

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[29]For more information on the design of our regression analysis, including the data used, see appendix III.

such as the Employee Engagement Index.[30] OPM does not currently conduct analyses on the drivers of retention.

Supporting agencies in analyzing OPM FEVS data and agency personnel data would be an appropriate role for OPM, as OPM is tasked with providing human resources, leadership, and support to federal agencies to manage their human capital functions. OPM's strategic plan highlights the agency's role in building government-wide and agency-specific workforce planning and forecasting abilities.[31]

We have previously reported on the importance of agencies using workforce analytics to drive their human capital decisions, as well as use available flexibilities from Congress and OPM to acquire, develop, motivate, and retain talent as needed.[32] This requires agencies to take a holistic approach—analyzing data, developing and implementing strategies to improve outcomes, and linking their efforts to improved performance.[33] In its most recent strategic plan, the Interagency Council on Veterans Employment directed agencies to perform better workforce data analysis to strengthen workforce planning in support of agency efforts to hire and retain veterans.[34]

Our 2019 high-risk update urged OPM and agencies to continue to develop capacity to effectively use workforce data to ensure that agencies have the workforce in place to carry out their missions.[35] Performing

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[30]In addition to the Employee Engagement Index, OPM also provides agencies information on the Global Satisfaction Index and the New Inclusion Quotient Index. See Office of Personnel Management, *Office of Personnel Management Federal Employee Viewpoint Survey 2019 Governmentwide Management Report* (Washington, D.C.) for more information.

[31]Office of Personnel Management, *Strategic Plan Fiscal Years 2018 to 2022* (Washington, D.C.: Feb. 12, 2018).

[32]GAO-16-880T and GAO, *Human Capital: Effective Use of Flexibilities Can Assist Agencies in Managing Their Workforces*, GAO-03-2 (Washington, D.C.: Dec. 6, 2002).

[33]GAO, *Federal Workforce: Additional Analysis and Sharing of Promising Practices Could Improve Employee Engagement and Performance,* GAO-15-585 (Washington, D.C.: July 14, 2015).

[34]Office of Personnel Management, *Interagency Council on Veterans Employment Governmentwide Veterans Recruitment and Employment Strategic Plan, Fiscal Years 2014 to 2017* (Washington, D.C.: April 2014).

[35]GAO, *High-Risk Series: Substantial Efforts Needed to Achieve Greater Progress on High-Risk Areas,* GAO-19-157SP (Washington, D.C.: Mar. 6, 2019).

analyses similar to those in this report could help agencies identify and strengthen strategies for improving veteran retention.

Conclusions

The federal government has established programs to facilitate the hiring, placement, and advancement of veterans working in federal agencies. Similarly, the 2009 executive order, *Employment of Veterans in the Federal Government*, called for actions to increase the employment of veterans in the federal government. However, our analysis of OPM personnel data showed that, after controlling for key demographic and employment factors, veterans left federal service at slightly higher rates than non-veterans. Veterans hired in the last 5 years left at even higher rates than newly-hired non-veterans. Furthermore, our analysis showed that each of the 24 CFO Act agencies experienced higher rates of veteran attrition than non-veteran attrition from fiscal years 2014 through 2018.

We also identified factors—such as meaningfulness of work and opportunities for advancement—that may contribute to veterans' decisions to leave their agencies or the federal government. Our analysis of OPM personnel and employee feedback data provides an example for agencies to consider as they engage in strategic workforce planning. With assistance from OPM, agencies could analyze their personnel data and employee feedback or exit surveys to identify trends in attrition and job satisfaction, among other workplace factors, that may help them find opportunities to improve employee retention.

Recommendations for Executive Action

We are making the following recommendation to OPM.

The Director of the Office of Personnel Management should assist the 24 CFO Act agencies by using OPM FEVS data to analyze the key drivers of retention for veterans in the agencies' workforces to identify strategies for improving veteran retention. OPM should also be available to non-CFO Act agencies that request assistance with the veteran retention analysis.

Agency Comments and Our Evaluation

We provided Energy, OPM, State, and VA a draft report for review and comment. OPM provided written comments that are reprinted in appendix VI and included as a part of our responses below. Energy, State and VA informed us that they had no comments on the draft report.

OPM agreed with "the spirit of the recommendation," but said it did not have the ability to provide record-level data to agencies, citing limitations under the Privacy Act. In the report, we acknowledge these limitations and note that OPM provides support to agencies, such as technical reports and analytical tools. Our recommendation does not ask or require OPM to forgo its obligations under the Privacy Act. As we state in the report, OPM previously used FEVS data to create an employee engagement index and our recommendation is intended to have OPM replicate that experience by developing key drivers to address challenges with retaining veteran employees.

In its written comments, OPM stated that providing assistance to all non-CFO Act agencies is beyond the capacity of OPM's current staff and requested that the recommendation be limited to providing veteran retention analysis to the 24 CFO Act agencies. We recognize OPM's concern and we modified the recommendation to specify that assistance be provided to the 24 CFO agencies. OPM also stated that the assumptions used with the analysis could only be applied to agencies with a large number of veteran employees. We believe that the analysis is applicable and could be useful for smaller agencies, in instances where sufficient data are available. Therefore, we have also modified the recommendation by asking OPM to be available, upon request, to assist non-CFO Act agencies with the veteran retention analysis.

We are sending copies of this report to the appropriate congressional committees and the Acting Director of the Office of Personnel Management, the Secretary of the Department of Energy, the Secretary of the Department of State, and the Secretary of the Department of Veterans Affairs. In addition, the report will be available at no charge on the GAO website at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-2717 or jonesy@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.

Sincerely yours,

Yvonne D. Jones
Director, Strategic Issues

Appendix I: Analysis of Veteran and Non-Veteran Attrition Rates

To identify how recent trends in attrition for veteran federal employees compare with non-veterans, we analyzed the Office of Personnel Management Enterprise Human Resources Integration (EHRI) data for fiscal years 2014 through 2018. EHRI data comprise an administrative census database of most executive branch federal employees.

Scope of Analysis

The scope of our analysis included the veteran and non-veteran population of nonseasonal, full-time permanent federal employees working 40 hours a week year round. In the EHRI data, there are a few instances (0.5 percent per year) where the same employee has multiple records, often because he or she is listed in multiple agencies. In our prior reports, all employees with multiple records have been dropped from the analysis. However, in this report, we chose to retain one randomly chosen record for each of these employees to yield a more precise estimate of the veteran workforce. For each fiscal year, we used propensity score matching methods to select comparison groups of non-veterans who most closely resembled members of the veteran population on a number of key demographic and employment factors. This method simulated an experimental design with random assignment to veteran and non-veteran groups by limiting the non-veteran group to those who were similar to individuals in the veteran group. A matched comparison group controlled for factors that were associated with veteran or non-veteran status, thereby reducing the potential for those factors to over or under estimate differences in attrition outcomes when making simple comparisons between veterans and all non-veterans in our scope.

To estimate the associations between veteran status and attrition outcomes, we created separate matched comparison groups for the following populations for each fiscal year:

- **Government-wide veterans and non-veterans**. We estimated overall attrition, which includes resignations, retirements, and terminations or separations. For this analysis we excluded transfers to other federal agencies and limited the population to federal employees who were employed as of the end of the prior fiscal year (September 30).

- **Government-wide newly-hired veterans and non-veterans.** We estimated attrition, excluding transfers, among similar groups of veterans and non-veterans with less than or equal to 5 years of federal service (minus creditable time for military service).

- **Agency-specific veterans and non-veterans.** We estimated overall attrition, including transfers to other agencies, at each of the 24 Chief Financial Officer (CFO) Act agencies.

Model Design

To construct the matched comparison groups for veterans and non-veterans, we estimated the probability of an individual being a veteran or non-veteran, given a set of observed key characteristics, using a logistic regression model. For the government-wide and agency-specific analysis, this was done for each fiscal year. For the new hire analysis, this was done for all fiscal years combined. These key characteristics, or covariates, controlled for potential confounding variation that could have affected employment outcomes between the veteran and non-veteran groups. We assessed frequency counts of the data to determine missing values for covariates that did not have levels already assigned as a missing/unknown value. We selected key demographic and employment characteristics based on a literature review. For the government-wide analysis the key characteristics used were: length of federal tenure (excluding creditable time for military service), age, disability status, education level, salary, gender, minority status, supervisory status, an indicator for CFO Act agency, agency size, and occupational group. For the agency-specific analysis, specific CFO Act agency was controlled for in place of an indicator for CFO Act agency and agency size. For the analysis of new hires, federal tenure was limited to new hires with a federal tenure of less than or equal to 5 years. Key characteristics were entered stepwise into the regression model as linear terms, and all were statistically significant predictors of veteran status.

Sensitivity Testing

Since the predicted probabilities are of interest for comparing veterans and non-veterans, we assessed the predictive power of the logistic regression model using the following methods:[1]

- **Using the Hosmer and Lemeshow Goodness-of-Fit test.** For all models this test was significant at the 0.05 level.

- **Evaluating the model C-statistic** (a measure of goodness of fit, ranging between 0.5 and 1).[2] Averaged across all fiscal years, the model C-statistics were 0.8 for all analyses.

[1]Donald B. Rubin, *Matched Sampling for Causal Effects,* 1st ed. (Cambridge: Cambridge University Press, 2006).

[2]D. W. Hosmer, Jr. and S. Lemeshow., *Applied Logistic Regression*, 2nd ed. (New York: Wiley, 2000).

- **Assessing model sensitivity** (the percentage of veterans correctly classified) for predicted probabilities greater than 0.4. Model sensitivity averaged across all fiscal years was 68 percent for the government-wide analyses, 76 percent for the new hires analysis, and 70 percent for the CFO Act agency analyses.

- **Assessing model specificity** (the percentage of non-veterans correctly classified) for predicted probabilities greater than 0.4. Model specificity averaged across all fiscal years was 79 percent for the government-wide analyses, 74 percent for the new hire analysis, and 81 percent for the CFO Act agency analyses.

Matched Comparison Analysis

Using the estimated predicted probabilities of being a veteran or non-veteran controlling for the key factors listed above, we used a greedy matching algorithm to match the population of veterans to similar non-veterans, forming our matched comparison groups.[3] The greedy matching algorithm uses a nearest neighbor approach: veterans are first ordered and sequentially matched to the nearest unmatched non-veteran unit by the logit of the predicted probability. The method is without replacement matching—when a match is made, the match is not reconsidered since it is the best possible match.

Matched comparison groups were created for the same fiscal years as the regression analysis. To determine the quality of the matching, we checked the covariate balance of the matched groups by examining frequency tables of key characteristics by veteran status. This is done to assess the similarity between the veteran and non-veteran groups after controlling for key characteristics. We limited the difference between the logit of the predicted probabilities for a matched pair to a specified caliper of 0.25 for all analyses excluding new hires; for new hires, we limited the difference to a specified caliper of 0.3. This resulted in a matched sample that was theoretically similar to random sampling without replacement, allowing us to make generalizable statements to the larger population of veterans.

Some veterans were unable to be matched because the original population of veterans was different from the population of non-veterans in such a way that matches were impossible since the predicted probabilities range was nonoverlapping, or no matches existed within the

[3]SAS Institute Inc., "Chapter 98: The PSMatch Procedure," in *SAS/STATA 15.1 User's Guide* (Cary, N.C.: 2018), 8,093-10,802.

range of the caliper. To evaluate potential differences in the matched veteran group due to nonmatched veterans, we examined frequency tables for the matched veterans and veteran population across key characteristics. The largest differences between matched veterans and the population of veterans were for key characteristics of gender and disability status. For example, the matched veteran group had 5 percent more women and 3.7 percent more veterans without a disability than the larger population of veterans. To illustrate this, table 2 shows the matching diagnostics for the government-wide analysis for fiscal year 2016, as an example.

Table 2: Matching Diagnostics for Government-wide Analysis, Fiscal Year 2016

Key characteristic		Matched comparison group (percentage)		Total veteran population (percentage)
		Non-veteran	Veteran	Veteran
Age group	<= 25	0.8	0.7	0.6
	26-29	3.5	3.3	2.6
	30-39	24.7	22.7	19.4
	40-49	27.8	28.0	28.6
	50-55	19.7	20.2	22.8
	56-61	15.1	15.0	16.5
	62-64	4.3	4.9	4.7
	65-69	3.2	3.9	3.9
	70+	1.0	1.2	1.1
Federal tenure	< 1 years	>0.5	>0.5	>0.5
	1-3 years	11.0	11.6	13.2
	4-5 years	8.3	9.0	9.9
	6-10 years	28.8	29.2	30.4
	11-20 years	31.0	30.3	30.0
	> 20 years	21.0	20.0	16.0
Disability	Yes	10.1	12.2	15.5
	No	86.6	83.5	79.8
	Unknown	3.3	4.3	4.8
Education level	Less than high school	0.3	0.4	0.3
	High school	30.3	29.1	32.6
	Trade/Technical Cert.	2.6	2.9	2.5
	Some college	12.0	13.2	13.2
	Associate	7.1	7.9	8.1
	Bachelors	26.6	25.0	23.2

Key characteristic		Matched comparison group (percentage)		Total veteran population (percentage)
		Non-veteran	Veteran	Veteran
	Masters	15.1	15.6	15.1
	PhD/Professional	3.4	3.0	2.4
	Missing	2.7	2.9	2.7
Chief Financial Officer Act agency	Yes	98.8	98.9	99.1
	No	1.3	1.1	0.9
Occupation category	Administrative	41.7	42.4	44.8
	Blue Collar	13.2	13.3	15.6
	Clerical	4.5	4.7	4.6
	Other white collar	5.7	5.9	5.8
	Professional	16.9	15.8	12.6
	Technical	18.2	17.9	16.6
	Missing	>0.05	>0.05	>0.05
Salary	Less than $40,000	8.8	9.6	10.0
	$40,000-$69,999	39.2	39.0	41.6
	$70,000-$119,999	42.0	41.7	40.1
	$120,000-$159,999	7.9	7.9	6.8
	$160,000+	2.0	1.7	1.3
	Missing	0.1	0.1	0.1
Minority	Minority	34.7	35.8	35.0
	Not a minority	65.3	64.2	65.0
Gender	Female	27.6	24.2	19.2
	Male	72.4	75.8	80.8
	Missing	>0.05	>0.05	>0.05
Supervisory status	Yes	14.3	14.6	14.6
	No	85.7	85.4	85.9
	Missing	>0.05	>0.05	>0.05
Agency size	Small	0.3	0.3	0.3
	Medium	1.9	1.7	1.7
	Large	11.6	11.3	11.3
	Very Large	86.2	86.6	86.6

Source: GAO analysis of Office of Personnel Management Enterprise Human Resources Integration data. | GAO-20-592

For the new hire analysis over all fiscal years, matched veterans had 11 percent more women and 9 percent more veterans without a disability than the population of new hire veterans. Our results are limited to the

veteran population for whom we could obtain a sufficiently close matched comparison group of non-veterans. These results may not resemble what we might have obtained for the original target population of veterans, to the extent that sex and disability status are systematically associated with retention outcomes. Across all fiscal years, we matched 79 percent of veterans for the government-wide analysis and matched 74 percent for the agency-specific analysis. For the new hire analysis, we were able to match 65 percent of veterans.

Using our matched comparison groups, we then estimated the association between veteran status and each type of attrition. To do this, we combined matched comparison groups for all fiscal years and calculated the percentage of veterans and non-veterans with a given attrition outcome. We performed a t-test for each attrition outcome to determine statistical significance of differences between veteran and non-veteran groups. For the agency-specific analysis, we conducted the t-tests at the agency level. All differences between veteran and non-veteran groups presented in this report are statistically significant at the 0.05 level.

Appendix II: Literature Review on Drivers of Retention

To identify potential drivers of employee retention, we conducted a literature review of academic, government, and research institute studies. We searched various databases such as Proquest, SCOPUS, DIALOG, and EBSCO for sources published between 2009 and 2018 using search terms such as veteran, employee, retention, and attrition. We also reviewed the bibliographies of identified sources and our prior work related to veterans and human capital issues.

From these methods, we identified 83 sources. We screened the titles and abstracts of these sources for relevance and identified 29 sources for further screening. We then screened the full texts of these sources for relevance and methodological appropriateness and identified 12 sources.

We analyzed those sources and identified specific factors associated with employee retention (e.g., drivers). Two analysts independently reviewed each source and identified drivers of retention and categorized the information as a (1) workplace factor, or (2) demographic or employment factor. Any disagreements in the determinations both analysts made were resolved through discussion. Through this process, we identified drivers of employee retention that are relevant for veteran employment retention. Appendix III provides details on our analysis of these drivers using Office of Personnel Management Federal Employee Viewpoint Survey data.

Appendix III: Analysis of the Drivers of Retention

Our analysis of the drivers of retention measures the extent to which selected Office of Personnel Management Federal Employee Viewpoint Survey (OPM FEVS) questions predict an employee considering leaving federal service. To conduct this analysis, we reviewed relevant literature and interviewed knowledgeable individuals to identify and refine a list of potential drivers of retention, and then identified corresponding OPM FEVS questions. Using OPM FEVS 2017 data, we used individual questions to represent some drivers and developed and validated indexes of multiple questions to represent other drivers. We then used multiple logistic regression analysis to assess the correlation between the driver questions and the OPM FEVS question about considering leaving federal service, controlling for other factors such as agency and employee characteristics. We used both statistical significance and the magnitude of regression coefficients to define drivers of retention. To identify the key drivers of retention for veterans and non-veterans, we ran separate models for each of these two groups. Then, to examine whether the relationships were significantly different for veterans and non-veterans, we ran a third model with both groups included and an interaction term for each OPM FEVS question in the model. We used the final weights calculated by OPM for the OPM FEVS questions in the models. These weights took into account the probability of selection into the sample and nonresponse to the survey.

Identification of FEVS Questions

To determine the FEVS questions to include in our statistical model we identified corresponding OPM FEVS questions that reflected the concepts for each of the drivers of retention that we identified from our literature review and interviews with four veteran service organizations.[1] We selected at least one OPM FEVS question as a proxy for each of the potential drivers that we identified, as shown in table 3. The questions that we selected were those we determined to be actionable by managers and representative of the potential driver.[2]

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[1]We interviewed the following veteran service organizations to discuss drivers of veteran employee retention: (1) American Legion, (2) Disabled American Veterans, (3) Student Veterans of America, and (4) Wounded Warrior Project. Based on these interviews, we added "support for diversity and inclusion" as a driver of employee retention.

[2]For example, from our literature review we identified overall job satisfaction as a driver of employee. However, we excluded this set of questions from the final set of models because the items did not offer actionable items for employers to address. This approach is consistent with OPM's analysis of the drivers of employee engagement. See OPM, *The Keys to Unlocking Engagement: An Analysis of the Conditions that Drive Employee* Engagement (Washington, D.C.: 2016).

**Table 3: Potential Drivers and Corresponding Selected 2017 OPM Federal Employment Viewpoint Survey (OPM FEVS)
Questions Included in GAO's Statistical Model**

Potential Driver of Retention Identified in Literature	2017 OPM FEVS Question Selected for Model as Proxy for Potential Driver
Communication of agency goals	56. Managers communicate the goals and priorities of the organization.
Confidence in leaders	53. In my organization, senior leaders generate high levels of motivation and commitment in the workforce.
	54. My organization's senior leaders maintain high standards of honesty and integrity.
	61. I have a high level of respect for my organization's senior leaders.
Culture of employee growth and development	47. Supervisors in my work unit support employee development.
Employee skills-job match	11. My talents are used well in the workplace.
Fairness in performance	15. My performance appraisal is a fair reflection of my performance.
Innovation	32. Creativity and innovation are rewarded.
Meaningfulness of work	4. My work gives me a feeling of personal accomplishment.
Merit-Based recruiting and hiring	38. Prohibited Personnel Practices are not tolerated.
Mission success	39. My agency is successful at accomplishing its mission.
Motivation	13. The work I do is important.
Opportunities for advancement	67. How satisfied are you with your opportunity to get a better job in your organization?
Performance-based employee recognition	22. Promotions in my work unit are based on merit.
	24. In my work unit, differences in performance are recognized in a meaningful way.
	25. Awards in my work unit depend on how well employees perform their jobs.
	31. Employees are recognized for providing high quality products and services.
	33. Pay raises depend on how well employees perform their jobs.
	65. How satisfied are you with the recognition you receive for doing a good job?
Policy support for diversity and inclusion	34. Policies and programs promote diversity in the workplace (for example, recruiting minorities and women, training in awareness of diversity issues, mentoring).
Relationship with supervisor	44. Discussions with my supervisor about my performance are worthwhile.
	48. My supervisor listens to what I have to say.
	49. My supervisor treats me with respect.
	51. I have trust and confidence in my supervisor.
	52. Overall, how good a job do you feel is being done by your immediate supervisor?
Satisfaction with pay	70. Considering everything, how satisfied are you with your pay?
Supervisor commitment to diversity and inclusion	55. Supervisors work well with employees of different backgrounds.
Training and skills development	1. I am given a real opportunity to improve my skills in my organization.
	18. My training needs are assessed.
	68. How satisfied are you with the training you receive for your present job?
Work/Life balance	42. My supervisor supports my need to balance work and other life issues.

Potential Driver of Retention Identified in Literature	2017 OPM FEVS Question Selected for Model as Proxy for Potential Driver
Workload	10. My workload is reasonable.

Source: GAO analysis of literature on employee turnover and retention and 2017 OPM FEVS. | GAO-20-592

Index Development

We developed four indexes using data from the 2017 OPM FEVS to measure respondents' attitudes about broad factors that research suggests may affect job retention. These factors are listed in table 4 below.

We used a structured method to develop the indexes. We first conducted a systematic search of literature to identify factors that may influence retention, both inside and outside the federal government. After identifying relevant factors (or latent variables), we identified questions from the 2017 OPM FEVS that might have measured them. We assumed a multivariate normal distribution for the FEVS questions in the indexes and their measurement error of the latent variables. This is a common assumption to simplify estimation, consistent with traditional confirmatory factory analysis.

We initially hypothesized two specific structures for how the questions might relate to the factors, which implied two candidate statistical measurement models (or confirmatory factor analyses). After using individual items to measure factors with two or fewer indicators, we fit revised versions of the initial candidate models to a simple random "training" sample of about 121,000 respondents to validate the hypothesized relationships and indexes, and assessed the extent to which each model fit the data. Specifically, we assessed the model fit using the size and consistency of factor loadings across items within the same index, the estimated measurement error residual variance for each item, and the coefficient of determination and standardized root mean squared residual error of the covariance matrices implied by the fitted model compared to the sample covariance matrices.

Based on the results on the initial model fit, we fit two sets of revised models using two additional simple random samples of about 121,000 respondents each. The first revised models eliminated poorly performing latent variables measuring workload and work-life balance, empowerment and autonomy, and support for diversity, along with poorly performing questions assumed to measure the remaining latent variables. The second revised models created one latent variable measuring training,

rather than measuring training and development as the same latent variable. The second models produced a version that fit the data well, according to the criteria above. We used this final model to estimate index scores for all respondents in the complete OPM FEVS sample.

Table 4 gives the final indexes, the questions that measure them, the estimated factor loadings, and the estimated residual measurement error standard deviations, with overall model fit statistics in the table notes. The OPM FEVS questions used a 1 to 5 scale of decreasing satisfaction or agreement with statements presented in each question. We rescaled each question to increase with satisfaction or agreement and to vary on [0,1]. This allowed us to choose an arbitrary item for each latent variable to define its scale and the scale of the factor loadings. The final measurement model showed consistent factor loadings and measurement error standard deviations across items. The overall fit of the correlation matrix implied by the model was within 0.034 standardized units of the observed correlation matrix.

Table 4: Final Indexes Developed from 2017 OPM Federal Employment Viewpoint Survey (OPM FEVS)

Index	OPM FEVS question	Estimated factor loading (SE)	Estimated measurement error variance (SE)
Performance-based employee recognition	22. Promotions in my work unit are based on merit.	1 (NA)	0.54 (0.0047)
	24. In my work unit, differences in performance are recognized in a meaningful way.	1.02 (0.0036)	0.39 (0.0038)
	25. Awards in my work unit depend on how well employees perform their jobs.	1.06 (0.0038)	0.41 (0.0041)
	31. Employees are recognized for providing high quality products and services.	1.00 (0.0042)	0.40 (0.0038)
	33. Pay raises depend on how well employees perform their jobs.	0.85 (0.0040)	0.71 (0.0051)
	65. How satisfied are you with the recognition you receive for doing a good job?	0.99 (0.0043)	0.47 (0.0042)
Training and skills development	1. I am given a real opportunity to improve my skills in my organization.	1 (NA)	0.43 (0.0047)
	18. My training needs are assessed.	1.01 (0.0055)	0.48 (0.0053)
	68. How satisfied are you with the training you receive for your present job?	0.99 (0.0053)	0.44 (0.0046)
Relationship with supervisor	44. Discussions with my supervisor about my performance are worthwhile.	1 (NA)	0.34 (0.0036)
	48. My supervisor listens to what I have to say.	0.92 (0.0035)	0.20 (0.0027)
	49. My supervisor treats me with respect.	0.85 (0.0038)	0.21 (0.0025)

Index	OPM FEVS question	Estimated factor loading (SE)	Estimated measurement error variance (SE)
	51. I have trust and confidence in my supervisor.	1.09 (0.0031)	0.16 (0.0022)
	52. Overall, how good a job do you feel is being done by your immediate supervisor?	0.96 (0.0033)	0.24 (0.0028)
Confidence in leaders	53. In my organization, senior leaders generate high levels of motivation and commitment in the workforce.	1 (NA)	0.26 (0.0032)
	54. My organization's senior leaders maintain high standards of honesty and integrity.	0.97 (0.0026)	0.26 (0.0033)
	61. I have a high level of respect for my organization's senior leaders.	0.95 (0.0031)	0.35 (0.0041)

Source: GAO analysis of 2017 OPM FEVS. | GAO-20-592

Note: Standardized root mean-squared residual=0.034. Coefficient of determination = 1.00.

For analytical and reporting purposes, we used a formula similar to the one that we have previously used to calculate OPM aggregate indexes for individual respondents, such as Employee Engagement and Job Satisfaction Indexes:

$$\text{Index}_i = \frac{1}{k_i} \sum_{j}^{k_i} \text{I}(Q_{ij} > 3)$$

I(.) is the indicator function, and Qij is a rescaled version of the j = 1, …, ki nonmissing questions in the index for respondent i, such that "satisfied/agree" = 4 and "very satisfied/strongly agree" = 5. The index equals the proportion of positive responses to the scale questions that the respondent answered. This definition minimized the effects of question-missing data and maximized the number of respondents with index values. The definition assumes that the questions in each index are exchangeably good measures of the latent concept, which is generally consistent with the results of the measurement modeling (see table 4). The definition scales the indexes to have the same range on [0,1], which allows for rough comparability across the scales and other individual questions when analyzing their associations with retention.

We estimated the sampling error of the index values using a modified version of the 2017 OPM FEVS sample design variables. OPM used an unequal probability sample stratified by agencies and organizational divisions within them. We created a new weight that reflected sampling probabilities and differences in response rates among veterans and non-veterans. Because we lacked the original OPM FEVS design strata, we could not use either design-based variance estimators or replicate

weights from OPM. Instead, we used agency as a pseudo-stratum and
Taylor series linearized variance estimation methods, with our weights
adjusted for veteran nonresponse. This approach produced conservative
estimates of standard errors because the actual design strata were
nested within agency. We then estimated the means of the indexes
overall, by veteran status, and by Chief Financial Officers Act agency,
treating them as linear combinations of the original survey variables.

Government-wide Statistical Analysis

OPM Federal Employee Viewpoint Survey Question 94

- Are you considering leaving your organization within the next year, and if so, why?
- No
- Yes, to retire
- Yes, to take another job within the federal government
- Yes, to take another job outside the federal government
- Yes, other

Source: OPM Federal Employee Viewpoint Survey. | GAO-20-592

To examine the factors that are associated with retention in federal
service for veteran and non-veteran federal employees, we used multiple
logistic regression to analyze the 2017 OPM FEVS data. We used the
outcome variable of question 94 and created binary outcomes: intending
to stay or considering leaving (see sidebar).

Scope of Population

We viewed the decision to retire as a separate decision that is likely to be
influenced by different factors than the decision to change jobs.
Therefore, we excluded respondents to the OPM FEVS who responded
that they planned to retire in the next year from the analysis. As such, the
results can be generalized to federal employees who did not intend to
retire in the year following the survey. Respondents who answered that
they were considering transferring to another position within the federal
government were grouped with employees who said they were not
considering leaving federal service within the year following the survey.
Additionally, we excluded respondents who did not report a veteran status
from the models because they could not be categorized as a veteran or
non-veteran.

We also used several demographic variables as controls in the models.
These control variables were race/ethnicity, education, sex, years of
federal tenure, supervisory status, agency size, and pay category/grade.
For each of the demographic control variables and the single-item OPM

FEVS questions, we included a category for a missing response so that respondents who did not respond to all of the questions in the survey could still be included in the models. We calculated the multi-item OPM FEVS indexes using any question in the index that had a response. As a result, there were few respondents who were missing an index score, and no missing category was included for the indexes. The combined effect of nonresponse to question 94 and veteran status and to the OPM FEVS questions that were used in the analysis reduced the final analytical sample size to 86 percent of the original OPM FEVS sample.

Overall, 10.2 percent of the in-scope employees (those who responded that they intended to stay or leave federal service in 2017) responded that they were considering leaving federal service within the year following the survey. The remaining 89.8 percent of in-scope employees responded that they were intending to stay in federal service.

Model Results

A logistic regression takes the binary structure of the outcome variable into account. The coefficients of logistic regression models represent the association of a one unit change in the independent variable on the dependent variable in log odds. The log odds can be converted to represent the relationship in odds, which is less intuitive to interpret than a probability. To assist with interpreting the results, we converted the model coefficients to calculate the average predicted probability (average margins) of intending to leave federal service at various levels of the drivers.

Since logistic models are not linear, the size of the relationship between the independent and dependent variables depends on the values of the predictor variables. The average margins are calculated by assuming everyone in the dataset has a particular characteristic (e.g., a positive score on the Satisfaction with Pay question) and scoring each observation using the model parameters. The difference of the average margins at different levels of the predictor variables (e.g., "positive" and "not positive") is the average marginal effect. The average marginal effect can be interpreted as the average change in the predicted probability of intending to leave federal service between two levels of a predictor variable. This method is used to describe the results of the logistic models.

Given the large number of cases in the government-wide analysis, nearly all of the coefficients on the drivers in the model were statistically significant. Accordingly, we incorporated a substantive threshold in our determination of whether an independent variable acted as a driver of

retention, in addition to statistical significance. We considered variables to be "key" drivers of retention if they had an average marginal effect of 2 percentage points or above. Such an effect indicates that, on average, a positive response to the OPM FEVS question (or, for the OPM FEVS indexes, all of the responses that made up the index were positive) was associated with a 2 percentage point decrease in considering leaving federal service compared to a negative response to the OPM FEVS question (or, for the OPM FEVS indexes, all of the responses that made up the index were negative). In other words, an average marginal effect of 2 percentage points implies that a respondent who answered positively to a given driver question would have a predicted probability of considering leaving federal service that is 2 percentage points lower than a respondent who answered negatively. Table 5 shows the probabilities of the key drivers of retention.

Table 5: High Score and Low Score Probabilities of Key Drivers of Retention for Veteran and Non-Veteran Federal Employees, as Measured by the 2017 OPM Federal Employee Viewpoint Survey

Variable	Probability of considering leaving federal service (percentage)					
	Veterans			Non-veterans		
	Positive response[b]	Negative response[c]	Marginal effect[d]	Positive response	Negative response	Marginal effect
Satisfaction with pay[a]	8.0	11.8	-3.8	8.3	13.0	-4.7
Confidence in leaders index[a]	7.8	11.0	-3.2	8.5	11.8	-3.3
Meaningfulness of Work[a]	8.4	11.7	-3.2	9.2	12.4	-3.3
Opportunities for advancement	7.4	10.5	-3.1	7.9	11.3	-3.5
Training and skills development index[a]	8.4	10.9	-2.5	9.3	11.5	-2.3
Relationship with supervisor index[a]	9.0	11.2	-2.2	10.0	11.6	-1.6

Source: GAO analysis of 2017 Office of Personnel Management Federal Employee Viewpoint Survey (OPM FEVS). | GAO-20-592

Notes: All variables in the table had a significant association with an employee's intention to stay in federal service.

[a]Significant difference between the size of the marginal effect for veterans and non-veterans as indicated by a significant interaction term ($p<0.05$).

[b]Positive response is the predicted probability of intending to leave the federal government when employees responded positively to the single OPM FEVS question, or, for the indexes, all of the responses that made up the index were positive. All estimates have a margin of error of plus or minus 1 percentage point or less at the 95 percent confidence level.

[c]Negative response is the predicted probability of intending to leave the federal government when employees responded negatively to the single OPM FEVS question, or, for the indexes, all of the responses that made up the index were negative. All estimates have a margin of error of plus or minus 1 percentage point or less at the 95 percent confidence level.

[d]Marginal effect is the difference in the predicted probabilities for employees with a positive response and those with a negative response. The marginal effects in this table may not equal the difference in predicted probabilities for employees with a positive response and those with a negative response due to rounding.

Limitations

The potential drivers we considered in our models were selected based
on an extensive review of academic, government, and policy-related
literature and a logical assessment of the particular concepts with which
they related. Researchers may disagree over which OPM FEVS
questions provide the best and most actionable proxies for the drivers we
identified. Had we selected different questions as proxies for drivers
found in the literature, our results may have been different. The OPM
FEVS was not initially designed with the express purpose of measuring
retention or of identifying factors related to retention. Alternative
measures of retention or drivers might provide different insights as to
which factors most strongly predict retention.

Our model is not a causal assessment of the relationship between the
specific OPM FEVS questions included in our model and increased
retention. Survey responses do not directly predict turnover or measure
concern or disaffection among those who say they are considering
leaving. However, attrition considerations still may be a useful indirect
measure that agencies could monitor and address with thoughtful actions.
Moreover, our results do confirm that drivers of retention, as measured by
questions currently available in OPM FEVS data, appear to be statistically
and substantively significant for veterans and non-veterans across a wide
range of agencies, and other employee characteristics.

Appendix IV: Veteran and Non-Veteran Satisfaction with Key Drivers of Retention

Figures 5 through 10 show the percent of positive responses of veteran and non-veteran federal employees for each of the six key drivers of retention for each of the 24 Chief Financial Officers (CFO) Act agencies. For purposes of this report, the percent of positive responses refers to the combined percentages of respondents who answered Strongly Agree or Agree, Very Satisfied or Satisfied, or Very Good or Good, depending on the item's response categories. For the driver indexes consisting of multiple Office of Personnel Management Federal Employee Viewpoint Survey (OPM FEVS) questions, we categorized employees' responses as positive if they responded positively to each question in the index.

Figure 5: Veteran and Non-Veteran Percent of Positive Responses for Satisfaction with Pay by CFO Act Agency, 2017 OPM Federal Employee Viewpoint Survey

Satisfaction with Pay

62.3% — 62.9%
Government-wide Veterans | Government-wide Non-Veterans

Agency	Veterans	Non-Veterans
Department of Agriculture*	60.8	62.9
Department of Commerce	66.8	67.4
Department of Defense	64.0	63.8
Department of Education	68.9	67.8
Department of Energy*	66.7	69.7
Department of Health and Human Services*	68.8	65.4
Department of Homeland Security*	65.2	61.4
Department of Housing and Urban Development	67.9	70.4
Department of the Interior*	58.7	64.9
Department of Justice	66.0	66.7
Department of Labor	68.7	66.8
Department of State	67.9	68.3
Department of the Treasury	59.9	59.6
Department of Transportation	65.1	66.0
Department of Veterans Affairs*	53.0	54.8
Environmental Protection Agency	70.2	70.2
General Services Administration	73.5	73.2
National Aeronautics and Space Administration*	72.1	73.9
National Science Foundation	68.9	69.8
Nuclear Regulatory Commission	72.6	72.3
Office of Personnel Management	69.7	73.0
Small Business Administration*	61.1	67.2
Social Security Administration	67.6	69.4
U.S. Agency for International Development	69.5	66.0

Percent of Positive Responses

0   10   20   30   40   50   60   70   80%

■ Veterans   ■ Non-Veterans

Source: GAO analysis of 2017 Office of Personnel Management Federal Employee Viewpoint Survey (OPM FEVS) data. | GAO-20-592

Notes: Question 70 from the 2017 OPM FEVS asks, "Considering everything, how satisfied are you with your pay?"

*Denotes that the difference between veteran and non-veteran percent of positive responses is statistically significant at the 95 percent confidence level. The 95 percent confidence interval widths ranged from 0.6 to 8.4 percentage points across all agencies. For 15 out of 24 agencies, confidence interval widths ranged from 0.6 to 3.5 percentage points. The difference between government-wide veteran and non-veteran percent of positive responses was statistically significant at the 95 percent confidence level.

Figure 6: Veteran and Non-Veteran Percent of Positive Responses for Meaningfulness of Work by CFO Act Agency, 2017 OPM Federal Employee Viewpoint Survey

Meaningfulness of Work

72.1% Government-wide Veterans

74.5% Government-wide Non-Veterans

Agency	Veterans	Non-Veterans
Department of Agriculture*	72.0	75.2
Department of Commerce*	72.9	77.9
Department of Defense	73.2	73.0
Department of Education	73.5	73.9
Department of Energy*	72.3	75.9
Department of Health and Human Services*	75.3	79.1
Department of Homeland Security	68.1	68.0
Department of Housing and Urban Development	74.1	76.1
Department of the Interior*	71.9	76.8
Department of Justice*	71.0	77.7
Department of Labor	76.0	77.0
Department of State*	73.4	79.1
Department of the Treasury*	69.9	72.4
Department of Transportation	75.2	76.6
Department of Veterans Affairs*	70.0	73.9
Environmental Protection Agency*	74.8	77.7
General Services Administration*	75.5	78.3
National Aeronautics and Space Administration*	80.4	86.3
National Science Foundation	80.3	80.1
Nuclear Regulatory Commission	75.0	76.7
Office of Personnel Management	72.6	75.5
Small Business Administration	74.1	76.0
Social Security Administration	73.8	75.9
U.S. Agency for International Development*	72.0	80.1

Percent of Positive Responses

Legend: ■ Veterans   ☐ Non-Veterans

Source: GAO analysis of 2017 Office of Personnel Management Federal Employee Viewpoint Survey (OPM FEVS) data. | GAO-20-592

Notes: Question 4 from the 2017 OPM FEVS asks respondents the degree to which they agree with the statement, "My work gives me a feeling of personal accomplishment."
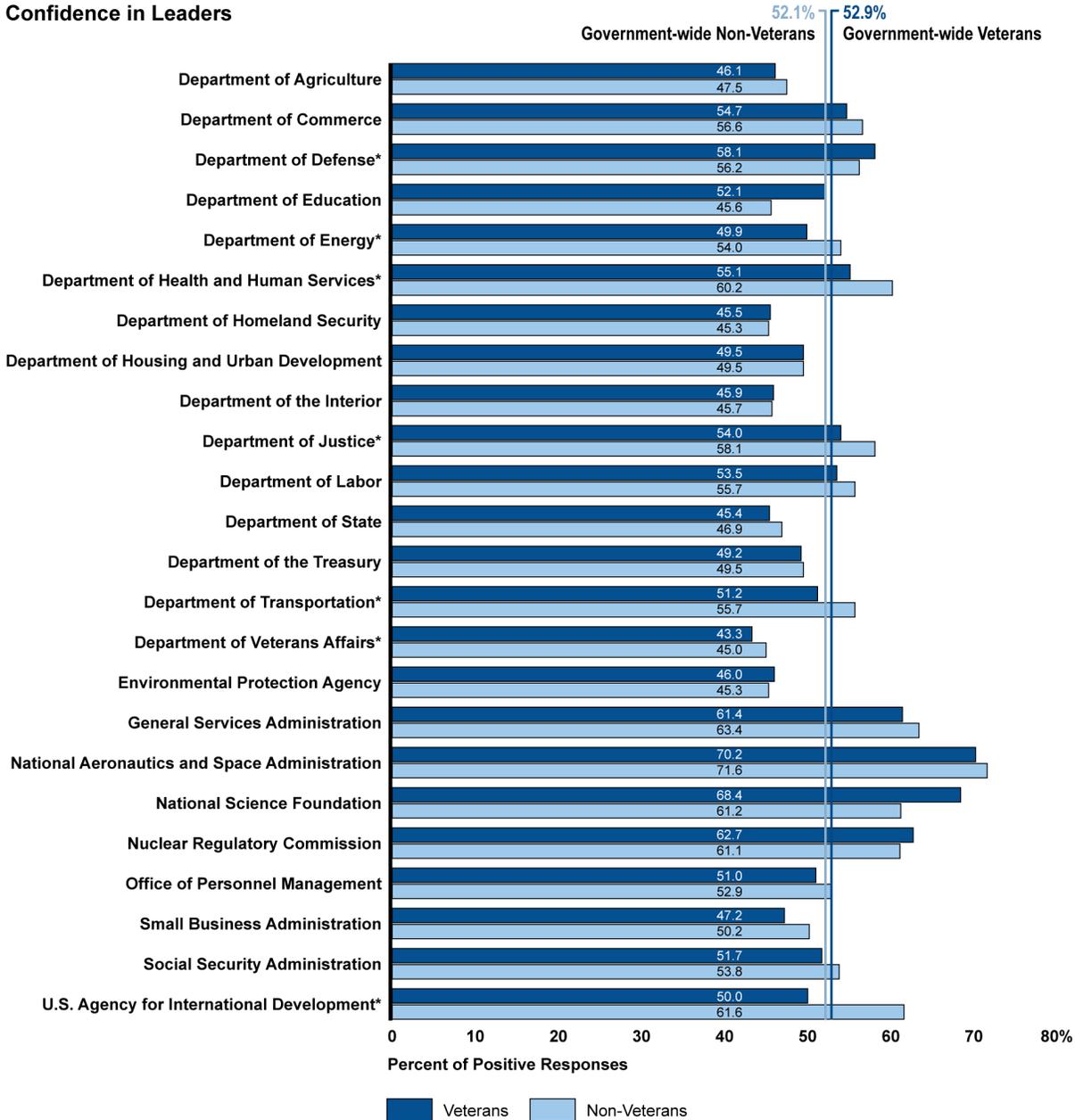
*Denotes that the difference between veteran and non-veteran percent of positive responses is statistically significant at the 95 percent confidence level. The 95 percent confidence interval widths ranged from 0.5 to 8.7 percentage points across all agencies. For 16 out of 24 agencies, confidence interval widths ranged from 0.5 to 3.5 percentage points. The difference between government-wide veteran and non-veteran percent of positive responses was statistically significant at the 95 percent confidence level.

Figure 7: Veteran and Non-Veteran Percent of Positive Responses for Confidence in Leaders by CFO Act Agency, 2017 OPM Federal Employee Viewpoint Survey

Confidence in Leaders

52.1% Government-wide Non-Veterans
52.9% Government-wide Veterans

Agency	Veterans	Non-Veterans
Department of Agriculture	46.1	47.5
Department of Commerce	54.7	56.6
Department of Defense*	58.1	56.2
Department of Education	52.1	45.6
Department of Energy*	49.9	54.0
Department of Health and Human Services*	55.1	60.2
Department of Homeland Security	45.5	45.3
Department of Housing and Urban Development	49.5	49.5
Department of the Interior	45.9	45.7
Department of Justice*	54.0	58.1
Department of Labor	53.5	55.7
Department of State	45.4	46.9
Department of the Treasury	49.2	49.5
Department of Transportation*	51.2	55.7
Department of Veterans Affairs*	43.3	45.0
Environmental Protection Agency	46.0	45.3
General Services Administration	61.4	63.4
National Aeronautics and Space Administration	70.2	71.6
National Science Foundation	68.4	61.2
Nuclear Regulatory Commission	62.7	61.1
Office of Personnel Management	51.0	52.9
Small Business Administration	47.2	50.2
Social Security Administration	51.7	53.8
U.S. Agency for International Development*	50.0	61.6

Percent of Positive Responses (0, 10, 20, 30, 40, 50, 60, 70, 80%)

Legend: Veterans | Non-Veterans

Source: GAO analysis of 2017 Office of Personnel Management Federal Employee Viewpoint Survey (OPM FEVS) data. | GAO-20-592

Notes: Questions 53, 54, and 61 from the 2017 OPM FEVS ask respondents the degree to which they agree with the statements, "In my organization, senior leaders generate high levels of motivation

and commitment in the workforce," "My organization's senior leaders maintain high standards of honesty and integrity," and "I have a high level of respect for my organization's senior leaders."

*Denotes that the difference between veteran and non-veteran percent of positive responses is statistically significant at the 95 percent confidence level. The 95 percent confidence interval widths ranged from 0.9 to 16.6 percentage points across all agencies. For 15 out of 24 agencies, confidence interval widths ranged from 0.9 to 4.7 percentage points. The difference between government-wide veteran and non-veteran percent of positive responses was statistically significant at the 95 percent confidence level.

Figure 8: Veteran and Non-Veteran Percent of Positive Responses for Opportunities for Advancement by CFO Act Agency, 2017 OPM Federal Employee Viewpoint Survey
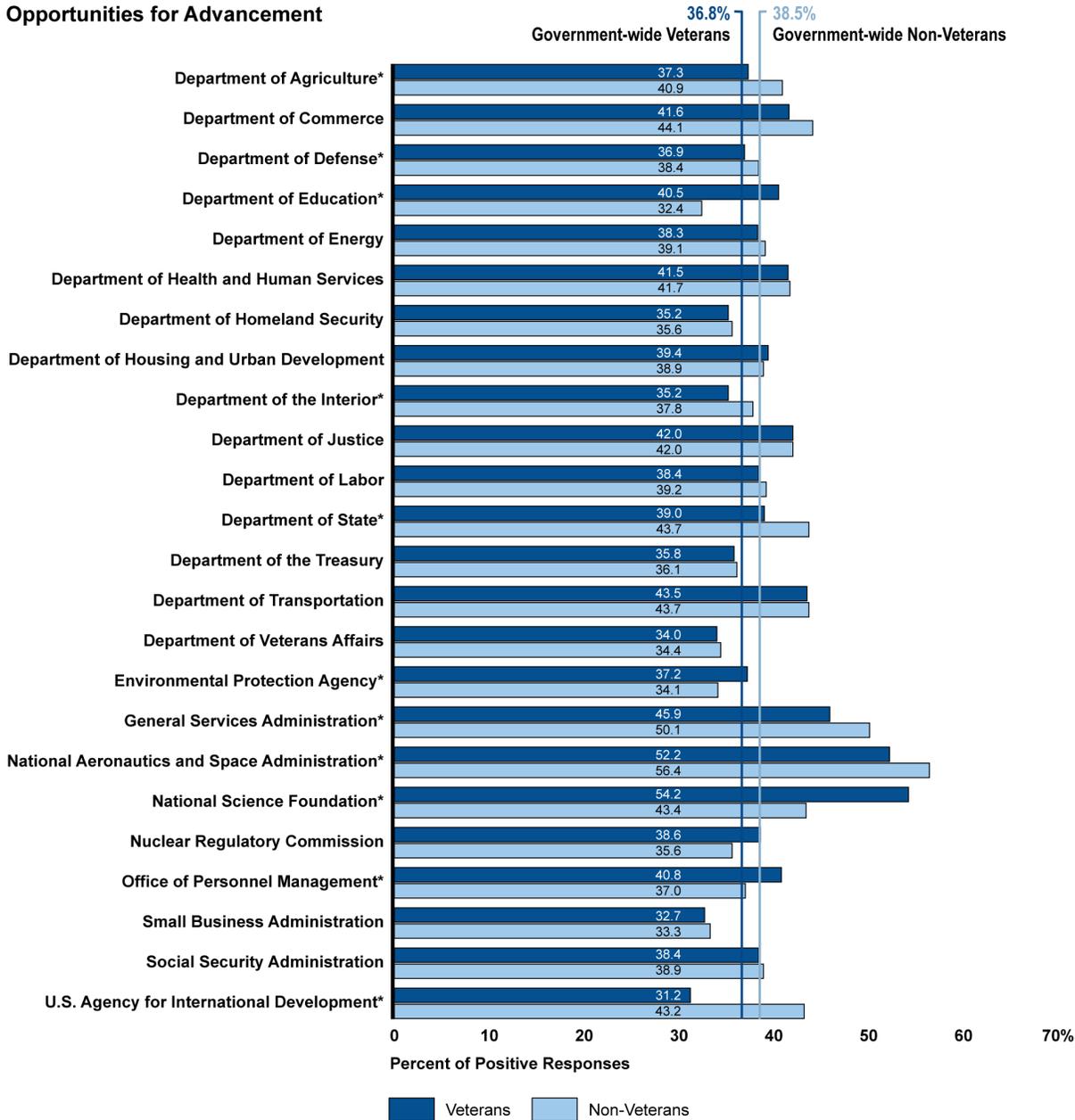
Opportunities for Advancement

Source: GAO analysis of 2017 Office of Personnel Management Federal Employee Viewpoint Survey (OPM FEVS) data. | GAO-20-592

Notes: Question 67 from the 2017 OPM FEVS asks, "How satisfied are you with your opportunity to get a better job in your organization?"
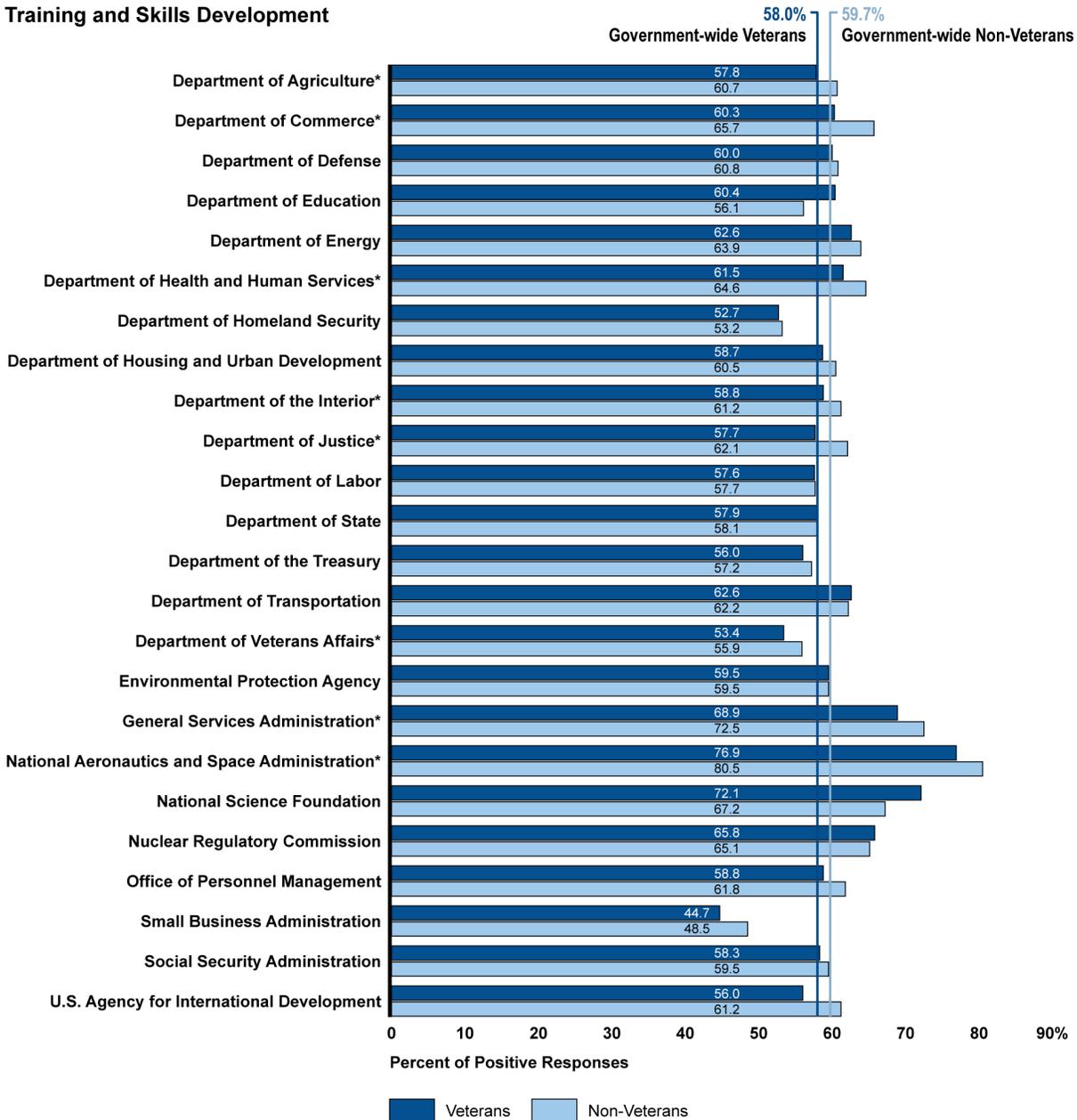
*Denotes that the difference between veteran and non-veteran percent of positive responses is statistically significant at the 95 percent confidence level. The 95 percent confidence interval widths ranged from 0.6 to 9.2 percentage points across all agencies. For 14 out of 24 agencies, confidence interval widths ranged from 0.6 to 3.5 percentage points. The difference between government-wide veteran and non-veteran percent of positive responses was statistically significant at the 95 percent confidence level.

Figure 9: Veteran and Non-Veteran Percent of Positive Responses for Training and Skills Development by CFO Act Agency, 2017 OPM Federal Employee Viewpoint Survey

Training and Skills Development

58.0% Government-wide Veterans   59.7% Government-wide Non-Veterans

Agency	Veterans	Non-Veterans
Department of Agriculture*	57.8	60.7
Department of Commerce*	60.3	65.7
Department of Defense	60.0	60.8
Department of Education	60.4	56.1
Department of Energy	62.6	63.9
Department of Health and Human Services*	61.5	64.6
Department of Homeland Security	52.7	53.2
Department of Housing and Urban Development	58.7	60.5
Department of the Interior*	58.8	61.2
Department of Justice*	57.7	62.1
Department of Labor	57.6	57.7
Department of State	57.9	58.1
Department of the Treasury	56.0	57.2
Department of Transportation	62.6	62.2
Department of Veterans Affairs*	53.4	55.9
Environmental Protection Agency	59.5	59.5
General Services Administration*	68.9	72.5
National Aeronautics and Space Administration*	76.9	80.5
National Science Foundation	72.1	67.2
Nuclear Regulatory Commission	65.8	65.1
Office of Personnel Management	58.8	61.8
Small Business Administration	44.7	48.5
Social Security Administration	58.3	59.5
U.S. Agency for International Development	56.0	61.2

Percent of Positive Responses

Veterans   Non-Veterans

Source: GAO analysis of 2017 Office of Personnel Management Federal Employee Viewpoint Survey (OPM FEVS) data. | GAO-20-592

Notes: Questions 1 and 18 from the 2017 OPM FEVS ask respondents the degree to which they agree with the statements, "I am given a real opportunity to improve my skills in my organization," and
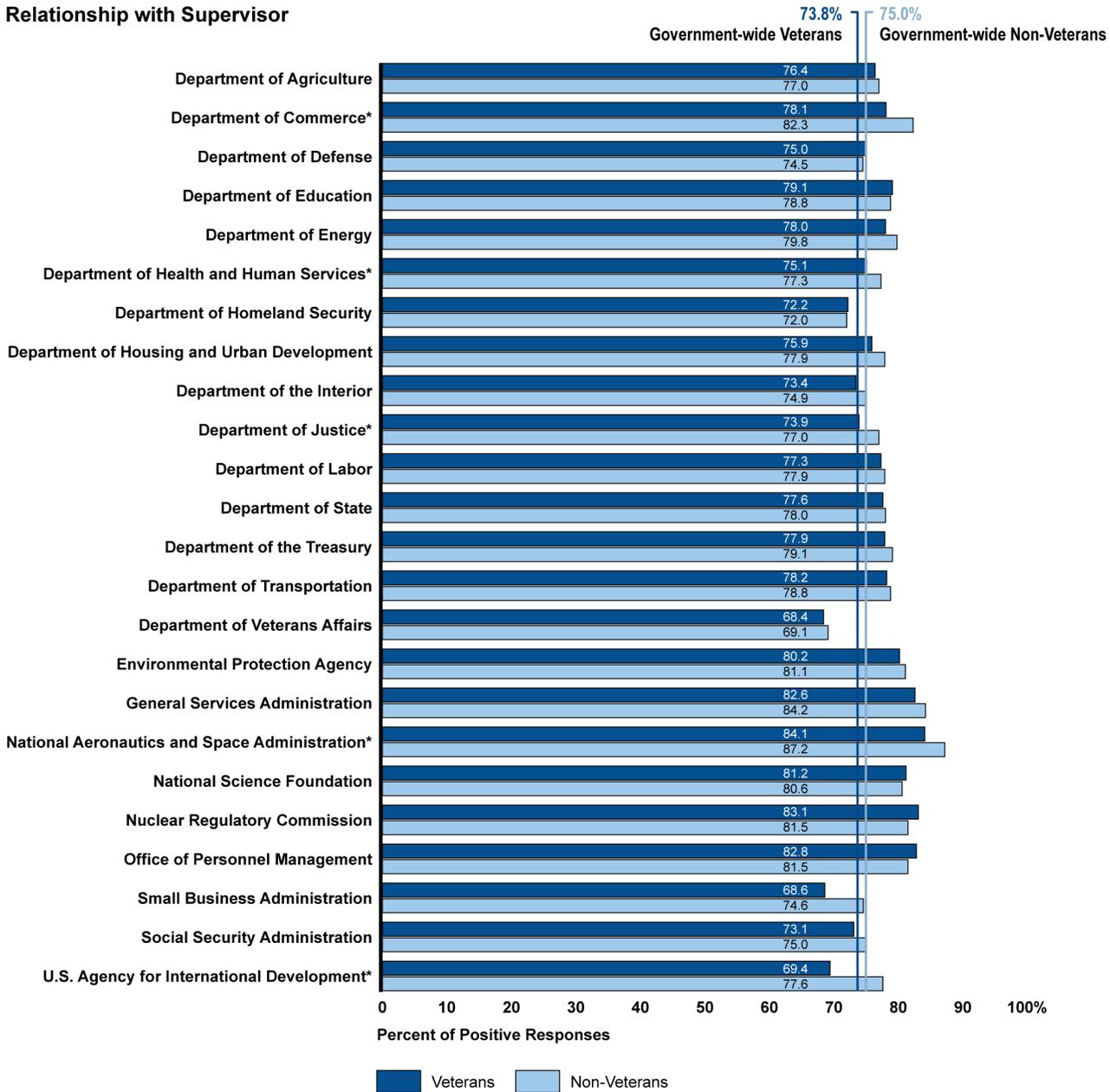
"My training needs are assessed," respectively. Question 68 asks respondents, "How satisfied are you with the training you receive for your present job?"

*Denotes that the difference between veteran and non-veteran percent of positive responses is statistically significant at the 95 percent confidence level. The 95 percent confidence interval widths ranged from 0.8 to 15.3 percentage points across all agencies. For 15 out of 24 agencies, confidence interval widths ranged from 0.8 to 4.6 percentage points. The difference between government-wide veteran and non-veteran percent of positive responses was statistically significant at the 95 percent confidence level.

Figure 10: Veteran and Non-Veteran Percent of Positive Responses for Relationship with Supervisor by CFO Act Agency, 2017 OPM Federal Employee Viewpoint Survey

Relationship with Supervisor

73.8% — Government-wide Veterans   75.0% — Government-wide Non-Veterans

Agency	Veterans	Non-Veterans
Department of Agriculture	76.4	77.0
Department of Commerce*	78.1	82.3
Department of Defense	75.0	74.5
Department of Education	79.1	78.8
Department of Energy	78.0	79.8
Department of Health and Human Services*	75.1	77.3
Department of Homeland Security	72.2	72.0
Department of Housing and Urban Development	75.9	77.9
Department of the Interior	73.4	74.9
Department of Justice*	73.9	77.0
Department of Labor	77.3	77.9
Department of State	77.6	78.0
Department of the Treasury	77.9	79.1
Department of Transportation	78.2	78.8
Department of Veterans Affairs	68.4	69.1
Environmental Protection Agency	80.2	81.1
General Services Administration	82.6	84.2
National Aeronautics and Space Administration*	84.1	87.2
National Science Foundation	81.2	80.6
Nuclear Regulatory Commission	83.1	81.5
Office of Personnel Management	82.8	81.5
Small Business Administration	68.6	74.6
Social Security Administration	73.1	75.0
U.S. Agency for International Development*	69.4	77.6

Percent of Positive Responses
0 10 20 30 40 50 60 70 80 90 100%

Legend: ■ Veterans   ■ Non-Veterans

Source: GAO analysis of 2017 Office of Personnel Management Federal Employee Viewpoint Survey (OPM FEVS) data. | GAO-20-592

Notes: Questions 44, 48, 49, and 51 from the 2017 OPM FEVS ask respondents the degree to which they agree with the statements, "Discussions with my supervisor about my performance are worthwhile," "My supervisor listens to what I have to say," "My supervisor treats me with respect," and

"I have trust and confidence in my supervisor," respectively. Question 52 asks, "Overall, how good a job do you feel is being done by your immediate supervisor?"

*Denotes that the difference between veteran and non-veteran percent of positive responses is statistically significant at the 95 percent confidence level. The 95 percent confidence interval widths ranged from 0.7 to 13.4 percentage points across all agencies. For 17 out of 24 agencies, confidence interval widths ranged from 0.7 to 4.5 percentage points. Government-wide, the difference between veteran and non-veteran percent of positive responses was statistically significant at the 95 percent confidence level.

Appendix V: Information on Four Federal Career and Employment Programs for Veterans

The Council on Veterans Employment's most recent strategic plan directed agencies to rely on existing programs or develop their own programs for veterans to acquire the knowledge, skills, and experience necessary to fill mission-critical occupations in the federal government.[1] For example, the Office of Personnel Management and the Departments of Energy, State, and Veterans Affairs each have programs that are intended to support skills development and hiring of veterans in the federal government. Table 6 provides a description of those programs, along with the number of veterans hired and the program costs.

Table 6: Information on Four Federal Career and Employment Programs for Veterans

Program title and description	Year started	Number of veteran participants (as of June 2019)	Program outlays (fiscal years 2014 through 2018)
The Department of Energy Federal Energy Management Program offers a paid 10-week internship for college students and recent graduates—with preference given to veterans—to learn about energy management initiatives in the federal government.	**2014**	**45**	**$538,000**
The Department of State Veterans Innovation Partnership Program provides veterans with master's degrees a 12-month, full-time career-development appointment in foreign affairs at the Department of State.	**2014**	**53**	**$2,288,000**
The Department of Veterans Affairs Warriors to Workforce Program provides training to disabled veterans who have not completed a bachelor's degree to obtain certification for federal contracting. Graduates are placed in federal agency acquisition offices.	**2011**	**255**	**$9,100,00**
The Office of Personnel Management Vets to Feds Career Development Program provides career-development opportunities for veterans and assists agencies in filling mission critical positions. Agencies identify key occupations to target veteran candidates and provide training to better enable veterans to meet agency staffing needs.	**2011**	**295**	**$51,425**

Source: GAO summary of information from the Departments of Energy, State, and Veteran Affairs, and the Office of Personnel Management. | GAO-20-592.

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[1]Office of Personnel Management, *Interagency Council on Veterans Employment Governmentwide Veterans Recruitment and Employment Strategic Plan, Fiscal Years 2014 to 2017* (Washington, D.C.: April 2014).

Appendix VI: Comments from the Office of Personnel Management

Ms. Michelle B. Rosenberg
Acting Director, Strategic Issues
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Ms. Rosenberg:

Thank you for providing us the opportunity to respond to the Government Accountability Office (GAO) draft report entitled, *Veteran Federal Employment: OPM and Agencies Could Better Leverage Data to Help Improve Veteran Retention Rates*, GAO-20-592, GAO 102967. Our response to your recommendation is provided below.

Recommendation: The director of OPM should assist agencies in using OPM's Federal Employee Viewpoint Survey (FEVS) or other employee feedback data to analyze the key drivers of retention for veterans, which would help agencies to identify strategies for improving veteran retention.

We partially concur. OPM agrees with the spirit of the recommendation; however, our understanding of key terminology puts the recommendation at odds with our existing Privacy Act of 1974, 5 U.S.C. § 552a, policies. Further, OPM lacks the necessary resources to fully implement this recommendation as written.

The recommendation states: "OPM *should assist agencies in using OPM FEVS . . . data to analyze the key drivers of retention for veterans . . . .*" (Emphasis added.) OPM can support agencies in identifying key drivers of retention at the enterprise level, but under the Privacy Act, OPM cannot provide agencies with the record-level data that would enable them to conduct any granular analysis, such as regression analysis.

Further, the current recommendation is too broad in scope to fit the logic and distribution of veteran employment data in the Federal government. We previously requested that the recommendation be limited to the 24 Chief Financial Officer (CFO) Act agencies included in the GAO report. Currently, over 80 agencies participate in the FEVS, but only several large agencies have the number of veterans necessary to meet the assumptions for analysis or to justify the work involved in producing the analyses for agencies. OPM would again request that the recommendation be limited to the 24 CFO Act agencies as the magnitude of the task places the recommendation outside current staffing constraints and the practical limitations of applying the model to agencies with few veterans.

2

Failing these suggested modifications, OPM can only partially concur with the
recommendation. OPM plans to provide other methods of implementation, such as
offering webinars or forms of guidance that would increase awareness among agencies of
the drivers of veteran retention.

I appreciate the opportunity to respond to this draft report. If you have any questions
regarding our response, please contact Dr. Zina Sutch, Deputy Associate Director, Office
of Diversity & Inclusion, (202) 606-2433, and zina.sutch@opm.gov.

Sincerely,

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Dennis Dean Kirk, Esq.
Associate Director

Appendix VII: GAO Contact and Staff Acknowledgments

GAO Contact

Yvonne D. Jones, (202) 512-6806 or jonesy@gao.gov

Staff Acknowledgments

In addition to the contact named above, Steven Lozano (Assistant Director), Margaret McKenna Adams (Analyst-in-Charge), Mariel Alper, Carl Barden, Alyssia Borsella, Arpita Chattopadhyay, Christopher Falcone, Joseph Fread, Robert Gebhart, Sarah Gilliland, Hannah Laufe, Michael Silver, Jeff Tessin, Frances Tirado, Peter Verchinski, Alicia White, and Lauren Woodard made significant contributions to this report. Jeff DeMarco, Clifton Douglas, Jr., Justin Fisher, and Silvia Symber also made key contributions to the report.