



The Single Salary System for Military Personnel: A Review of Existing Practices and Literature

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Abstract

The 13th Quadrennial Review of Military Compensation (QRMC) is considering whether the U.S. military should move from its current regular military compensation (RMC) structure to a single-salary system (SSS) that would eliminate the basic allowances for housing (BAH) and subsistence (BAS) and increase basic pay. To inform this potential policy change, this study provides information about: the potential advantages and disadvantages to the U.S. military of moving to an SSS; potential design features of an SSS to meet key objectives; and, important implementation challenges that the Department of Defense (DOD) may face if it goes forward with a military SSS. To provide insight into these issues, we conducted a literature review on the compensation preferences of servicemembers and civilians, a review of U.S. civilian-sector compensation practices based on a literature review and subject-matter expert (SME) discussions, and a review of foreign military compensation practices based on discussions with foreign military compensation experts and a review of policy documents.

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Cover image credit: Key West, Fla. (Dec. 5, 2006) - Command Master Chief Al Holland assigned to the Navy's Center for Personal and Professional Development, Millington, Tenn., conducts First Line Leadership training for first and second class petty officers at Naval Air Station Key West. The training, which was part of the air stations daylong Career Management Symposium, covered a variety of topics related to the fleets effort to develop 21st century leaders, including pay and compensation, force shaping and retirement. U.S. Navy photo by Mass Communication Specialist 2nd Class Timothy Cox (RELEASED).

Approved by:

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Executive Summary

The 13th Quadrennial Review of Military Compensation (QRMC) is considering whether the US military should move from its current regular military compensation (RMC) structure to a single-salary system (SSS) that would eliminate the basic allowances for housing and subsistence (BAH and BAS) and increase basic pay. In this study, we focus on three questions:

1. What are the potential advantages and disadvantages to the US military of moving to an SSS in terms of pay transparency and equity, incentives and manpower outcomes, and cost?
2. How might an SSS be designed to meet objectives, including equity and pay comparability, adequate recruiting and retention, and minimal additional costs to the federal government?
3. What are some important implementation challenges that the Department of Defense (DOD) will face if it goes forward with an SSS for the military?

To provide insight into these issues, we conducted a literature review on the compensation preferences of servicemembers and civilians, a review of US civilian-sector compensation practices based on a literature review and subject-matter expert (SME) discussions, and a review of foreign military compensation practices based on discussions with foreign military compensation experts and a review of policy documents provided by our foreign military SMEs. Taken together, the reviews provide a rich set of information about compensation preferences and US federal civilian, private-sector, and foreign military compensation systems that can inform decisions about whether and how the US military might move to an SSS. The information gathered suggests some key implications for a move to a military SSS, including the following:

- There is a need for compelling evidence to justify a change to an SSS.
- If DOD decides to go forward with an SSS, it will be important to:
 - Assess the advantages and disadvantages of using the General Schedule (GS) system as a model.
 - Ensure that the new system is viewed as fair by servicemembers and their families.
 - Determine to what extent military pay should be benchmarked to civilian pay for similar occupations.

- Determine whether a salary should include a “military factor” that compensates servicemembers for the unique demands of military service.
- Determine whether “cost containment” implies strict budget neutrality or would allow additional budgetary costs to be offset by additional tax revenues.
- Determine whether and how to structure opt-out provisions.
- Ensure transparency, effective messaging, and leadership buy-in in the transition to an SSS.

We also include, as appendixes, the three memoranda that review compensation preferences, civilian compensation systems, and foreign military compensation systems.

Appendix A: Compensation Preferences

The key points of Appendix A follow:

- **Transparency.** The current US military compensation system continues to lack transparency. Servicemembers tend to be uncertain about the structure of their compensation, especially the value of the tax advantage (resulting from the nontaxability of BAH and BAS) and the amount that DOD contributes to benefits, such as health care and retirement.
- **Pay equity and incentives.** There is some support for the principle of “equal pay for equal work,” including among some servicemembers for a compensation system in which dependent status plays a less important role, and some support among civilians for allocating a “moderate” level of pay to performance-based components.
- **Nonmonetary forms of compensation.** There is some evidence for an increase in the importance of nonmonetary forms of compensation involving greater choice and flexibility in work locations and career paths among servicemembers.
- **Demographic differences.** Preferences for different types of compensation can vary significantly based on demographic and other personal characteristics of individuals, including age, gender, education level, and rank. This fact will make it difficult to design a compensation system that will satisfy all servicemembers.

Appendix B: Civilian Compensation Systems

Two of the main topics discussed in Appendix B include:

- **GS system as a model for a military SSS.** The federal civilian GS system might be a natural model for a military SSS. The GS system has drawbacks, however, including

insufficient focus on rewarding excellent performance and pay comparability with the civilian sector.

- **Clear communication.** It's important to share clear, readily accessible information with employees about their compensation packages, in a variety of formats. Clear communication helps them understand the full value of their compensation package, the standards needed to achieve performance-related salary increases or bonuses, and the rationale behind the structure of the compensation system, especially when changes are being made.

Appendix C: Foreign Military Compensation Systems

Below we summarize the main points of Appendix C:

- **Pay comparability and salary benchmarking.** All three foreign militaries we studied (the United Kingdom (UK), Canada, and Australia) explicitly benchmark the salary component of military compensation to the pay levels of sectors outside the military to ensure pay comparability with the civilian sector.
- **Compensation for the unique nature of military service.** All three foreign military pay systems add to the benchmarked base salary a component intended to compensate members for the unique aspects of military service that conventional benchmarking does not capture (the UK's "X-Factor," Canada's "military factor," and Australia's service allowance).
- **Skill-based pay differentials.** All of the base pay scales of the three foreign militaries include skill differentials—higher pay for members in certain occupations requiring high levels of experience or technical competence.
- **Tax advantages.** Tax advantages play a limited role in the compensation systems of the foreign militaries we studied.
- **Pay and dependent status.** The relationship between pay and dependent status also differs across the three foreign militaries. In the UK, almost no military compensation is tied to dependent status. In Canada, some relocation benefits are a function of the number of dependents, but little else. Australia, by contrast, offers a range of benefits (including housing, assisted leave travel, district allowances, and others) that are tied to the makeup of a member's family.

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Introduction

The 13th Quadrennial Review of Military Compensation (QRMC) is considering whether the US military should move from its current regular military compensation (RMC) structure to a single-salary system (SSS). The current RMC structure involves four components:¹

1. Basic pay – a cash salary that is a function of rank and years of service (YOS)
2. Basic allowance for housing (BAH) – an allowance that depends on rank, location, and dependent status to offset housing costs for members who do not receive government-provided housing
3. Basic allowance for subsistence (BAS) – an allowance that is a function of enlisted/officer status (and is higher for enlisted members) to offset members' meal costs
4. Tax advantage – tax savings resulting from the fact that BAH and BAS are not taxable at the state or federal level

Although this RMC structure has been a central component of US military compensation for decades, policy-makers are concerned that it may be overly complex, administratively demanding, and out of step with modern compensation practices in other sectors of the economy. According to the FY 2017 National Defense Authorization Act (NDAA), which mandated that the Department of Defense (DOD) study the issue, an SSS means [1]:

- **Elimination of BAH and BAS** – assumes the repeal of the BAH and BAS
- **Pay table changes** – new pay tables specifying level of pay necessary by grade and YOS to:
 - Achieve pay comparability with the civilian sector²
 - Effectively recruit and retain a high-quality All-Volunteer Force
- **Retirement system changes** – modifications to the military retirement system, including the retired pay multiplier, to ensure that members of the armed forces under

¹ Although most servicemembers receive this combination of basic pay and allowances, there are notable exceptions and nuances. For example, military personnel who live on base (e.g., in barracks) benefit from free housing and free meals and do not receive BAH or BAS. Furthermore, servicemembers stationed overseas do not technically receive BAH; instead, they receive a functionally equivalent allowance called the overseas housing allowance (OHA).

² In this paper, we use the word “civilian” to refer to people outside of the military, whether in the public sector or in the private sector. When we refer to the group of public sector employees outside of the military, we will use the terms “federal civilians” or “government civilians.”

the pay structure are situated similarly to where they would otherwise be under the new Blended Retirement System

- **Cost-of-living (CoL) adjustment** – same CoL adjustment that DOD uses worldwide for civilian employees
- **Cost containment** – an SSS that will result in no or minimal additional costs to the government

In addition to basic pay and allowances, the US military provides a variety of special and incentive pays to members for service in particular environments and circumstances. These include hazardous duty pay, family separation pay, and special pays for hard-to-staff positions and occupations. Moving to an SSS probably would not change the nature of these types of pay.

The potential benefits of a move to an SSS may include reduced complexity, increased efficiency, and greater transparency with respect to how much servicemembers earn. Potential drawbacks of a switch to an SSS could include high upfront costs and increased compensation costs overall, the need to adjust compensation policies that are currently a function of basic pay (such as retirement benefits), and increased pay inequality. Moving to an SSS would represent a substantial change to military compensation policy.

This study's purpose is to help DOD decision-makers to better understand the implications of moving to an SSS—that is, how an SSS would function in the military and what effects such a system would have on manpower outcomes of interest, such as recruiting and retention, and on overall readiness. Determining whether an SSS makes sense for the US military requires examination of several factors, including transparency, equity, efficiency, and budgetary issues.

The SSS debate

The 13th QRMC is not the first to examine the feasibility of an SSS. The 1st (1967), 3rd (1976), and 7th (1992) QMRCs, as well as the Defense Manpower Commission Report (1976), discussed the potential advantages and disadvantages of transitioning to such a system. The issues discussed in these reports have remained fairly consistent over time. Typically, they fall into four broad categories: transparency issues, equity issues, incentive and efficiency issues, and budget issues.

Transparency issues

It has long been argued that, from the point of view of individual servicemembers, the current pay plus allowances system is so complex that members don't understand the full value of their compensation. Complexity arises from the proliferation of multiple types of pay plus allowances, as well as the fact that the value of the tax advantage can vary based on such factors

as a member's marital status, outside income, or spousal income, so it is hard to compute and can change frequently. Moving to an SSS, then, could increase pay transparency, make it easier for servicemembers to more accurately compare their pay with civilian-sector pay, and perhaps improve recruiting and retention outcomes.

Another potential drawback to the current pay plus allowances system is that, at an organizational level, the system results in personnel costs that are not fully transparent to military decision-makers. Because much of military compensation occurs through the tax system (in the form of reduced revenues to federal, state, and local governments rather than explicit budgetary outlays), the current system does not reflect the true cost of military compensation. By eliminating the tax advantage portion of military compensation, moving to an SSS could more clearly show decision-makers the true cost of military personnel [2-3].

Equity issues

Some have argued that the pay-plus-allowances system is inequitable because it does not embody the principle of "equal pay for equal work." The 1st QRMC (1967) argued that all military servicemembers of the same grade and YOS should receive the same compensation without regard to dependent status or location and housing arrangements [4]. According to this argument, because BAH and the tax advantage depend on such factors as a person's location, dependent status, and tax bracket, current RMC does not represent equal pay for equal work. Only the basic pay component of RMC embodies this principle [5]. Of course, a person's perceptions of pay equity may be largely dependent on his or her circumstances (single members versus those who are married with large families, for example). It also is likely that perceptions of equity and fairness may, to some extent, drive recruiting, performance, and retention outcomes.

Another set of equity-related issues involves understanding which members may benefit or be harmed financially by a transition from the current system to an SSS. For example, while a move to an SSS might (in general) enhance equity by eliminating the tax advantage (which currently favors those in higher tax brackets), predicting the effects of compensation changes on members' taxes can be complex. It has been suggested that junior servicemembers might be harmed by a move to an SSS because eliminating the tax advantage for food and housing allowances would result in increased tax liability for both state income taxes and federal Social Security payroll taxes [3]. Increased liability for state taxes would fall most heavily on junior members because a larger portion of their income is composed of the (currently nontaxable) allowances. This effect would be larger, of course, for people who live in high-tax states. Junior servicemembers also may experience losses related to federal Social Security taxes because earnings credits to their Social Security accounts forgone in earlier years would be replaced later in their careers, when earnings are higher. Even if servicemembers are not directly financially harmed, major changes to the military compensation system have the potential to

engender distrust or concern among members about the effects. It will be important to understand how any reform of the military compensation system will affect servicemembers based on rank, experience level, geographic locations, number of dependents, and other relevant factors.

Incentive and efficiency issues

Related to the transparency and equity issues is a set of incentive and efficiency issues. For example, some argue that military pay should have a closer relationship to a member's performance. The current pay-plus-allowances system obscures the link between pay and productivity because only a fraction of a member's pay currently depends on work done; the rest depends on such factors as location, dependent status, tax bracket, and food costs. From an organizational perspective, more cost transparency could improve the ability of military decision-makers to achieve given levels of recruiting effectiveness, performance, and retention at minimum cost. An SSS also might be simpler to administer in the long term, thus reducing some additional administrative costs (although the transition costs of moving to an SSS may be substantial, which could offset any longer term savings).

Budget issues

Moving to an SSS also has implications for the federal budget. Making RMC fully taxable will increase on-budget costs by requiring the federal government to fund the current tax advantage component of RMC. Unless other policies are changed, making RMC fully taxable also will increase "drag along" costs of other compensation types that increase proportionally with basic pay (such as contributions to retirement plans) [2, 5].

Organization of this report

To help DOD decision-makers to better understand the implications of moving to an SSS, we conducted evidence reviews in three major areas: employee compensation preferences, civilian compensation systems, and foreign military compensation systems. The report synthesizes the major findings from our three reviews. We first consider issues related to the design of a new SSS, including the salary component, location adjustments, housing benefits, and other features of salary systems in civilian organizations and foreign militaries. We then look at important issues concerning the desirability of DOD adopting an SSS, including potential effects on compensation transparency and equity, incentives and manpower outcomes (such as recruiting, retention, and motivation), administrative and budgetary costs, and implementation costs. We conclude with a summary of our findings and the implications for a military SSS. Appendixes A, B, and C present the three reviews (compensation

preferences, civilian compensation systems, and foreign military compensation systems, respectively). Appendix D provides our sources, subject matter experts, and points of contact.

Design of a Single-Salary System

Research on compensation preferences, civilian compensation systems, and foreign military compensation systems provides insights on basic structures and features of salary systems in other sectors, which can inform the design of an SSS for the US military.

Salary component

The General Schedule (GS) scale currently used in the federal civilian sector may be the most suitable model for a military SSS for several reasons. The grade and YOS structure of military basic pay aligns closely with the grade and step structure of the GS system and the related Law Enforcement Organization (LEO) pay schedules. In these systems, paygrades are based on education level, position, and prior experience; within each grade, steps are based on time-in-grade. These systems also include adjustments for annual salary increases reflecting cost-of-living changes, location pay differentials, and special rates that apply to hard-to-staff positions. There also are a number of situational allowances in the GS system that would apply directly to military settings. DOD employs many GS employees and, as a result, is familiar with the system and has created a crosswalk that relates military rank to GS grade [6].

Using the GS system as a model may entail addressing some of its key criticisms. These include excessive focus on maintaining “internal equity” (reflecting a person’s position in the hierarchy), insufficient focus on “individual equity” to reward excellent performance, and insufficient focus on “external equity” to accommodate needed changes in pay due to supply and demand conditions in the broader labor market. Among civilian-sector employees, the perception is that the GS system overcompensates some positions and undercompensates others, and that pay increases are not adequately tied to performance. To deal with these issues, a military SSS could institute the kind of external salary benchmarking currently done in the three foreign militaries reviewed, and/or augment the GS system with more pay-for-performance features, such as pay banding, that collapse paygrades and allow more flexibility to award performance-based raises [7].

Location adjustments

The FY 2017 NDAA specified that a military SSS should assume the same cost-of-living adjustment that the DOD uses worldwide for civilian employees [1]. Models for this type of adjustment might be derived from the GS system or those of foreign militaries, such as Canada. The GS system includes locality pay, which is a location-specific adjustment for different

geographic regions that adjusts the pay table to reflect the difference in average pay in that location compared with the rest of the country. These adjustments make up 13 to 28 percent of a federal civilian employee's pay [6]. Canada's military offers its servicemembers a monthly allowance called a Post Living Differential (PLD). The PLD compensates members for the high cost of living (including rental housing costs and food costs) in certain areas of the country (typically large cities). Current PLD rates range from C\$62 (\$46) to C\$1,485 (\$1,112) per month, about 5 percent of a typical member's pay.³ One feature of the PLD is that, unlike GS-system locality pay, it is not pensionable (does not go into the formula that determines a Canadian military member's pension). This feature removes the incentive for members to relocate to a high-cost area at the ends of their careers, which is a criticism of the GS system locality adjustment [8-10].

Housing benefits

Because the US military expects its members to relocate frequently, some subject matter experts (SMEs) believe it will be difficult to fully eliminate BAH by converting it to salary. Therefore, a new compensation system will need to ensure adequate support for frequent location and housing changes in a variety of settings.

Our reviews and SME discussions revealed a range of housing benefit options that DOD might consider. Location-based pay adjustments, such as those for DOD civilians, federal civilians under the GS system, or the Foreign Service's Overseas Comparability Pay (OCP) could be one option. A second option might be to adapt the housing allowance system used for church ministers to US military members. Under this system, housing allowances are built into ministers' salaries, but the portion spent on housing is tax-free [11]. Adapting this system for the military would incur verification costs because servicemembers (like ministers) would have to document their housing expenditures when they file annual income taxes, and it would mean that the federal government would still be bearing some of the cost of providing housing to servicemembers.

A third option could be to look to the housing benefits provided to members of some foreign militaries. Under the UK's "subsidized accommodation" program, for example, military members who are provided housing have the rent (subsidized to be about 30 percent lower than market rents) deducted from their salaries [12-13]. Australia provides a range of housing benefits to its members, including accommodations for single members, service residences for those with families (both provided at a charge), or a rent allowance for those who live in a

³ We use the abbreviation "C\$" to refer to Canadian dollars.

rented home. Each package element is designed so that members pay a similar out-of-pocket amount for housing no matter where they live [14-15].

Other design issues

In addition to the design features already discussed, our reviews suggest a number of additional issues that, although not required of a new SSS, may warrant DOD consideration in undertaking major changes to military compensation.

Skill-based pay differentials

One issue that DOD may want to consider is whether to establish different compensation tables or pay supplements for select communities that require high levels of technical skill or experience. Even though the US military currently addresses these issues using enlistment and reenlistment bonuses, special pays, and faster promotion timing for enlisted members in some fields, the fact that pay tables tend to treat each occupation uniformly can limit DOD's ability to offer salaries competitive with the civilian sector and can harm recruiting and retention in skilled occupations [16-17].⁴ Each of the foreign militaries we studied in our review incorporates skill-based pay differentials directly into its pay table. The UK, for example, places certain occupations into one of four pay supplement categories, based on a detailed job evaluation process designed to achieve pay comparability with the civilian sector [12-13]. Canada has established two higher skill "specialist" pay groupings, again based on a standard job evaluation rubric, although they still have issues with recruiting and retention for some occupations [8-9, 20]. The Australian military base pay table includes ten "paygrades" that reflect the level of technical skill and experience required to master an occupation. Entire occupations can move into a higher paygrade as they require higher skill levels. An independent tribunal determines which jobs are assigned to the various paygrades [14-15].

Performance-based pay

One of the criticisms of the military compensation system has been that military pay should be more closely related to a servicemember's performance. Similarly, our review of compensation

⁴ Koopman and Hansen (2005) argue that DOD's ability to recruit and retain individuals in particular specialties could be improved by creating occupational pay differentials through increased and more flexible use of enlistment and retention incentive pays. Under this proposal, pays such as selective retention bonuses (SRBs) and enlistment bonuses (EBs) would become a larger proportion of servicemember compensation [18]. See also Pilling et al. (2006) [19].

preferences suggests that civilian workers also support allocating at least some portion of their compensation to performance-based pay. In international comparisons, US employees had among the highest preference for performance-based pay [20].⁵ An SSS based on grade and step schedules, however, may not offer clear advantages in this regard. Federal civilian salary systems like the GS system, for instance, have been criticized for insufficiently linking compensation to performance [7, 22]. In moving to an SSS, then, DOD may want to consider developing pay-for-performance features that are currently lacking. One option might be “pay banding” systems similar to those used in some organizations under the GS system.⁶ Such systems “collapse” the 15 grades of the GS schedule into fewer bands that cover a wider range of salaries [25-27]. This approach provides managers with more opportunities to award performance-based raises without going through the formalities of promoting an employee to a new grade. Another approach adopted by some federal agencies is to award one-time performance bonuses that do not require a commitment to a permanent increase in the employee’s salary [7].⁷

If DOD implements more performance-based approaches, a number of challenges will have to be addressed. SMEs in the private sector (where performance-based pay is more common) emphasize the need for transparency about the basis for merit pay increases or bonuses and how to achieve performance targets. A recent CNA study concurs with the need for transparency, suggesting that any performance-based compensation system should [28]:

⁵ Our review also revealed some demographic differences in preferences for performance pay. Men are more likely to prefer compensation packages with a performance component, while women tend to prefer compensation packages with seniority-based pay [20-21].

⁶ Any pay-banding approach would have to be implemented with care. Our reviews showed that some attempts to introduce pay banding, such as the UK’s “Pay2000” reform or the National Security Personnel System (NSPS) instituted for DOD civilians from 2006 to 2010, either were terminated or had to be significantly revised because of such issues as excessive complexity that impaired pay transparency, inconsistent application, pay inequities, and/or a lack of stakeholder involvement [12-13, 23-24].

⁷ Koopman and Hansen (2005) suggested a third option for increasing performance incentives in the U.S. military pay system: make basic pay step increases a function of time in grade instead of YOS, as each of the three foreign militaries we reviewed do. This change would provide additional performance incentives because faster promotions would create a permanent compensation differential for strong performers [18]. Increasing the importance of special and incentive pays that are linked to paygrade (such as SRBs) or other performance measures could also be part of a strategy to increase performance incentives [19].

- Be based on a performance measurement system that provides valid measures of individual performance, is able to distinguish different performance levels and types, measures performance in all of the important aspects of the job, and emphasizes recent and current performance;⁸
- Ensure that incentive payments are large enough to motivate good performance; and,
- Decide whether to reward performance levels, performance growth or improvement, or both.

Another CNA study argues that performance pay implementation should [29]:

- Set clear goals from the outset (for example: be able to achieve adequate recruiting and retention levels, motivate high performance, motivate professional development and appropriate career transitions, and be flexible enough to respond to changing military manpower needs);
- Build on best practices from the private sector; and,
- Be pilot-tested prior to full implementation to determine best practices and whether the goals of the program can be achieved.

Nonmonetary incentives

The military might be able to ease any transition to an SSS by offering additional nonmonetary incentives as part of a broader package of reforms. Some possibilities for which servicemembers have expressed a preference follow [30-35]:

- Duty station/homeport/location choice
- Geographic stability
- Telecommuting options
- Sabbaticals
- Assignment choice
- Additional training opportunities (especially for recruits and younger members)

Among the civilian workforce, there is some evidence of a decrease in the importance of traditional pay and benefits, with increased importance placed on “nontraditional” benefits,

⁸ Golfin and Carey (2013) argue that simply increasing reliance on supervisor feedback in a performance measurement system can be problematic, as supervisors can be subjective and biased, and their evaluations can result in decreased morale if perceived to be based on favoritism [28]. Private-sector SMEs agreed that at times, some organizations may suffer from a lack of trust in managers to fairly implement merit pay systems if their objectives differ from rewarding current performance (for example, managers may prefer to reward people who have critical skills, or those deemed to have high potential for future performance, rather than those exhibiting high levels of current performance).

including flexible scheduling, transportation subsidies, more time off, or family-related benefits, such as paternity leave, adoption leave, or child-care benefits [36]. Also, developing tailored approaches to pay and benefits is becoming an increasingly important trend in private-sector compensation systems. More organizations are offering a core set of benefits, along with an allocation that employees can apply to a range of additional benefit options (e.g., tuition reimbursement or other professional development options). Simplifying the military compensation system by eliminating BAH and BAS could provide the opportunity for introducing more personalized or tailored benefit packages that would give servicemembers more choice. Increasing the importance of nonmonetary forms of compensation, then, might offset any negative responses by military members to other compensation changes by increasing choice while limiting the direct budgetary impact of the changes.

Opt-out provisions

One additional issue to consider is that, if current servicemembers are allowed to opt out of some or all aspects of a new SSS, the take-up rate of the new system may depend on how the choice is framed. Our review of compensation preferences describes a well-documented tendency for people to accept default options, even when offered a menu of alternatives. For example, establishing automatic enrollment as the default option greatly increases participation rates in savings plans (although there is not much research on whether these effects carry over to the choice of salary systems) [37-46]. Establishing opting-in to a new SSS as the default option may increase the proportion of servicemembers who adopt it, if such a choice is provided.

SSS: Key Issues

Important considerations in determining whether the US military should adopt an SSS include the following questions: How will an SSS likely affect the transparency and equity of the military compensation system? What will be the effect on personnel outcomes of moving to an SSS? How will the adoption of an SSS affect administrative and budget costs? What might be some of the implementation challenges in moving to an SSS? In this section, we put together information from our three reviews to shed light on some of these issues.

Transparency

One potential benefit of an SSS is that the compensation package would be more transparent to servicemembers than the current RMC is. Our SME discussions revealed multiple dimensions of transparency that may apply to military compensation, depending on the nature of any redesign. First, public-sector SMEs emphasized the need to make sure employees understand the full value of their compensation package and possibilities for future earnings. This is an important issue with respect to the current RMC system because our review of compensation preferences showed that US servicemembers do tend to be uncertain about the structure of their compensation packages, and they tend to underestimate the amount of their total compensation relative to their potential private-sector earnings.

Private-sector SMEs emphasized a second dimension of transparency—ensuring that employees understand the basis for merit pay increases and how to achieve performance targets that lead to salary increases or bonuses. This transparency dimension is likely to become more important if the military adopts performance pay or institutes other types of compensation flexibilities in the future.

Equity and pay comparability

Another argument in favor of an SSS is that it better embodies the principle of “equal pay for equal work.” By this standard, pay should compensate servicemembers for work done, and not for other factors (such as dependent status). Public-sector SMEs indicated a need for compensation systems to move closer to an ideal of rewarding work done and strong performance. Adoption of an SSS could be seen as a move in that direction (since basic pay is the current RMC component that best reflects the equal-pay-for-equal-work principle). Our review of compensation preferences suggests that the equal-pay principle may have support among servicemembers. For example, some senior enlisted personnel have expressed

dissatisfaction with their basic pay, especially when compared with that of junior officers, on the grounds that those officers have less experience and often rely on enlisted personnel for on-the-job training. There also is some evidence that at least some servicemembers may prefer a compensation system that does not include additional pay for those with dependents [47].

Related to the principle of equal pay for equal work is the concept of pay comparability. The FY 2017 NDAA specifies that any new SSS should achieve pay comparability with the civilian sector [1]. In our interviews with public-sector SMEs, it was apparent that pay comparability is an important equity issue in compensation that, if not addressed, can create dissatisfaction among employees. For example, SMEs stressed the importance of the need to offer equal pay for equal work across government agencies, especially when personnel from different agencies perform similar work closely together, in similar circumstances. External equity with the private sector also is an important consideration. Each foreign military that we looked at conducts some kind of pay comparability analysis or salary benchmarking to ensure that military pay tracks civilian-sector pay. For example, the UK conducts an annual in-depth pay-review process, including labor market analyses for some military occupations, with the goal of achieving broad pay comparability between military pay and the civilian labor market [12-13]. In Canada, military pay for both noncommissioned members and officers is benchmarked externally against similar jobs in the Canadian federal civil service [9, 48-49]. Australian military salaries also are benchmarked against occupations outside the military where comparisons are possible [14]. All three foreign military pay systems also add to the benchmarked base salary a pay component intended to compensate members for the unique aspects of military service that conventional benchmarking does not capture (namely, the UK's "X-Factor," Canada's "military factor," and Australia's service allowance).⁹

A related equity issue is the extent to which pay should vary according to whether a servicemember has dependents. Integrating BAH into salary would remove pay differentials

⁹ Comparisons of US military and civilian compensation suggest that, on average, servicemembers' earnings compare favorably to their similarly educated and experienced counterparts in the civilian sector. A 2006 Congressional Budget Office analysis showed that, on average, RMC exceeded the 75th percentile of earnings for comparably educated civilians. A subsequent CNA analysis for the 11th QRMC based on 2009 data found that average RMC had risen relative to the civilian wage distribution, (a) reaching the 90th percentile relative to the combined comparison group, consisting of civilians with high school diplomas, those with some college, and those with two-year degrees, and (b) reaching the 83rd percentile for officers relative to the combined group of civilians with bachelor's degrees and those with master's degrees or higher. In other words, more than 80 percent of civilians had earnings lower than the earnings of comparably educated and experienced servicemembers in 2009. To some extent, then, there may already be a so-called military factor that is implicitly included in US servicemembers' pay [50-52]. Note that these findings on average military earnings do not preclude the possibility that military pay may lag behind civilian pay for those in specific occupations that require specialized training and education, or are in high demand in the civilian sector [53].

based on a servicemember's marital or dependent status. Our compensation preference review suggests that some servicemembers favor offering the same level of BAH to all members regardless of dependents [47]. Such a move also would align military pay more closely with private-sector practices, where varying compensation based on dependent status is nearly nonexistent.¹⁰ Others, however, fear that such a move could be viewed negatively, as "anti-family," and also could remove an important recruitment and retention incentive for servicemembers with families. This effect may be particularly problematic in an environment of increasing demand for mid- and senior-level officers and enlisted personnel [16-17]. Consequently, it is important to take into account dependents' views and the potential reactions of family units (not just those of the individual servicemember) when implementing compensation changes.

Incentives and personnel outcomes

Recruiting and retention

While the FY 2017 NDAA specified that any new SSS should set compensation at a level that permits effective recruiting and retention of a high-quality All-Volunteer Force, the effects of a new SSS on recruiting and retention were unclear in our reviews and SME discussions. Our compensation preferences review suggests that, in general, servicemembers may favor a compensation system that increases cash compensation [54]. However, the same review also finds that compensation preferences can vary substantially between different groups of servicemembers, suggesting that recruiting and retention effects might not be uniform (for example, the effects on recruiting and retaining members with families, as just discussed). For instance, older servicemembers (who also are likely to be the most skilled and experienced) have expressed a strong preference for compensation approaches that would increase or maintain the value of their retirement benefits (such as increased contributions to the Thrift Savings Plan (TSP)) [30]. This fact highlights the importance of meeting the FY 2017 NDAA's mandate that any new SSS ensure that members of the armed forces under the pay structure are situated similarly to where they would otherwise be under the current Blended Retirement System (BRS). Also, there is some evidence that increasing the availability of nonmonetary forms of compensation (such as geographic stability, or additional training for recruits and younger members, or adding more choice among different types of compensation) might provide effective recruiting and retention incentives.

¹⁰ In the foreign militaries we considered, treatment of dependents by the compensation system varies. In the UK, little military compensation depends on whether a member has dependents. In Canada, some relocation benefits are tied to the number of dependents, but little else. In Australia, by contrast, the ADF provides a range of benefits (including housing, assisted leave travel, and district allowances) that all rely on dependent status [8, 12, 14].

In addition, the recruiting and retention effects of an SSS will almost certainly depend on its design. One design principle that could be helpful in avoiding major negative effects on manpower outcomes is to avoid pay cuts. Both our compensation preference review and our SME discussions suggest that servicemembers might be less accepting of an SSS if it lowers, or is perceived to be lowering, the total value of compensation received [54]. Foreign militaries have dealt with this issue by instituting “pay protection” policies specifying that members will not receive a pay cut, or by phasing in adverse changes to members’ compensation over a number of years.

Another set of issues (that would not necessarily be addressed by a move to an SSS unless other features were added to it) involves the limitation on recruiting and retention of highly skilled personnel in occupations that also are in demand in the private sector. The US military’s current one-size-fits-all approach to basic pay limits its ability to offer compensation that is competitive with the civilian sector and, thus, hurts recruiting and retention in these occupations [16-17]. Foreign militaries, including those of the UK, Canada, and Australia, typically incorporate skill differentials directly into their basic pay tables. The special rates established under the GS system for hard-to-fill positions, which increasingly have been applied to such high-demand occupations as technology, health care, and engineering, could potentially serve as a model for compensating skilled members.

Performance-based incentives

In addition to recruiting and retention issues, the design of a new SSS should consider the issue of individual motivation and performance incentives. Our civilian compensation review showed that SSSs currently in place in the public sector (including the GS system) tend to be much more heavily weighted toward tenure and job classification than performance [7]. Performance-based pay increases are possible, but rare. In the military (and the Foreign Service), up-or-out promotion systems provide additional performance incentives that many public-sector civilian personnel systems lack; however, in moving to an SSS, DOD may also want to consider how to incorporate performance-based approaches, such as pay banding.¹¹

¹¹ There is some evidence that servicemembers are somewhat skeptical about the degree to which the promotion system provides incentives for good performance. According to Kane (2017), who surveyed a sample of 360 officers and noncommissioned officers, servicemembers perceive the promotion system to be a relatively weak component of military talent management, believing that the system allows poor performers to be promoted, and that promotions may depend to some extent on seniority or favoritism rather than merit [55]. Wayland (2002), who surveyed Air Force officers, concurs, writing that the objective of “ensuring the best officers are promoted and exceptional officers are promoted ahead of their peers may not be met in our current system.” Survey respondents indicated a perception that the promotion system was “subjective” in nature, and that such factors as a supervisor’s writing ability played an important role in who receives promotions [56]. Sims and Hiatt (2011),

Administrative costs

Our SME discussions indicate that DOD will need to weigh the potentially hefty administrative costs of transitioning to an SSS against possible reduced administrative costs once the transition is complete. SMEs with experience in compensation systems caution that the transition costs of moving to an SSS are likely to be large. Depending on the exact design of the system, costs could include revisions to pay tables and retirement policies, implementation of a CoL adjustment, establishment of a procedure to ensure pay comparability with the civilian sector (a very time-consuming and costly set of tasks for an organization the size of the US military with numerous occupations to be evaluated), and conversion of information technology systems to the new compensation system. There may also be considerable additional costs associated with “second- and third-order” effects of moving to an SSS, referring to the numerous changes that may be required to other military compensation policies that currently depend on levels of basic pay, BAH, or BAS. Even small firms incur costs in the hundreds of thousands of dollars to implement major compensation changes. For an organization the size of the US military, transition costs are likely to run into the billions.¹²

SMEs indicate, however, that once the transition is made, an SSS (like the GS system) is likely to be more administrative- and cost-efficient than a more allowance-based system, such as the current military compensation system, because of “economies of scale.” One SME noted, for instance, that the overhead costs of administering the GS system for roughly 1 million federal employees is smaller than the cost of collecting CoL data for allowance areas, many of which affect fewer than 50,000 servicemembers.

Budget costs

DOD also should consider the issue of long-term budget impact in evaluating a potential move to an SSS. The FY 2017 NDAA indicates that any new SSS should “result in no or minimal additional costs to the Government...when compared with the continuation of the current pay system.” It may be difficult to meet this objective while fully compensating servicemembers for the loss of BAH, BAS, and the associated tax advantage.

who linked Marine Corps promotion data to late 1980s-early-1990s job performance records from the Joint Service Job Performance Measurement (JPM) project, also concluded that promotion was not a good surrogate for satisfactory job performance (nor were other potential performance measures such as job knowledge tests, training course grades, proficiency marks, or conduct marks) [57].

¹² A 1977 General Accounting Office (GAO) study reported that the net cost to the federal government of converting to an SSS was estimated by DOD to be in the range of \$3 billion to \$5 billion (in 2017 dollars), depending on how the change was to be implemented [58].

One issue is the need to offset the loss of tax advantage that servicemembers currently receive through BAH and BAS. If these allowances are absorbed into salaries, all of RMC would become taxable. To fully compensate servicemembers for this loss of tax advantage, the military would have to increase members' basic pay. This increase in basic pay would convert what is now a tax break into an on-budget expenditure, thus potentially conflicting with the goal of minimal additional costs to the government (depending on whether "cost containment" implies strict budget neutrality, or would allow for additional budgetary costs to be offset by additional tax revenues).

Another issue concerns servicemembers who, for one reason or another, do not currently receive one or more of the allowances. For example, servicemembers who live in onbase government housing do not receive BAH, and reservists in most cases do not receive either BAH or BAS. Any increase in basic pay to compensate for the loss of these allowances will result in a pay "windfall" for those who do not currently receive them. These issues could be dealt with (e.g., by charging members living in onbase housing or by changing the pay formula for reservists), but such solutions would introduce another level of complexity into the transition process.

A third budget issue concerns the impact on the new BRS if basic pay is increased to offset the loss of allowances and related tax advantages. Such a change would result in increased government contributions to retirement because those contributions are based on basic pay. Consequently, changes to contribution and pension multipliers (which apply to the level of basic pay), or changes to continuation pay policies (also a function of basic pay), may be needed to counteract the potential budgetary effects of an increase in basic pay.

The importance of clear communication

A primary challenge to successful implementation of an SSS will be managing how servicemembers interpret and react to changes to the compensation structure. Our SME discussions indicate that the success of compensation reforms in large part depends on the perceptions of equity among servicemembers. Canada's unsuccessful attempts to expand skill pay differentials (which would have raised pay for high-skilled/in-demand occupations and lowered it or slowed its growth for lower skilled occupations, thus engendering resistance and dissatisfaction) illustrate this point [9, 48]. Moreover, SMEs report that employees are typically suspicious of changes to the way in which they are compensated, often fearing that such changes are actually disguised pay cuts. Pay and incentive preferences and their impact also vary with servicemembers' career stages, personal lives, or career goals, making it difficult to construct a one-size-fits-all compensation package that pleases everyone [59]. If compensation changes are viewed as unfair by particular groups (regardless of their true impact), issues may arise in retaining and recruiting these types of individuals, which could compromise

readiness.¹³ To maintain servicemember perceptions of equity, special policy initiatives limiting the immediate effects of any pay changes may be required. When introducing a new pay system in 2016, for example, the UK's Ministry of Defence instituted a pay protection measure that ensured that no members received a pay cut for three years (later extended to six years) [12].

Private-sector SMEs note that, to achieve servicemember acceptance of an SSS, DOD must clearly communicate its intentions and fully share relevant information. Information must be made available in a variety of formats to help servicemembers quickly and easily access and understand their full compensation package and benefits. Similarly, if the new system incorporates performance-based features, clear information should be shared about the competency and proficiency markers needed to advance in the system. Messaging about all aspects of the new system should make clear the philosophy behind the system. SMEs report that employees also are more likely to understand and accept a new system if it flows from and connects to the overall organization's culture and values. In the context of the military, this may require illustrating how changes to compensation are necessary for mission success or force readiness.

Clear communication is especially important when a compensation change involves pay cuts. If compensation reductions cannot be avoided, our SME discussions indicated that it is even more important to formulate and clearly communicate a justification that resonates with people. In the private sector, such explanations typically come down to "the survival of the firm—your job—depends on this change."

Our SME conversations also indicated the critical importance of gaining senior leadership buy-in and support in compensation system changes. Because senior leaders will be responsible for selling and implementing the new system, these leaders must understand and support the change.

Compensation reform and implementation challenges in foreign militaries

In the late 1960s and early 1970s, all three of the foreign militaries that we studied (the UK, Canada, and Australia) converted from pay and allowance systems to salary systems as the

¹³ Our literature and policy reviews and SME discussions recommend that having servicemembers and their families perceive any new compensation system as treating them fairly should be an important objective for DOD. One option for better understanding servicemember perceptions of an SSS would be to conduct surveys or focus groups of servicemembers in order to identify their preferences for different types of pay and benefits and their attitudes toward different policy options under an SSS.

primary form of military compensation. Subsequently, each has faced additional challenges in implementing changes within the framework of a salary-based system. This subsection of the report provides a summary of some of the major changes—both for the transition to a salary system and for more recent reforms—and some of the challenges these nations faced in implementing military compensation system changes.

United Kingdom

Conversion to a salary system

Before 1970, UK military compensation took the form of a pay and allowance package. Servicemembers' basic pay took the form of a "spot rate," a specified daily amount that depended on rank, with higher rates established for taking on additional duties (such as piloting, parachuting, or serving in submarines). There was no annual salary. UK servicemembers also received in-kind benefits in the form of free housing and food. In addition, some members were entitled to cash allowances in lieu of the in-kind food and housing benefits or to compensate for special circumstances, such as relocation expenses [5, 12, 58].

By the 1960s, this compensation system was perceived to have a number of disadvantages. The spot rates were set such that military pay was well below civilian levels (although this was partially mitigated by the in-kind benefits and allowances). There was also a perceived lack of equity in the system because married members were eligible for allowances and benefits (including a cash marriage allowance, a cash food allowance, and family housing) that were unavailable to single members. The pay system was also thought to lack transparency, in that it was difficult for members to properly value the in-kind benefits and thus make accurate comparisons between their compensation and that of civilian-sector employees [5, 58].

In 1970 and 1971, the UK converted to a salary system in which the housing and food benefits were eliminated, with their value included in a larger annual salary payment to members that reflected private-sector pay rates. The pay gap between single and married members was eliminated; all servicemen of the same rank and occupation were paid the same salary. Because the new system meant a large increase in pay for single members, the increase was implemented over a two-year period (1970–1971). Implementation planning for the new system took about three years, and involved (a) conducting job evaluations and establishing acceptable pay linkages to ensure pay comparability between the military and civilian sectors, (b) establishing methods for calculating charges for government-provided housing and food, (c) revising regulations on pay, pensions, and allowances, (d) studying ways of making annual adjustments to base salary and other pay components, and (e) assessing the short- and long-term costs of adopting the new system. A 1977 General Accounting Office (GAO) report provided one estimate of the costs of moving to the new pay system—equivalent to about a 23 percent pay increase, which may have helped to ease the transition process [5, 58].

More recent changes: Pay 2000 and Pay 16

In April 2016, the British Armed Forces transitioned to a new core pay system, known as Pay 16, which consists of the core basic pay scheme described above. Pay 16 consists of a single-pay spine with four pay supplements. Each trade receives a Trade Score and is placed into one of the supplements to ensure pay comparability with the civilian labor market. Assignment of occupations to the four pay supplements is determined by a Job Evaluation process.

Pay 16 was introduced to simplify the compensation system and make it easier for servicemembers to anticipate what they would earn in the future. The previous pay system, Pay 2000, was introduced in April 2001. It included two pay bands (high and low), which were applied at each rank within each trade. This meant that there were 128 possible permutations of pay schemes for servicemembers throughout their careers. The Pay 2000 system largely was perceived to be overly complex, and Pay 16 made the pay system easier to interpret and predict future salary levels. The X-Factor was not affected by the transition to Pay 16 [23].

In addition to being complicated, many servicemembers were dissatisfied with Pay 2000 because it led to situations where they could experience pay cuts. The system led to instances of “flip flop,” in which personnel moved from a higher pay band in one rank to the lower pay band in the subsequent rank when promoted. The compensation offered through the lower band in their new rank was sometimes less than what they had been receiving in the higher band of their previous rank. There also were instances of overtaking, where individuals overtook others in the same trade and rank who were promoted earlier. Servicemembers were especially concerned about the loss of pay through the flip-flop scenario because it affected the potential value of their pensions.

Pay 16 was designed to be easier for servicemembers to understand, and it ensured that servicemembers would no longer experience pay cuts through a flip-flop scenario. The new pay system was not intended to serve as a cost-cutting measure for the military. Instead, Pay 16 rebalanced existing investments in compensation to increase the effectiveness and efficiency of the pay system [13, 23].

When Pay 16 was implemented, the Ministry of Defence instituted a pay protection measure that would ensure that no servicemembers received a pay cut under the new plan [13, 23]. The pay protections initially were put in place for three years but subsequently were extended to six years. The measure helped assuage servicemembers who were concerned that their compensation might be reduced under Pay 16 [12]. In the long term, through-career pay under Pay 16 increased or remained broadly the same for two-thirds of servicemembers of other ranks (enlisted) relative to Pay 2000 [23]. A subject matter expert on compensation from the Ministry of Defence indicated that most servicemembers are satisfied with the compensation that they receive under Pay 16 [12].

Canada

Conversion to a salary system

The current Canadian military compensation structure was put in place during the late 1960s. Before 1966, Canada's military pay system was a pay and allowances system in which basic pay (the salary component) was based on a comparison of private-sector jobs with comparable military jobs. There were special pays for pilots, navigators, medical, dental, and legal officers. Allowances included a tax-advantaged subsistence allowance (only two-thirds of the total was taxable) that varied by rank, type of housing occupied, and marital status, and a separate "marriage allowance" of C\$30 per month (C\$40 for officers) for married members. Each of these components was pensionable—that is, parts of the base from which pension payments were calculated [5, 58].

In 1966, Canada began converting to the current compensation system for military members in which basic pay, the subsistence allowance, the marriage allowance, and some specialist pays were converted to salary. The reasons for this change included perceptions that the older pay system was inequitable because it paid married members more for the same level of work, and it treated those living in military-provided housing differently than those living in privately owned homes. The system was also thought to lack transparency because military members could not easily compare their pay to pay in the civilian sector [5, 58].

The conversion process occurred in two stages. In 1966, compensation elements under the older pay and allowances system were changed over to salary. This involved combining the marriage and subsistence allowances into a single pay, based on rank and time-in-rank, and instituting a system of charges for government-provided housing. The conversion of these pay elements to salary resulted in a 14 percent increase in compensation costs: about 3 percent related to the elimination of the difference between pay for single and married personnel, 1.4 percent owing to elimination of the tax advantage for the subsistence allowance, and about 10 percent attributable to a general pay increase. The second stage of the conversion process, establishing pay comparability between the military and the Canadian civil service, required further study and planning and was implemented in stages in 1970 and 1971. As part of this pay comparability planning process, it was determined that public service pay was, on average, about 22 percent higher than military pay, and this additional pay increase was incorporated into military members' pay in 1970 and 1971. By some accounts, these changes resulted in reduced administrative cost, although there is no exact figure for how large these savings may have been [5, 9, 48, 58].

The process of including skill-based "specialist" pay categories into the salary table was not completed until 1975 because of disagreements between the military and treasury officials on the right procedures for establishing pay comparability between specialist occupations in the military and in the Canadian public service. Although military planners had anticipated that

only a small percentage of servicemembers would receive higher specialist pay (perhaps 3 to 5 percent of members), by 1976 about 20 percent of members were receiving the higher pay levels, so the Canadian Armed Forces (CAF) were spending substantially more on specialist pay than had been forecast [5, 9, 48].

More recent changes: Compensating skill

Since the conversion to a salary system, there have been no major redesigns of the compensation structure. Instead, the system has evolved slowly, becoming more similar to that of the Canadian Public Service, as well as increasingly complex. The single set of compensation rules developed in the 1960s has grown over time to account for increasingly diverse requirements of military service, including a growing number of posting and deployment locations and greater family pressures [9].

One issue that has not successfully been dealt with is how best to compensate people with valuable technical skills. The “team concept” applied to Canadian military pay, in which most occupations of the same rank are paid the same amount, tends to flatten the pay structure with respect to skill, making it difficult to recruit and retain technically skilled personnel. Multiple attempts to modify Canadian military compensation to better compensate skilled personnel have been unsuccessful. In the 1970s, for example, CAF attempted to expand the number of pay fields from three (standard, specialist 1 and specialist 2) to five. This attempted reform resulted in great dissatisfaction among some personnel, and some groups refused to perform extra or even traditional work tasks. These issues became so divisive that the reform quickly was abandoned. In the late 1980s and early 1990s, an initiative to introduce a new pay scale that combined rank and skill-based pay increments was never implemented because policy-makers feared dissatisfaction among lower skilled personnel and were concerned about a potentially high implementation cost. The issue of compensating skill still is a problem. In recent years, it has become increasingly difficult to attract and retain technically proficient people at both the non-commissioned member (NCM) and general-service officer (GSO) levels. A partial response to this problem has been expanded use of recruitment allowances as bonuses [9, 48, 60].

Australia

Conversion to a salary system

Until 1971, military pay in Australia for other ranks (enlisted personnel) was based on a “group pay system” in which pay rates were based on comparisons between military jobs and civilian jobs with comparable functions and skills. When the system was initiated in the late 1950s, there were 7 pay groups; by 1971, the number of groups had expanded to more than 30. There was much dissatisfaction with this system, due to the proliferation of pay groups and a belief that the group pay system placed too much emphasis on occupations and technical skills with

civilian counterparts and undervalued personnel whose main skill was military (and thus hard to compare to private-sector jobs). There was also a lack of transparency—members did not fully understand what pay elements were included in their compensation, the relationship between military and civilian pay rates, and how annual pay adjustments were determined—as well as perceived inequities between single and married members [5, 58].

Between 1971 and 1973, the Australian military converted to a salary system for military members in two stages. In the first stage, completed in 1971, pay linkages were established with the Australian public service through a military job audit process that evaluated the work content of military duties for both officers and other ranks (enlisted). These job audits involved studies conducted by joint teams of management consultants and uniformed military members, using surveys and interviews to determine the nature and requirements of individual assignments. Salary scales were based on these audits, with military pay aligned to rates applying to comparable civilian-sector jobs. The second stage of the process, completed in 1973, converted pay elements under the older system into salary [5, 58].¹⁴

One estimate of the costs of this conversion process was about 15 percent of pay to achieve pay comparability with the public service in the first stage, and about 8 percent to convert the pay elements under the old system into salary in the second stage. In dollar terms, these costs have been estimated at \$A72.9 million (in 1970 terms), which would be equivalent to at least \$600 million (US) in 2017.¹⁵ Roughly half of this cost was attributed to the restructuring of pay and continuing allowances and the introduction of the service allowance (which compensates members for unique aspects of military service not accounted for in salary benchmarking), about 40 percent was attributed to the need for additional pay increases for other ranks (enlisted) to prevent individuals from receiving less pay under the new system, and the rest stemmed from the net costs of eliminating some allowances and establishing charges for housing and food (5 percent) and the costs of additional pay increases for junior member and trainees (about 7 percent) [5, 58].

More recent changes: Adopting a defined-contribution pension

The important recent change to the Australian military compensation system involves the move from a defined-benefit retirement system to the new defined-contribution “superannuation” system that was implemented in 2016. Because the US already has moved to its new Blended Retirement System, the history of the Australian reform is probably less relevant to the potential move to an SSS. Note, however, that the Australian military is having

¹⁴ Despite these changes the Australian military compensation system still includes substantial housing benefits for servicemembers, as well as a range of benefits that are tied to whether or not a member has dependents, as described in Appendix C.

¹⁵ We use the abbreviation “A\$” to refer to Australian dollars.

some of the same issues in its transition to superannuation as the US is having in its transition to BRS, including low take-up rates among incumbent members who were given a choice between the old and new retirement systems [14].

Conclusion

The 13th Quadrennial Review of Military Compensation is considering whether the US military should move from its current regular military compensation structure to a single-salary system that would eliminate BAH, eliminate BAS, and increase basic pay. In this study, we have focused on the following issues:

- What are the potential advantages and disadvantages to the US military of moving to an SSS in terms of pay transparency and equity, incentives and manpower outcomes, and cost?
- How might an SSS be designed to meet such objectives as equity and pay comparability, adequate recruiting and retention, and minimizing additional costs to the federal government?
- What are some important implementation challenges that DOD will face if it goes forward with an SSS for the military?

To provide insight into these questions, we conducted a literature review on the compensation preferences of servicemembers and civilians, a review of US civilian-sector compensation practices based on a literature review and SME interviews, and a review of foreign military compensation practices based on (a) interviews with foreign military compensation experts and (b) a review of policy documents provided by our foreign military points of contact. The information gathered through these reviews suggests three key implications that center on:

1. The need for compelling evidence to justify the change to an SSS
2. Alternatives to an SSS
3. Considerations in adopting an SSS

The need for compelling evidence

Challenges to redesigning the military compensation system highlighted in the preceding sections suggest that such a change should only be made if there is strong and compelling evidence that an SSS presents clear advantages. Our review of compensation preferences indicated that, in general, servicemembers are satisfied with the military compensation package as a whole, despite dissatisfaction with some aspects of the system [47, 54]. These findings suggest that compensation reforms aimed at particular areas of dissatisfaction might be more widely accepted by servicemembers (see the next subsection, “Alternatives to an SSS,” for examples).

In addition, some areas of dissatisfaction are not necessarily addressed by an SSS. For instance, such systems do not necessarily address special pay and incentives, which some servicemembers perceived as unfair. Similarly, an SSS does not inherently address the call for more performance-based incentives.

Another issue is cost—the potentially very large cost of transitioning to a new compensation system and the possible long-term budget effects of absorbing allowances and related tax advantages into servicemembers' salaries. As we have discussed, pay increases to offset the loss of allowances could negate any administrative cost savings once the new system is in place. Detailed analysis of such costs will be needed to illuminate how costs and benefits might balance out.

Experience with major compensation and benefits changes also reinforces the adage that “change is hard.” For instance, Canada's attempts to modify its military compensation system to better compensate skilled personnel have been unsuccessful because of dissatisfaction among key personnel, coupled with high implementation costs [9]. In addition, changes to military retirement benefits in both Australia and the US have seen relatively low take-up rates among incumbent members who are given a choice between the old and new systems [14]. This precedent, as well as research showing that employees tend to go with default options when given a choice, suggests a potentially long implementation timeline for a new compensation system if there are opt-out provisions for current servicemembers. Taken together, these challenges suggest that compelling evidence and sound justification for switching to an SSS should be established before making such a resource-intensive change.

Alternatives to an SSS

If it is determined that the costs and challenges of implementing an SSS outweigh the benefits, DOD might consider how to improve some of the more problematic aspects of the existing system without fully replacing it. We describe three possibilities:

- **Increasing transparency.** To ensure that servicemembers understand the total value of their compensation packages (including government contributions), more complete information might be provided through such means as annual personal benefit statements that include information on earnings, leave, benefits, tax-free and tax-deferred compensation, and retirement forecasts.
- **Alleviating equity concerns.** One of the largest equity issues focuses on the higher BAH provided to servicemembers with dependents, even when they do the same work as single servicemembers (thus violating the equal-pay-for-equal-work principle) [47]. DOD might consider how to modify BAH in ways that are not perceived as “anti-family,” while addressing the equity issue. One option would be to retain BAH but close

the gap between the amounts received by members with and without dependents in stages, over time, until the gap is eliminated. A second approach might be to consider adopting a version of the system of housing allowances for religious leaders. These allowances are built into ministers' salaries, with all or part of the allowance excluded from taxes [11]. While this system takes into account actual housing expenses—which are likely to vary based on family size—number of dependents is not the explicit basis for allowances. Such an approach may alleviate current BAH equity concerns.

- **Improving incentives.** To address concerns that military pay should be more closely related to a servicemember's performance, DOD might consider modifications of the existing compensation system, servicemember incentive preferences, as well as private-sector trends that may have appeal; for instance:
 - Increasing the importance of special and incentive pays that are linked to paygrade (such as SRBs) could provide additional performance incentives as faster promotions for strong performers would create a larger pay differential.
 - Given servicemembers' preference for nonmonetary incentives, such as duty station choices and guaranteed assignments, DOD might consider offering such incentives to servicemembers as a reward for strong performance.
 - Task-based compensation is an emerging trend in the private sector that may be worth a closer look. Such an approach might offer a way to incentivize servicemembers by giving them the opportunity to apply to perform particular or specialized tasks for a specified amount of compensation. Such an approach would require development of task-specific compensation packages for which qualified servicemembers could apply, with compensation awarded upon successful completion.

Important considerations if moving to an SSS

If it is determined that the benefits of an SSS outweigh the costs and challenges of making such a change, several considerations will be important in designing and transitioning to the new system. These considerations include understanding the pros and cons of the GS system, ensuring that the new system is viewed as fair, determining whether and how to structure opt-out provisions, and ensuring transparency and effective messaging. We describe these considerations below:

- **Pros and cons of the GS scale.** As discussed in our section on civilian compensation systems, the GS system could be a natural successor to the military compensation system for a number of reasons. Because DOD employs many GS employees, it is familiar with the system and has created a crosswalk that explicitly relates military

rank to GS grade. In addition, locality pay or situational allowances, such as the Living Quarters Allowance (LQA), could be used in place of the BAH, and special rates might provide a mechanism for filling high-demand, hard-to-fill occupations. Using the GS system as a model, however, may entail addressing some of its drawbacks, including excessive focus on compensating a person's position in the hierarchy, and insufficient focus on rewarding excellent performance and accommodating changes in pay needed due to changing labor market conditions.

- **Ensuring that system is viewed as fair.** Because salaries in a new system would be taxable, moving to an SSS would require measures to offset the loss of tax advantages. These kinds of tax advantages are rare in the civilian sector and in foreign military systems, so messaging this may help servicemembers appreciate the change. Other ways of managing the compensation loss include increasing salaries to offset the loss of tax advantages or building in pay protection measures similar to those used in the UK. If pay reductions are necessary for budgetary reasons, DOD might consider offsetting these reductions with nonmonetary incentives that are highly valued by servicemembers, such as choice of duty station, guaranteed duty assignment, or homesteading (remaining in the same geographic location for several tours).
- **Structuring opt-out provisions.** If DOD wishes to allow current servicemembers to choose the existing compensation system or the SSS, some consideration should be given to offering the SSS as the default option, given that research shows a bias toward selecting default options when given a choice. Such an approach might help with a more rapid transition to the new system.
- **Ensuring transparency and effective messaging.** The importance of transparency and messaging emerged repeatedly throughout our research, particularly in connection to making changes in compensation systems. Private-sector SMEs emphasized the importance of sharing a rationale that resonates with employees (i.e., how the new system is advantageous for them and for the organization). It also will be important to provide detailed information that makes clear the total compensation and incentives that servicemembers will receive under the new system, and how the new system compares with the old one. Leadership buy-in is a key element to effective messaging, and leaders should be well educated about the new system, its advantages, and messaging.

In conclusion, available evidence indicates that servicemembers are satisfied with the existing compensation package as a whole, although they believe that they deserve higher compensation and they dislike aspects of the system. Implementing a new system may incur high transition and long-term budget costs, and experience with changing compensation systems both in the US and in allied military systems indicates many challenges that often have resulted in failed attempts. Even so, compensation reforms have succeeded when challenges

are anticipated and effectively addressed, such as the UK's Pay 16 system. We have highlighted likely challenges and potential approaches to addressing those challenges either through improvements in the current compensation system or in the transition to an SSS. DOD will need to weigh all of these issues in making a decision about whether to implement an SSS.

Taken together, the reviews provide a rich set of information about compensation preferences and US federal civilian, private-sector, and foreign military compensation systems that can inform decisions about whether and how the US military might move to an SSS. This information is relevant to issues related to the design of an SSS, including the salary component, location adjustments, housing benefits, and other features of salary systems in civilian organizations and foreign militaries. This information also is relevant to assessing the desirability of DOD adopting an SSS, including potential effects on pay transparency and equity, incentives and manpower outcomes, and administrative and budgetary costs. Our reviews suggest some key implications for a move to a military SSS. First, there is a need for compelling evidence to justify a change to an SSS. Second, if DOD decides to go forward with an SSS, the following actions will be important:

- Assess the advantages and disadvantages of using the GS system as a model.
- Ensure that the new system is viewed as fair by servicemembers and their families.
- Determine to what extent military pay should be benchmarked to civilian pay for similar occupations.
- Determine whether an SSS should include a so-called military factor that explicitly compensates servicemembers for the unique demands of military service.
- Determine whether "cost containment" implies strict budget neutrality or would allow additional budgetary costs to be offset by additional tax revenues.
- Determine whether and how to structure opt-out provisions.
- Ensure transparency, effective messaging, and leadership buy-in in the transition to an SSS.

If DOD decides against moving to an SSS, alternative courses of action might include (a) increasing pay transparency by providing more complete information to servicemembers through such means as annual personal benefits statements that include information on earnings, leave, benefits, tax-deferred compensation, and retirement forecasts and/or (b) addressing equity and incentive issues through modifying the existing BAH system to eliminate disparities based on dependent status, increased emphasis on pay for performance, or nonmonetary forms of compensation.

Appendix A: Compensation Preferences

A central consideration in undertaking any type of compensation reform is that military personnel are likely to have specific preferences about *how* they are compensated. Transitioning to an SSS has the potential to affect how favorably servicemembers view their military compensation. This appendix is intended to provide a foundational understanding of individual compensation preferences for those serving in the military and those employed in the private sector. We describe findings from numerous sources, including previous CNA studies, sources archived in the Defense Technical Information Center (DTIC), academic databases (EBSCOHost, ProQuest, JSTOR, and LexisNexis Academic), and Google Scholar. Social science research demonstrates that people may prefer some forms of compensation over others, even if the value of each compensation type is held constant. Understanding these preferences is important to predict several consequences of an SSS, especially implications for servicemember retention.

This appendix summarizes relevant military research, including how preferences for and the relative value of different types of compensation vary by servicemembers' military service and demographic characteristics. The rest of the appendix synthesizes the academic research on civilian employees' compensation preferences, drawing from labor economics, human resource management, psychology, and organizational sciences. The appendix concludes with a summary of research related to behavioral biases toward default compensation options; this summary focuses on automatic enrollment in retirement savings accounts.

The research covered in this review is intentionally broad and captures several forms of compensation that would not directly be part of any SSS (e.g., bonuses). We cast a wide net because our goal is to provide a comprehensive description of people's compensation preferences and how those preferences affect decision-making. Put simply, the findings documented below collectively provide key insights into how servicemembers might respond to *any* change in their compensation's structure.

The most important conclusions of this review include the following:

- **Transparency.** The current US military compensation system lacks transparency; servicemembers tend to be uncertain about the structure of their compensation, especially the value of the tax advantage (resulting from the nontaxability of BAH and BAS) and the amount that DOD contributes to benefits, such as health care and retirement. There is also some evidence that younger workers in the civilian sector especially value transparency in compensation.

- **Pay equity and incentives.** There is some support, including among some servicemembers, for the principle of equal pay for equal work:
 - Senior enlisted personnel express dissatisfaction with their base pay relative to that of junior officers, who are often less experienced than the enlisted personnel and rely on enlisted personnel for training.
 - There is also some sentiment among servicemembers (although not universal) for a compensation system in which dependent status plays less of a role—that is, for single members to receive the same level of BAH as do members with dependents.
 - Among civilians, there is some support for allocating a “moderate” level of pay to performance-based components.
- **Cash versus noncash compensation.** Some servicemembers express a preference for cash over noncash compensation, but there are also concerns among servicemembers that increases in cash compensation are actually disguised pay cuts.
- **Nonmonetary forms of compensation.** There is some evidence to support an increase in nonmonetary forms of compensation involving greater choice and flexibility in work locations and career paths among servicemembers.
- **Demographic differences.** Preferences for different types of compensation can vary significantly based on people’s demographic and other personal characteristics, including age, gender, education level, and rank. This fact will make it difficult to design a compensation system that will satisfy all servicemembers.

Studies on servicemembers’ compensation preferences

Servicemembers’ preferences for different compensation types can provide insight into how they would respond to the implementation of an SSS. Analysts at CNA and other research organizations have conducted surveys and focus groups to understand the relative value that servicemembers place on different compensation types. These studies find that compensation preferences vary by servicemembers’ characteristics, including age and officer or enlisted rank.¹⁶

In designing any type of compensation reform, it also will be important to understand how demographics affect compensation preferences because the military is not composed of a

¹⁶ In addition, one CNA study focused on whether certain compensation approaches are more attractive to reservists and more likely to incentivize their reserve reenlistment [61].

random selection of the population. For example, compared with the overall civilian population, it is disproportionately younger and male. An understanding of demographic differences in compensation preferences can help policy-makers to predict how different groups of servicemembers may respond to the implementation of an SSS (e.g., predict who will opt in to a reformed SSS under a grandfathering clause) or to better understand how to target segments of the population (e.g., women) for increased recruitment or retention.

Servicemembers' preferences for cash and nonmonetary incentives

In 2005, the Government Accountability Office (GAO) conducted an in-depth study on servicemembers' perceptions of the military compensation system, including their satisfaction level and any recommended changes [54]. The study's authors reviewed DOD's Status of Force Survey data on satisfaction with compensation. In addition, they conducted 40 focus groups with 400 servicemembers at eight US military installations. Respondents represented all four service branches and both enlisted and officer paygrades. While the focus groups were not representative of the entire military, they provided additional details and context that would not have been available in the survey results alone.

Preferences for cash benefits

Servicemembers often were dissatisfied with specific compensation components. In 35 of 40 focus groups, respondents indicated a preference for cash benefits; they would be willing to accept lower amounts of noncash benefits to receive additional cash subsidies. For example, servicemembers would rather receive a cash subsidy for shopping at offbase stores than discounts at commissaries or exchanges. Other respondents said that they would prefer cash subsidies or a cafeteria allowance for health care, because of limited provider choices. Finally, some servicemembers who did not intend to stay in the military long enough to earn their retirement benefits (20 years) wanted a cash subsidy that they could invest toward retirement.¹⁷

Preferences for current versus deferred pay

Similarly, other studies find that servicemembers prefer *current* pay to *deferred* pay, which often is in the form of retirement benefits. Ausink and Wise (1996) studied the effects of compensation changes on Air Force pilots' decisions to leave the military, with specific attention paid to the two incentive programs offered in 1992: the Voluntary Separation

¹⁷ The new Blended Retirement System (BRS) addresses this issue. The BRS combines the military's traditional defined-benefit retirement plan with a defined-contribution plan (similar to civilian 401(k) plans). Under the BRS, fully vested personnel who leave before 20 YOS will receive all of the contributions (both the individual servicemember's and DOD's) from the defined-contribution portion of the plan.

Incentive (VSI) and the Special Separation Benefit (SSB) [62]. While the former provided annual payments that lasted for two times the servicemembers' years of service, the latter was a one-time, lump-sum payment. Both amounts were a function of base pay and years of service. Although the present value of SSB was much less than the present value of VSI, initial applications to leave the Air Force under one of those two programs revealed a large preference for SSB, suggesting a preference for the current, lump-sum payment as opposed to future, annuity payments [62].

Warner and Pleeter (2001) studied the same VSI/SSB decision in the Army, Air Force, and Navy, noting evidence of particularly high personal discount rates (meaning future income is *discounted* as compared to current income) among their sample of military separablees [63].¹⁸ Although DOD predicted that roughly half of the enlisted population and no officers would take the lump-sum option (SSB), over half of officers and 90 percent of enlisted opted for it (implying an enlisted discount rate of at least 18 percent) [63]. The authors note that military compensation is, in general, more heavily deferred than private-sector compensation, in part because the retirement plan (at the time, before BRS) vested servicemembers only after 20 years in the military [63]. As a result, retention rates should differ by an individual's preference for current versus deferred pay. The military system is more attractive, in the long run, to those with lower personal discount rates; those who stay and ultimately earn a military retirement should have lower discount rates (i.e., a preference for deferred pay), while those who separate will have higher discount rates (a preference for current pay) [63]. The extent to which the adoption of the BRS will change these retention behaviors remains to be seen.

These preferences provide preliminary evidence that servicemembers might support an SSS that increases cash compensation received. However, according to the GAO study, some servicemembers had reservations about replacing noncash incentives with cash. In 16 of 20 focus groups, participants were concerned that new cash subsidies might be lower in value than current noncash or deferred benefits. These results indicate that servicemembers might be less accepting of an SSS if it lowered the total value of compensation received. More experienced military members indicated that more cash compensation might not be in the best interest of younger servicemembers, who (older members worry) might not be responsible in their personal finances [54].

Preferences for current versus deferred pay by servicemember characteristics

There also is literature highlighting demographic and situational differences in personal discount rates. Asch and Warner (1994), for example, note that young people are known to

¹⁸ The Marine Corps was excluded from the analysis because the authors were unable to reconstruct VSI and SSB eligibility.

have high personal discount rates and, in fact, value deferred compensation at a lower rate than it costs the government to *pay* deferred compensation, suggesting it might be most effective for the services to reduce retirement pay and instead increase active pay to their youngest members [59]. In a similar vein, Asch and coauthors indicate in more recent work that personal discount rates are expected to be lower for those with more education, perhaps suggesting that young servicemembers' preference for current over future compensation may be a misinformed preference [64]. Warner and Pleeter, similarly, find noticeable differences in enlisted/officer personal discount rates: they range between 10.4 and 18.7 for officers, and between 35.4 and 53.6 for enlisted [63]. Finally, Simon, Warner, and Pleeter (2014) also have found measurably lower discount rates (and thus greater patience) among those who are more cognitively adept, such as doctors [65]. There also is evidence that personal discount rates vary across the services. Asch et al. report a personal discount rate of 14.9 percent for the Army, 9.9 percent for the Navy, 13.6 percent for the Air Force, and 17.6 percent for the Marine Corps, though it is not clear whether these discount rates are for officers, enlisted, or both combined [64]. Of course, these service-level discount-rate differences could be related to demographic differences across the services.

Pay preferences and the impact of incentives have been found to vary not only with servicemember characteristics but also with the situation in which they find themselves. For example, Mehay and Hogan (1998), in their study of VSI/SSB decisions made by enlisted Navy and Air Force personnel, noted that voluntary quit rates increased notably at times when uncertainty regarding service layoffs was high—that is, an increase in future uncertainty led servicemembers to opt for the more guaranteed, immediate cash option [66]. Asch and Warner highlight the importance of properly designing incentives to get the desired behavior; specifically, they ask whether the current system induces the most qualified personnel to stay and seek promotion [59]. Because of the pyramid nature of the military promotion system, in which future leaders are grown from the entry pools, it is especially important that those who have reached their terminal grade are incentivized to keep contributing and revealing their full potential, even though there are no further promotions available to them [59]. For these reasons, careful and effective management of servicemembers' compensation is important, at all levels, and it may be difficult to construct a one-size-fits-all compensation package.

A 2005 CNA study showed that older servicemembers place more value on retirement benefits (deferred compensation) than do younger members. The report noted that, while few people join the military to secure retirement benefits (in fact, the value that younger servicemembers attribute to retirement benefits is less than the government's cost to provide them), retirement and retirement health care are extremely important to older servicemembers. Active component servicemembers with at least 10 years of experience indicate that retirement benefits are (or, in the pre-BRS era, have been) a primary reason to continue to serve until 20 years of service. In fact, very few servicemembers have left as they approached retirement

eligibility. Servicemembers have been much more likely to leave after 20 years of service because they earn only marginal increases in retirement benefits after that point. Again, the degree to which BRS will change these behaviors is still to be determined. The study's results indicate that older servicemembers have a strong preference for compensation approaches that would increase or maintain the value of their retirement benefits [30].

Preferences for nonmonetary compensation

Other studies have focused on servicemembers' preferences for nonmonetary incentives. Even though these benefits are not direct compensation, information on servicemembers' relative preferences for nonmonetary rewards could inform how they respond to an SSS. In addition, as discussed in the 7th QRMC, the implementation of an SSS may not be revenue neutral. To fully monetize the tax benefits that servicemembers currently receive, DOD would need to increase its investment in personnel [3]. If there is insufficient budgetary capacity or political will to do so, many servicemembers likely would receive lower monetary compensation under an SSS. If servicemembers prioritize nonmonetary incentives, however, the military might be able to compensate for lower overall salaries under an SSS by offering additional nonmonetary incentives.

To what extent should the military's compensation structure emphasize cash versus nonmonetary forms of compensation? As was discussed in a 2004 Congressional Budget Office (CBO) Issue Brief, arguments can be made for either a more cash-based or less cash-based compensation structure. For purposes of both recruiting and retention, it is critical that DOD offer compensation packages that are not only competitive with the civilian sector but also reward servicemembers for the extra risks and rigors that are part of military life [31]. In this vein, noncash benefits are a stable form of compensation that ensures good quality of life for younger servicemembers—thus not only attracting high-quality recruits but also encouraging those with valuable experience to stay in service—and it does so at a lower cost via the discounts provided to the military from benefits such as group health insurance [31]. Noncash benefits also promote readiness. For example, servicemembers feel that their families are well provided for because of such benefits as subsidized physical fitness centers and family support programs [31].

However, after considering that installation-based benefits are the second-largest noncash component of military compensation after health care and that today's military is much more expeditionary and less garrison based than when these programs were developed, there are certainly arguments to be made for a more cash-based compensation package as well [31]. Specifically, today's servicemembers are deploying overseas *without* their families and for shorter periods, making many of the family- and installation-based noncash benefits less necessary [31]. There is less value from subsidized housing, shopping, schools, and child care, among other noncash benefits, if families are not living on base. Most active-component and

reserve servicemembers who are *not* living on base may prefer benefits that are not tied to a specific geographic location [31]. Increasing the cash percentage of military compensation would give servicemembers more choice in how to spend their compensation based on their individual needs and could be targeted to those who are most productive or possess critical skills, making it less costly to DOD [31]. In addition, cash's value is likely more recognizable by potential recruits and those making reenlistment decisions, perhaps providing a less costly and more effective avenue for meeting recruiting and retention needs [31].

With respect to nonmonetary incentives, earlier CNA research supports the finding that such incentives are important to servicemembers. In late 2006 and early 2007, CNA conducted a series of focus groups with 743 Marines that included questions about the monetary and nonmonetary reenlistment incentives that were important to respondents. Participants indicated that they highly valued tax-free income; they tended to overestimate the tax-free value of Selective Reenlistment Bonuses (SRBs) received when reenlisting in theater. In addition, focus group results indicated that Marines placed value on duty station choice, either to start a family or maintain family stability. Heavily deployed respondents were interested in base and station billets. The study recommended, based on focus group results, that the Marine Corps offer 15 to 30 days of Permissive Temporary Additional Duty (time off to assist with transitions to a new duty station) as a reenlistment incentive (or a number of days dependent on commitment length) [32].

In 2003, CNA administered the Navy Survey on Reenlistment and Quality of Service to understand how sailors weigh monetary and non-pay-related incentives in their reenlistment decisions. The results indicated that nonsalary incentives are important to sailors. Sailors valued guaranteed location preference as equivalent to a 5.7 percent increase in pay. A guaranteed duty assignment was equivalent to a 4.3 percent increase in pay. Respondents rated a larger employer contribution (7 percent, or a 2 percent increase over the status quo) to the federal Thrift Savings Plan as equivalent to a 2.8 percent increase in basic pay. This reenlistment effect is larger than the benefit's actual value [33]. Given that sailors place relatively high equivalent cash values on nonmonetary incentives, there is evidence that the military might be able to compensate for lower salaries under an SSS by offering additional nonmonetary incentives, although perhaps at the cost of greater administrative complexity. Based on the studies described above, servicemembers prefer guaranteed duty assignment and location. The military might consider offering these benefits to the extent that it is feasible, recognizing that not all military personnel will receive their preferred location or assignment.

More recently, CNA reviewed the literature on incentive programs designed to increase Navy manning in sea duty billets. Like the earlier studies, the report emphasizes the importance of nonmonetary incentives. Sailors place high value on homesteading, which allows them to remain in the same geographic location for several tours. Homesteading is especially popular with senior sailors and those with families. Research indicates that sailors are more likely to

reenlist and serve additional sea time to take advantage of homesteading [34]. A 2008 CNA study estimated the range of monetary value that sailors placed on geographic stability, estimating a range of \$4,400 to \$15,700 (in 2008 dollars), depending on the rating, the location, and the length of sea duty [35].

Preferences for nonmonetary incentives by servicemember characteristics

Prior scholarly research indicates that servicemembers value nonmonetary incentives, but that different individuals often value them differently. Researchers from the Naval Postgraduate School examined the relative importance that sailors place on different types of nonmonetary benefits and found that preferences vary widely [67]. The authors surveyed Naval Surface Warfare Officers and members of two enlisted communities (air traffic controllers and fire controlmen). The survey asked respondents to indicate the reenlistment or retention bonus they would require to continue in the Navy and then asked how much of this bonus they would sacrifice to receive a particular nonmonetary incentive. Overall, the authors found three major sources of variability in the responses: (1) variability between officers and enlisted personnel, (2) variability within populations of officers or enlisted, and (3) variability when different nonmonetary incentives were offered in combination. That is, some servicemembers value some combinations of nonmonetary incentives more than the sum of the value that they place on an individual nonmonetary incentive.

Given the high levels of variability across these dimensions, it was difficult to identify specific nonmonetary incentives that had value for even half of the respondents. Nonetheless, preference patterns did emerge. On average, officers placed the highest value on geographic stability, followed by the ability to telecommute and the possibility of a one-year paid sabbatical. Meanwhile, enlisted personnel placed the highest value on homeport of choice, followed by telecommuting and the ability to choose their assigned billets. The average dollar amount assigned to each nonmonetary incentive was higher for officers, but that was mainly a reflection of the larger average retention bonus that they reported they would require. Enlisted, however, placed cash values on nonmonetary incentives that were a larger percentage of their projected retention bonuses compared with officers. These averages, however, mask variation in values across those within the enlisted and officer communities.

A 2005 CNA study found that young, potential recruits consistently mention additional training as a highly attractive piece of the compensation package. According to the results of the Youth Attitude Tracking Study Survey cited in the report, approximately one-third of young people who said that they were likely to consider joining the military cited additional training as a primary reason. In addition, one-third cited education benefits as an incentive to enlist in the military (this percentage rose to about half when a similar survey was conducted in 2017) [30, 68]. Those who actually enlist express similar preferences. For example, Marine recruits are

likely to indicate training as an important factor in their decisions to enlist [30]. If education and training benefits are a high priority for young recruits and prospective recruits, it is possible that they would join regardless of an SSS.

The takeaway from this research is that servicemembers' preferences for nonmonetary incentives are extremely diverse. Thus, it would be difficult to develop nonmonetary benefit packages in conjunction with an SSS that included incentives that would be of value to a majority of servicemembers. The authors of the Naval Postgraduate School study conclude that DOD could reduce the cost of military compensation by incorporating additional nonmonetary incentives into the compensation package, but it would need to individualize compensation packages to accommodate servicemembers' diverse preferences.

Perceptions about current military compensation

The 2005 GAO study provided additional context for servicemembers' compensation preferences by documenting their perceptions and levels of satisfaction with current military compensation. A large percentage of servicemembers were dissatisfied with one or more aspects of their compensation package, such as basic pay, BAH, or BAS. Like the Naval Postgraduate School study, the GAO study disaggregated results based on whether respondents were officers or enlisted.

In more than half of the 40 focus groups, servicemembers cited at least one of these compensation components as contributing to their levels of dissatisfaction with the entire compensation package. In eight focus groups, respondents indicated that they wanted single servicemembers to receive the same BAH as those with dependents. Overall, officers were more satisfied than enlisted servicemembers with their basic pay. Participants in six of the eight focus groups with senior enlisted personnel indicated that they were dissatisfied with their base pay, especially compared with junior officers, who have less experience and often rely on enlisted personnel for on-the-job training. With respect to the total compensation package, different studies come to somewhat different conclusions about servicemember perceptions. For example, while GAO study respondents often were dissatisfied with specific compensation components, many expressed satisfaction with the total compensation package. According to results from the 2003 and 2004 Status of Forces Surveys, however, less than half of servicemembers were satisfied with their overall compensation levels, although in more recent surveys the percentage of servicemembers who report being satisfied with their overall compensation has increased to 55 to 60 percent [47].

The GAO focus groups also documented that servicemembers were confused about the structure of their compensation packages and held misconceptions about the compensation received. Servicemembers consistently underestimated the value of their total compensation packages relative to those available in the private sector. In fact, nearly 80 percent of focus

group participants thought that they could earn more in the private sector. In reality, their compensation packages often were competitive with those in the private sector. These servicemembers likely did not take into account how the tax-free status of allowances increases their real income. Focus group participants also were likely to underestimate DOD spending on their compensation packages, including pay, health care, and retirement. These findings underscore the discussion in the 7th QMRC that RMC is not transparent to those who receive it. Moving to an SSS would allow servicemembers to more accurately compare the total compensation that they receive with the pay that they would receive as a civilian. Focus group participants also expressed concern that their benefits were decreasing, despite DOD efforts in these years to enhance military benefits [54].

Studies on civilian compensation preferences

Because the military recruits from the broader civilian population, and competes with civilian-sector employers in retaining servicemembers, an understanding of civilian compensation preferences should inform the design of military compensation policies. Overall, the literature on civilian employees' compensation preferences is limited. Only one survey, conducted by the Corporate Executive Board (CEB) in 2014, is representative of US employees. The sample size for most studies is small (i.e., less than 200) and specific to particular contexts that are not generalizable to other groups of employees. In addition, the results are largely based on self-reported surveys. Since the findings reflect intended rather than actual behavior, they may not be reliable. Finally, a small number of studies, usually one or two, support each research conclusion. Although there is not conflicting evidence in the literature, it is unknown whether additional research would yield the same findings.

It is not surprising that the limited literature on general compensation preferences indicates that pay is the most important factor in determining whether a prospective employee applies for a job. However, the recent CEB study found that employees tend to place more emphasis on nontraditional benefits, including those that contribute to their work-life balance, than in the past. In general, the literature finds that employees are receptive to devoting at least some portion of their compensation to individual performance-based pay, which they are more receptive to than team-level performance pay. As with military studies, the academic literature indicates that employees' compensation preferences vary by their demographic characteristics. The academic literature also indicates that preferences vary by personality traits.

General civilian compensation preferences

CEB regularly collects trend data on reward preferences—traditional rewards (e.g., salary, health care, and retirement benefits) as well as nontraditional ones (rewards and recognition,

wellness benefits, and work-life balance benefits, such as flexible schedules). The most recent survey in 2014 found that US employees' preferences regarding benefits changed relative to the previous survey in 2011. The importance that employees place on some traditional benefits (e.g., advancement and promotion potential, base pay equity, health-care benefits, and retirement benefits) all decreased in relative importance. Nontraditional benefits, however, increased in relative importance, including work-life balance benefits (flexible scheduling, transportation subsidies, and paid time off) and family-related benefits (paternal leave, adoption leave, and child-care benefits). The survey authors recommend that employers consider their competitiveness in offering these types of benefits. Note that the data show that the value for many of these offerings comes from employers providing them at all, rather than providing them in a way that is competitive with other employers.

A second CEB survey finding is that US employees place greater value on rewards that are available immediately, as opposed to delayed benefits (such as promotion potential), and rewards that are less variable. For example, respondents placed greater value on a 5 percent bonus that has a 50 percent payout probability than on a 10 percent bonus that has only a 25 percent payout probability. The study authors speculated that workers still were recovering from the Great Recession. They also may anticipate changing jobs frequently and, therefore, be less interested in long-term payouts [36].

Cable and Judge investigated the degree to which pay preferences influenced college students' decisions to apply for jobs and the types of compensation systems that applicants generally prefer [69]. The study included several hypotheses related to the types of pay systems that applicants would prefer:

- Applicants will be more attracted to organizations that offer higher pay.
- Job seekers will prefer organizations that offer flexible benefit plans, which allow employees to choose the benefits that are most useful to them.
- Prospective employees will prefer jobs that set compensation levels based on individual, rather than group or team, performance.
- Job seekers will prefer pay levels that are fixed, as opposed to contingent on work outcomes, such as output or sales.
- Applicants will prefer compensation levels that are based on their job descriptions to skill-based pay systems that reward employees for developing new skills. The authors grounded this hypothesis in prior literature that employees tend to perceive skill-based pay systems as more uncertain than job-based compensation.

The study subjects included 171 college students who were looking for permanent, full-time jobs. The researchers presented them with a series of potential jobs, including information about their compensation levels and structures. Participants rated their likelihood of applying for a job, along with which compensation factors were important to their decisions. The results

generally supported the hypotheses. As a group, job seekers were likely to report that they would apply for positions with high pay levels, pay based on individual performance, fixed rather than contingent pay, and compensation based on job duties. Overall, pay level was the most important variable in determining whether students would apply for a job. However, when pay levels were equal, the other attributes had effects on job search decisions.

Preferences for performance-based pay

In general, the academic literature indicates that workers support allocating at least some portion of their compensation to variable, performance-based pay systems [70]. For example, a study surveyed bank employees in four countries to determine employees' preferences for pay. Across cultures, employees ranked performance as the most important criterion for determining pay level, followed by human capital (defined as skills and education) and job duties [71]. A 2006 survey of 195 US college students asked them to rank their preference for compensation packages with different proportions of performance-based pay. Participants ranked the compensation packages with relatively small amounts of performance-based pay as significantly preferable to a package with no performance-based pay and options with high percentages of performance-based pay. Although respondents did not prefer that a high percentage of their salaries be based on performance, they indicated that they would prefer at least some portion of their salaries to be contingent on how well they executed their job duties [21]. Given that civilian employees are generally supportive of at least some component of their pay being based on performance, it is possible that servicemembers would be similarly supportive if an SSS incorporated a merit-based pay component.

Demographic differences in civilian compensation preferences

Several studies have examined whether demographic characteristics affect civilian employees' pay preferences. As previously discussed, understanding how demographic characteristics affect pay could potentially inform how individuals from different groups could respond to any transition to an SSS. Variations in preferences by demographics also will likely inform whether specific groups of individuals choose to be grandfathered into the current salary system or transition to an SSS, if given a choice. Some scholars have examined preference differences related to gender or age. Tocher, Feild, and Giles surveyed nearly 200 college students who were looking for jobs to determine which compensation and benefits items were most important to them [21]. They also examined whether these preferences varied by gender. Consistent with prior research, the study found that participants preferred salary- and security-related benefits (such as retirement benefits, health benefits, or the opportunity to buy stock options at a reduced rate) relative to time-related (e.g., paid time off) and family-related benefits (e.g., child-care subsidies). The authors note that these preferences likely shift as workers get older and are more likely to have greater family responsibilities.

In terms of gender, the authors found that men were more likely to prefer compensation packages with a performance component, while women were more likely to prefer compensation packages without one. These findings are consistent with prior literature that focused on more experienced workers and found that women tend to be more satisfied with pay systems that do not tie portions of their salaries to incentive pay [21]. In addition, other recent research has confirmed that men tend to prefer performance-based pay more than women do and that women are more likely to prefer seniority-based pay [20].

Other studies have examined how compensation preferences vary by age. Scott et al. conducted a seven-country survey on pay preferences [20]. While the study examined correlations between a number of employee characteristics and compensation preferences, there were several key findings on age differences. First, older respondents have a stronger preference for variable, nonguaranteed pay than younger workers do. In addition, younger workers sought more transparency than older workers in how compensation was awarded. The authors speculated that younger workers might be more willing to share such information and, thus, expected that it would be shared with them. If pay transparency also is a priority for more junior servicemembers, it is possible that this preference would make an SSS attractive relative to the current RMC approach. An SSS would make it easier for younger military personnel to accurately calculate their total compensation and compare it to what they would earn as a civilian employee. The study also examined pay preference differences by nationality. Of interest, workers in the United States had among the lowest preferences for pay transparency, yet they had among the highest preference for pay variability based on individual or group performance. The authors do not speculate about specific reasons for these results but state that country-specific results are likely grounded in culture, labor laws, and employment history [20].

Hallock and Olson examined detailed data from a company that provided an unusual choice to its employees related to salary allocation [72]. At the start of each year, the firm gave every employee nearly complete choice to allocate the percentages of pay that would be guaranteed (salary) and contingent (stock options and bonuses). The authors found substantial variation in the amount allocated to guaranteed versus uncertain pay, with some choosing to allocate nearly all of their compensation to one option or the other. In general, however, the employees allocated most of their pay packages to guaranteed salaries, an average of 83 percent of the total pay package. The researchers found that younger workers, more experienced employees, higher paid employees, and male employees were more likely to allocate large fractions of their compensation to the risk-dependent options. Although these results may be less directly relevant to the SSS (because servicemembers may not have a choice of allocating a certain percentage of their salary to pay contingent upon risk), if the military were to consider a contingent or risk-based component in its salary system, it is important to acknowledge that some groups may be more receptive to such a change than others.

Personality traits and compensation preferences

The study by Cable and Judge also included several hypotheses focused on how job seekers' dispositions affect their likelihood to apply for specific jobs [69]. First, the authors hypothesized that job seekers who were more materialistic would prefer higher salaries than those who were not. Second, they proposed that job seekers with stronger internal loci of control (that is, an individual's belief that he or she can influence events and outcomes that affect him or her) would be more attracted to flexible benefit plans, which allow employees to select the benefits that are most useful to them. Third, they hypothesized that job seekers who are highly individualistic in nature (e.g., those who prefer to work alone and place value on autonomy and privacy) would be more likely to prefer individual-based pay. Those who were collective in nature (e.g., those who derive satisfaction from group accomplishment and believe that individuals should make sacrifices for the group) would be less likely to prefer individual-based pay. Finally, they hypothesized that workers with high self-efficacy (belief in one's ability to accomplish a task) would be attracted to performance-based, contingent and skill-based pay systems.

The results supported most of these hypotheses. However, the authors found that prospective workers with high levels of self-efficacy did not prefer contingent pay systems more than those with low self-efficacy. Workers with internal loci of control also were not more attracted to contingent pay systems than those with external loci of control. Although it was not a study hypothesis, the research findings revealed that risk-averse people placed less emphasis on pay in their job search processes. Other studies also have confirmed that personality traits affect whether a person prefers fixed or contingent, performance-based pay. Dohmen and Falk found that those who assessed their work quality as high relative to others and those who were less risk averse (that is, more willing to accept uncertainty or variability in pay) were more likely to prefer contingent, performance-based pay systems [73]. A third study found a correlation between intrinsic motivation and a preference for merit pay [74].

Bias toward default options

Another issue to consider when designing compensation structures is that people have a documented tendency to accept options that they are offered automatically (i.e., default options), even when they are free to choose from a menu of alternatives. This bias toward default options could play a role in an SSS if a "grandfathering" policy is enacted that allows current servicemembers a choice of whether to switch to the new system. If current servicemembers are grandfathered into the existing RMC system as the default option, they may be less likely to choose to transition to an SSS compared with an alternative design in which the SSS was the default option. In addition, there are other forms of military compensation that incorporate default options dependent on basic pay. If the default options

stay the same under an SSS, it will likely have cost ramifications for the military because the salaries on which they are based will be higher.

Unfortunately, little of the literature on default options focuses on salary/wage structures. Instead, the most relevant literature in this area examines automatic enrollment in retirement savings plans and the default structures of those plans. A robust body of literature indicates that establishing automatic enrollment as the default option greatly increases participation rates in savings plans [75] [38]. In addition to increasing overall participation rates, default options are especially effective at increasing participation among employees who are least likely to participate in retirement savings plans, including young workers, those with short tenures, lower paid workers, and African-American and Hispanic employees [43] [42]. Related literature documents the following:

- Employees also are biased toward default saving rate and investment vehicle options. If the default contribution rate is higher, people tend to save more [75] [38] [46]. Default options in retirement savings plans also can influence how a retiree receives payouts [39].
- “Active enrollment” policies, in which employees are required to make an election about whether to participate, also have been shown to increase plan participation and savings rates in some studies [40].
- “Elective defaults,” which provide employees with efficient ways to sign up for participation or allow them to select future default levels for investments, have been associated with higher participation and savings rates [41].

The research literature has documented several potential reasons why employees might be biased toward default options. First, people may choose to invest at default levels because they perceive the default to be a corporate endorsement and, therefore, in their best interests [75] [42]. Other reasons for choosing the default option include procrastination and the need for cognitive closure (that is, the desire to make a decision) [44]. Another study found that those with lower levels of financial knowledge were more likely to remain with the default option than those with higher levels of financial knowledge [45].

Conclusion: Compensation preferences

Through the 13th QRMC, DOD is considering whether the current military compensation system—composed of basic pay, BAH, and BAS—remains the most effective approach or whether an alternate compensation structure, such as an SSS, would be preferable. In support of this effort, this appendix provides an overview of the academic literature and military manpower literature on compensation preferences.

Overall, the military and academic literature on compensation strategies is quite limited. Only one military-specific study, conducted by GAO, asked respondents to indicate changes that they would make to the current compensation system. Participants expressed a preference for cash compensation, and many were willing to forgo noncash benefits for additional cash. These results suggest that military servicemembers might support higher compensation through an SSS, although DOD should not draw conclusions from a single study. Other military-specific studies focused on which compensation and benefit components were most important to servicemembers. Researchers found that these preferences tended to vary by servicemembers' characteristics, including age and officer or enlisted status, although several studies indicated that geographic choice and stability are important to servicemembers.

Because DOD is considering changing the default options for compensation, the review also summarized the literature on biases toward default options in the context of retirement savings plans. The literature consistently indicates that automatic enrollment in a retirement savings plan increases the percentage of employees who participate. In addition, default savings contribution rates and asset allocations incentivize employees to participate in the plans at those levels. In general, this body of literature indicates a strong behavioral bias toward electing the default option.

It is difficult to draw strong conclusions from the academic literature owing to its limitations. Overall, there are few studies that focus on employees' compensation preferences. The extant research focuses on different aspects of compensation and benefit preferences. Therefore, a limited number of studies support each research conclusion. In addition, the body of related research suffers from validity concerns, largely that samples are small and drawn from specific contexts that are not generalizable to the broader civilian workforce. Nevertheless, it is possible to draw limited conclusions. Like the military research, the academic literature concludes that compensation- and benefit-related preferences vary both by demographic characteristics, such as gender and age, and by personality characteristics. Overall, this review underscores the need for additional research on how military servicemembers value different compensation structures.

Despite these limitations, it is possible to draw some at least provisional conclusions from this literature on some of the transparency, equity, and incentive issues that have been at the center of the debate about a transition to an SSS for several decades.

Transparency

The literature reviewed here, especially the GAO study, confirms previous notions that servicemembers tend to be confused about the structure of their compensation (especially the tax advantage and the amount that DOD contributes to benefits, such as health care and retirement), and they consistently underestimate both the level and trend of the compensation

they receive relative to what they believe they could receive in the private sector. Such misperceptions clearly could be having negative effects on retention. There also is some evidence that younger workers especially value transparency in the awarding of compensation.

Equity

This literature on compensation preferences also has some important implications for individual perceptions of equity with respect to a move to an SSS. The GAO report, for example, finds a servicemember's preference for cash over noncash compensation with some reservations, especially concerns that overall compensation might be reduced as a result of a change to increased cash compensation. There also is evidence that some servicemembers prefer compensation packages in which dependent status plays less of a determining role (specifically, sentiment for single members to receive the same BAH as those with dependents). Both of these results suggest that a move to an SSS, if managed carefully (especially to avoid perceptions that pay is being cut), could increase the satisfaction of many servicemembers with their compensation.

Incentives

There is some support for the principle of equal pay for equal work in this literature. In the military literature, for example, senior enlisted personnel express dissatisfaction with their levels of base pay relative to that of junior officers because those officers often are less experienced than, and often rely on, enlisted personnel for on-the-job training. In the broader literature on compensation preferences, there is some evidence that employees value performance highly as a criterion for pay-setting and tend to support allocating at least part of their pay to performance-based pay (that varies with employee performance). US college students expressed a preference for pay packages with small amounts of performance pay to both those with none and those with high percentages of performance-based pay. Although there is no guarantee that an SSS will include explicit pay-for-performance features, these results provisionally suggest that a carefully managed move to an SSS could increase member satisfaction with their pay by more closely linking that pay to the amount of work done.

Emerging issues

The literature reviewed here raises some additional issues that may have been less strongly emphasized in previous reports.

Demographic differences in compensation preferences

One such issue is that preferences for different types of compensation can differ based on a person's demographic characteristics. Younger, less experienced employees tend to value compensation, security-related benefits, and nonfinancial rewards, such as managerial recognition. Younger servicemembers also highly value opportunities for training and education. Older, more experienced workers have shown preferences for financial rewards involving more incentive-based (variable, nonguaranteed) pay, and a greater emphasis on time- and family-related benefits and deferred compensation (including retirement benefits).

There also can be differences in compensation preferences by gender. For example, our review found some evidence that college-educated women entering the labor force may be more likely to prefer seniority-based pay, and less likely to prefer incentive or performance-based pay, than similarly situated men. As the military seeks to recruit and retain women in larger numbers, such gender-related differences in compensation preferences should be taken into account.

Changing preferences for nonmonetary compensation

Changes in compensation preferences represent another emerging issue with respect to the design of compensation packages. One such change is perhaps an increasing preference for nonmonetary forms of compensation involving greater choice and flexibility in work locations and career paths. In surveys, both officers and enlisted servicemembers placed relatively high values on geographic stability and choice, and flexibility in work site (increased ability to telecommute). In terms of career paths, officers indicated interest in increased opportunities for paid sabbaticals, while enlisted respondents expressed a preference for greater ability to choose their assignments. These results suggest that a move to an SSS might be eased by making it part of a larger set of compensation and personnel management reforms that also provide servicemembers with additional flexibilities in these areas.

Appendix B: Civilian Compensation Systems

This appendix summarizes information on civilian compensation systems, gathered from a literature review and conversations with subject matter experts in public, private, and nonprofit sectors.¹⁹ It addresses the following objectives:

- Describe civilian compensation systems that could serve as models for a military SSS.
- Describe if and how civilian compensation systems provide allowances or in-kind benefits and whether those benefits or others have tax advantages.
- Identify compensation trends that may be relevant to military compensation reform.
- Identify the advantages, disadvantages, and implications of transitioning to an SSS.

Some of the important conclusions of the civilian compensation review follow:

- **General Schedule (GS) system as model for a military SSS**
 - The federal civilian GS system might be a natural model for a military SSS because the current structure of military basic pay closely resembles the structure of the GS system, and the GS system also includes a locational pay component.
 - The GS system has drawbacks, however. It has been criticized for focusing too much on “internal equity” (reflecting an employee’s position in the hierarchy) and not enough on “individual equity” (rewarding excellent performance) or “external equity” (pay comparability with the private sector or other organizations). The military may want to adopt a modified version of the system.
- **Housing benefits.** If BAH is eliminated, the issue arises as to how to ensure that servicemembers under an SSS have adequate support for frequent relocation and housing changes in a variety of settings. One option might be to look to the approach applied to ministers, who have housing allowances built into their salaries, with the portion of salary spent on housing not taxed.
- **Clear communication:** SMEs we interviewed consistently emphasized the importance of sharing clear, readily accessible information with employees about their compensation packages, in a variety of formats, to help employees understand three things:

¹⁹ Appendix D describes our literature review search methods and provides an overview of the numbers and types of SMEs consulted.

- The full value of their compensation package
- The competency/proficiency markers needed to achieve any performance-related salary increases or bonuses
- The rationale behind the structure of the compensation system, especially when changes are being made to the system

Overview of the current US military compensation system

The current system of compensation for military servicemembers has two primary components: basic pay and allowances. Basic pay is based solely on a servicemember's rank and years of service. Basic pay is fully taxable. In addition to basic pay, servicemembers can receive tax-free allowances for two things: housing and subsistence. The basic allowance for housing (BAH) is determined by duty location, paygrade, and whether the servicemember has dependents. Servicemembers in locations with higher housing costs, in higher paygrades, or with dependents will receive a higher BAH. If a servicemember lives in housing provided by the military at no cost, he or she does not receive BAH. The basic allowance for subsistence (BAS) is determined entirely by enlisted or officer status and is intended to cover the cost of food for the servicemember. Currently, enlisted servicemembers receive higher BAS than officers. Both BAH and BAS are unconditional transfers—meaning servicemembers do not have to provide records of payment for housing or food in order to receive the allowances—and any unused amount of the allowances can be kept by the servicemember. Servicemembers do not pay tax on either BAH or BAS.

A move to an SSS would aim to eliminate the use of housing and subsistence allowances and replace them with a proportional increase in basic pay. Doing so would result in the entirety of military compensation being subject to taxation, leading to a higher tax burden on servicemembers and lower take-home pay if no other changes were made. If the military wishes to keep take-home pay in an SSS equivalent to that in the pay-plus-allowances system, it would have to increase total disbursement to military members to offset the increase in tax liability that comes from eliminating the tax-free allowances.

In addition to basic pay and allowances, the military provides a variety of special pays to military members for service in particular environments and circumstances. These include hazardous duty pay, family separation pay, and special pays for hard-to-staff billets. Other than hazardous duty in a designated combat zone, all of these pays are subject to tax and exist for federal civilian employees both within and outside DOD. Moving to an SSS would not change the nature of these types of pay.

Finally, the military must consider the impact of an SSS on retirement contributions from both servicemembers and the services. Under the military's new Blended Retirement System (BRS), defined benefits and contributions are determined as percentages of base pay. By moving to an SSS, the military would consolidate allowances into servicemembers' basic pay. Doing so would increase the nominal contribution by both military members and their employing services under the BRS. In the absence of changes to the current BRS, a move to an SSS could significantly increase personnel costs to the services.

Overview of current civilian compensation systems

Salary systems

This subsection focuses primarily on salary systems within the public sector with an emphasis on approaches in federal civilian agencies that most closely parallel circumstances in the military services. Information on salary systems in some state government agencies also is provided. These public entities typically use a structured, transparent approach that is publicly available through wage and salary schedules posted on agency websites. Salaries in the private sector, in contrast, are considered more proprietary and generally are not publicly available. Even so, we briefly summarize general information on private-sector salary systems obtained from publicly available salary studies and SMEs who provide compensation services to private-sector companies and organizations.

Public-sector salary systems

Single-salary systems are common in the public sector. These systems are characterized by a basic pay structure that is primarily a function of position and experience, few or no allowances that parallel those in the military system, and few or no tax-advantaged components. Salary schedules in these systems typically cross-reference two factors, such as YOS and the rank of the position, or YOS and education level. In this way, base salaries in SSSs closely mirror that of basic military pay, which is determined by rank and YOS. The most widely used SSS in the public sector is the General Schedule (GS) pay system for civilian white-collar federal employees. Below, we share detailed information on the GS system and then summarize other public-sector salary systems that mirror the GS system in many respects.

GS pay system. The GS scale, maintained by the Office of Personnel Management (OPM), is the predominant SSS in the federal government, covering over 70 percent of federal employees, or about 1.5 million people. The schedule features 15 grades based on education, position, and prior experience, and 10 steps based on years of work with the federal government. Each grade has minimum requirements for education and experience, but federal employees may be

promoted from one grade to another based on performance. The employee's official title may remain the same as he or she moves up in grade. For example, a chemical engineer may receive a promotion from grade 12 to grade 13 because of performance, yet retain the official title of chemical engineer. A GS employee's step is determined by within-grade promotions related to his or her YOS. Movement from step 1 to step 2 typically takes only one year. However, the expected time between steps increases as employees progress through the steps; it typically takes 18 years to move from step 1 to step 10 [76].

Adjustments to the GS allow for annual salary increases, variation in pay by locality, and special rates for hard-to-staff positions. All three adjustments are considered fully taxable, with basic pay and adjustments combined to constitute total taxable income. The adjustments are structured as follows:

- **Annual salary increases.** The GS base pay table is adjusted every year to account for changes in the average salaries paid to private-sector employees, based on the annual rate of change in the employment cost index (ECI) minus 0.5 percentage point—although the President can and does adjust or reduce this amount based on the federal budget. Because this adjustment is made to the base pay table, the adjustment applies to all GS employees.
- **Locality pay.** An annual, location-specific adjustment, calculated separately for each geographic region, further adjusts the pay table to reflect the difference in average pay in that location relative to the rest of the country. As of 2018, OPM has designated 47 different regions for locality adjustment increases, 44 of which cover major metropolitan areas. Each of the 47 regions has an associated percentage increase (as high as 2.5 percent) that is multiplied by and added to the employee's base salary (as determined by grade and step). Anyone working outside these 47 regions is considered to work in the "rest of the United States" and receives no salary adjustment. Public-sector SMEs report that the standard practice is to allocate a percentage of payroll (e.g., 0.5 percent) for locality pay increases in a given year, and that it is typical to provide a larger share of the allocation to areas with large pay disparities.
- **Special rates.** If a federal agency or specific installation within an agency has trouble staffing a civilian position at the GS salary level, it may submit a request to OPM to offer a special salary rate. The request must clearly establish staffing difficulties in order to receive approval for the special rate (rather than request pay-matching to compete with other employers). The agency or installation must also have adequate funding to support the special pay table, which takes effect in the next pay period after approval. According to an SME, special rates commonly are applied in very rural locations that lack amenities and to which few young adults are attracted. Special rates increasingly have been applied to high-demand positions in such fields as technology,

health care, and engineering; special rates also are widely used in the federal prison system because of the nature of the work and an abundance of rural locations. If approved, the requesting agency offers the special rate rather than the established GS base pay and locality adjustment for that position. Special rates are reviewed annually for relevancy and tend to remain in place unless (1) the GS base pay plus locality adjustment meets or exceeds the special rate, (2) the agency no longer needs the rate, or (3) the annual review finds that the rate is not being used. DOD currently is the largest employer of personnel who receive special rates.

Other public-sector SSSs. While the GS schedule covers the largest share of public employees, a number of other schedules cover more specific occupations and employment types. In the federal public sector, nearly all of these other systems are tied to the GS base tables and incorporate the same annual and locality adjustments. While state and municipal pay systems may mirror that of the federal government, they are not always explicitly tied to the GS base table. The following is a list of some relevant examples and descriptions of their caveats:

- **The Foreign Service (FS) pay system** applies to US Department of State FS officers. The FS system is very similar and linked to the GS system, except the FS system has 9 (rather than 15) grades and 14 (rather than 10) steps. Like the GS system, the FS system has a base schedule as well as other schedules for specific locations (typically large metropolitan areas). A parallel to the GS locality pay is Overseas Comparability Pay (OCP), which is viewed as “makeup” pay to ensure parity between overseas and domestic FS officers. When stationed abroad, FS officers receive OCP in place of the base pay determined by their grade and step. For 2018, the OCP was 18.81 percent higher than base pay [45, 77].
- **Pay banding systems.** A number of federal agencies operate what are called pay banding systems. While they vary by agency, these systems typically collapse the 15 grades of the GS schedule into fewer “bands” that cover a wider range of salaries than each of the original 15 grades. The wider range of each band, compared to the range of the original grades, gives managers the opportunity to award more performance-based raises without having to deal with the formalities of promoting an employee to a new grade or band. These systems also commonly allow for one-time bonuses for performance without having to commit to a permanent increase in an employee’s salary. Examples of agencies that use a pay banding system include the Federal Aviation Administration, the Transportation Security Administration, and the Government Accountability Office [36, 71, 78].
- **The Federal Law Enforcement Officer (LEO) scale** is tied directly to the GS scale, but it includes only grades 3 through 10. It applies to “primary” personnel who work in a secure federal corrections facility and to “secondary” personnel who have worked in such a facility for at least three years and transfer to another corrections position

(e.g., training, headquarters, or regional office). Employees on the LEO scale are subject to the same annual and locality adjustments as GS scale employees. Because of the danger associated with these positions, the LEO base salary is higher than the GS scale. In addition, SMEs report that special rates are frequently requested and approved for hard-to-staff positions and locations within the prison system [79].

- **Military Sealift Command (MSC) Civil Service Mariners pay system.** The MSC operates noncombatant, civilian-crewed ships that provide supplies and support to US Navy ships. The majority of MSC employees are federal civilian employees known as civil service mariners (CIVMARs) [40]. CIVMARs, as wage mariners, are not on the GS schedule. Instead, wages are established to align with wages in the private maritime industry. A CIVMAR is hired into a position with an associated salary, which is then adjusted depending on the size, tonnage, and horsepower of the ship to which her or she is assigned. The standard workweek is Monday through Friday, eight hours per day, and mariners are paid an established overtime rate if they work beyond that. They also may receive hazardous pay, a percentage above the salary, if assigned to a ship that carries ammunition (for instance). While on board the ship, mariners receive the in-kind benefit of housing and food with no associated tax burden for the mariner. If the ship is not able to feed or house them for some reason (such as temporary loss of water or heat), mariners are given a taxable daily allowance.
- **State law enforcement agencies** also operate on SSSs based on job classification and YOS. The SME in one such agency reported that salary schedules for law enforcement officers are determined through collective bargaining agreements; there are no locality adjustments or housing/relocation allowances, but some pay differentials are in place, such as additional pay for K9 officers to cover canine care. The SME at an agency in a different state described and shared three salary schedules with rates based on job series and classifications. Rates are established by the state auditor's office based on salary surveys and are not automatically updated for cost of living, although new job series sometimes are established. There is no locality pay and no allowances for relocation or housing, although state troopers may receive an additional \$400 per month at "hardship duty stations" that are typically geographically isolated with few resources (no more than 40 such stations may be designated statewide). Moreover, to make pay competitive with city police officers, the salary schedule for commissioned officers incorporates an automatic 10 hours per week of overtime pay. Note that we consulted with only two SMEs in state law enforcement agencies, so these approaches are not necessarily representative of approaches across all states.
- **Public school teachers** typically are considered state employees. While guidelines differ by state, most states allow each school district to determine its own pay

schedule. A school district's pay table will apply to all teachers in the school district, regardless of school, and be determined by the combination of years of experience and level of formal education. Additional, supplemental compensation will typically be paid for additional responsibilities, such as coaching a sports team or acting as a mentor to other teachers [80]. There also has been ongoing interest in providing pay differentials to attract teachers to hard-to-staff schools (typically schools in rural locations or with high percentages of poor and/or minority students), although researchers note that education systems have been extremely reluctant to adopt such approaches [81].

Salary versus wage systems. Most civilians with the same demographic composition as enlisted personnel (18-to-25-year-olds without a college degree) earn income in the form of an hourly wage. Data from the Current Population Survey on the proportion of working people who are paid on an hourly basis by education and age, respectively, indicate that over 70 percent of people without a college degree and over 80 percent of people under 25 earn an hourly wage instead of a salary [82]. Conversely, servicemembers receive their total compensation in the form of monthly, salary-based pay. As a result, the "outside" civilian option is not always directly comparable to the salary system of similar enlisted servicemembers.

The Federal Wage System (FWS) is the hourly-rate, blue-collar corollary to the GS scale. FWS rates are established by DOD because it employs the most FWS personnel. Separate FWS schedules are created for each government facility (e.g., Camp Keyes, Fort Polk, or Fort Drum) on an as-needed basis and are based on market wages relevant to the location and occupations of each facility. Similar to GS pay tables, FWS pay tables include 15 grades, but they are limited to 5 steps. An FWS employee who works beyond 80 hours in a two-week period will receive 1.5 times his or her hourly rate for each additional hour beyond 80 hours. An FWS employee who works the majority of his or her shift during nighttime hours is entitled to a 7.5–10 percent increase in hourly pay for the entirety of his or her shift [83-84].

The similar demographics of civilian wage earners and military servicemembers might suggest the FWS as a model for an alternative military compensation system. A review of the FWS and other wage-based systems, however, suggests that such systems would introduce a degree of unpredictability in costs that may have adverse effects on military budgeting and readiness. The military operates in an environment where immediate, full-force response can be necessary. This environment means that large numbers of servicemembers may be called on to work long hours with little warning. Because wage-based systems determine pay based on number of hours worked and often carry requirements of increased overtime hourly pay, unexpected operations could introduce large, unpredictable burdens on the services' budgets. Conversely, salary-based systems make monthly basic pay predictable for servicemembers and their employing services alike, even in the face of a quick-turn military response. While unexpected deployments of military personnel will still require additional circumstantial pays,

such as hazardous duty pay, operating under a system that does not pay an hourly wage can limit large variations in payroll costs.

Private- and nonprofit-sector salary systems

SMEs who provide compensation services to companies and agencies in the private and nonprofit sectors report that SSSs are the norm, and that cost of living and local wages are typically figured into salary schedules. Companies or agencies with an international presence or that require relocation may provide reimbursement for relocation or salary premiums for hard-to-staff or dangerous locations. Typically, however, all of these differentials are subject to income tax. This differs from the military, which covers all relocation costs up front, in turn not exposing the servicemember to an increased tax burden. The exception is the church minister's housing allowance, which is discussed in greater detail in the subsection, "Allowances and in-kind benefits."

Implications for switching to an SSS

The current structure of basic pay in the military (excluding BAH and BAS) most closely resembles that of public-sector SSSs. The grade and step system of the GS and LEO schedules imposes a transparent formula for determining basic pay that is similar to the grade and YOS system used in the military. In both settings, employees move through a clearly defined schedule of salaries based almost exclusively on rank and experience. Still, both GS and military personnel have the potential to be promoted in grade and rank, respectively, by their superiors as an acknowledgment of exemplary performance.

In many ways, the GS scale would be a natural successor to the current basic pay plus allowances system used by the military. DOD employs more GS employees than any other federal department, meaning a movement of military members to GS could reduce the total number of pay systems implemented by DOD. Moreover, because the proximity of GS employees and military members often leads to comparisons of the two, DOD already has created a crosswalk that explicitly relates military rank to GS grade [43]. Though the entirety of a GS salary is taxable, a number of situational allowances exist that would apply directly to military settings. We discuss these allowances in the following subsection.

A key implication of moving to an SSS is that DOD would need to increase servicemembers' basic pay to compensate for the loss of tax advantages. This move would be necessary because, in SSS, the combination of all forms of pay (e.g., base pay, locality pay, and annual adjustments) is subject to income tax. A movement of the military to an SSS would mean that—with few exceptions—all military compensation would become taxable. Thus, a base pay increase would be needed to keep total take-home pay for servicemembers constant. Again, because the comparison is frequently made between taxable civilian compensation and partially taxable military compensation, DOD already has created a tool to calculate the required pay difference [37].

Another implication is that an SSS would remove differences in pay based on marital and dependent status. Removal of incentives that increase compensation for servicemembers who are married and have dependents may reduce the proportion of married servicemembers and, in turn, reduce the services' financial obligations in other ways. The degree to which these changes offset each other is outside the scope of the current literature review. In a subsequent section, we discuss a number of specific situational compensations and how they are taxed.

Allowances and in-kind benefits

As noted earlier, the US military currently operates under a system in which total regular military compensation is the sum of base pay and allowances, plus tax advantages conferred by those allowances. A servicemember's base pay is akin to that of federal civilians in the sense that base pay (plus bonuses and overtime pay for civilians) can be viewed as the sum total of taxable income. The military's allowance component is the sum total of any cash payments that can be used by the employee without being subject to taxation. Housing and subsistence allowances are unconditional cash transfers because any amount not spent can be kept without increasing the servicemember's tax liability. Next, we consider how allowances and in-kind benefits are structured in both the military and civilian sectors.

Housing allowances

BAH. The largest allowance for military members is the basic allowance for housing, a cash allowance to offset the cost of housing while serving in the military. Because the cost of housing varies by location and family size, the amount of BAH a servicemember receives depends on his or her duty station and dependent status, in addition to his or her military rank. BAH is a cash transfer to a servicemember that does not require any documentation of living quarters and is not subject to tax. Servicemembers who live in housing provided by the military free of cost (i.e., barracks or some instances of onbase family housing) do not receive BAH. Though the amount of BAH compared to basic pay depends on location and dependency status, BAH can be up to a third of the size of basic pay [37].

When stationed abroad, servicemembers do not receive BAH. If foreign-stationed members reside in onbase or government-leased housing, they do not receive any form of housing-based allowance. However, servicemembers who live in private housing while stationed abroad are eligible to receive an Overseas Housing Allowance (OHA). OHA differs from BAH in that OHA is intended to reimburse the servicemember for the specific amount spent on housing and utilities. Once a member has secured a suitable private residence, he or she must submit a request for OHA approval. Once approved, he or she receives monthly disbursements equal to either the cost of rent and utilities or the maximum allowance available to that servicemember. Because maximum allowances are determined by location, rank, and dependent status, OHA may not always cover the full cost of living in a private house overseas [85].

Public-sector housing allowances and locality adjustments. Tax-free housing allowances are rare in the civilian labor market. The GS schedule and its associated pay schedules do, however, incorporate explicit adjustments for the cost of living in different regions of the United States. These locality adjustments increase the pay for federal employees in each region by a given percentage (less than 5 percent) and are unrelated to years of service or dependent status. Locality pay is incorporated into the employee's total salary and is subject to federal income tax. Unlike BAH, which is intended to cover the entire cost of housing for a servicemember, locality adjustments are differential payments. These payments are meant to offset the increase in living costs incurred by living in more expensive areas; they are not intended to cover the entire cost of living.

In a few select cases, employees receive housing-related payments that are *not* subject to taxation. Civilians in the Department of State and the DOD can be eligible for a Living Quarters Allowance (LQA) when stationed at a post abroad where the US government does not provide living quarters.²⁰ LQA is a nontaxable allowance, paid every two weeks, intended to cover the costs of rent, utilities, taxes, and other fees that a civilian employee may incur while stationed abroad. In this way, LQA is the civilian equivalent to OHA. The amount of LQA may vary by post as well as by the employee's classification or grade. The total LQA can vary by family size and family status: with family or without family.²¹ If an employee receiving LQA has three dependents, but those dependents are living in the United States, the employee receives no LQA increase based on family size. In all cases, LQA is considered an allowance and is not subject to tax [33, 70].

Limited staff housing is available at some federal correctional facilities—typically offered to security personnel who need to be nearby in case of emergencies. Employees apply for this housing; if they are approved, a biweekly deduction is taken from the employee's paycheck to cover the rent. The amount of the rent is based on prevailing rental rates for comparable private housing in the geographic region where the facility is located.

Private-sector housing allowances. Tax-free housing allowances are extremely rare in the private sector. Moreover, while the majority of federal civilian employees receive locality adjustments, only about 12 percent of private-sector employees receive such a differential. Payment specific to the cost of housing is even less common. Down payment assistance, mortgage assistance, and rental assistance are all received by only 2 to 6 percent of private-

²⁰ Foreign-stationed federal employees who reside in government provided housing do not receive LQA. Instead, they receive housing as an in-kind benefit and are not subject to taxation for such a benefit.

²¹ The LQA for people in the middle ranking group ranges from \$14,300 to \$87,900 per year if stationed without a family and from \$15,900 to \$90,500 per year for those stationed with a family [31].

sector employees. In all cases, these payments are treated as standard income and are subject to federal income tax [86].

SMEs that provide compensation services to private-sector companies report that companies or organizations with an international presence have been converting housing allowances to cash compensation or reducing the number of tiers at which allowances are offered. SMEs also report that it was once common for companies to contract with a relocation company to assist employees in relocating, but a more recent practice is to provide a bonus for employees to handle their own relocation costs. With both approaches, employees bear the tax responsibility, documented as additional income (Form 1099) when a relocation vendor is used or as straightforward compensation (Form W2) when a relocation stipend is provided. This differs from current military policy, which provides relocating servicemembers with the option to have the entirety of their relocation costs covered up front by DOD. In such cases, servicemembers do not incur any out-of-pocket cost or tax burden for the relocation. Alternatively, servicemembers may choose to handle any or all of the moving accommodations at their own expense.

SMEs in the petroleum industry report that companies with foreign locations offer various housing incentives to keep employees “whole” with respect to the compensation that they would receive in the United States, as well as to incentivize them to live in remote locations. In locations where security is challenging, the company may provide housing in a compound, with the employee’s salary temporarily increased to cover the additional taxes from the imputed income of the housing. If those employees keep their houses in the United States to return to when their assignments end, they essentially have a “free” place to live overseas, but their salaries are sufficient to cover their mortgages for the US houses, so they are kept whole.

Nonprofit-sector housing allowances. In the nonprofit sector, housing allowances are offered to pastors and other eligible religious leaders when no parsonage is provided by the congregation. SMEs who provide compensation services to churches report that housing allowances are built into the minister’s salary and often constitute a substantial percentage of that salary. Ministers who own homes may exclude from taxes the lowest of three amounts: the housing allowance, actual housing expenses (mortgage, rent, utilities, property tax, etc.), or the market rental value of the home. Section 107 of the Internal Revenue Code stipulates that any housing allowance paid to a qualified religious leader, up to the amount actually spent on the cost of housing, is not subject to income tax [87]. This amount, however, is subject to self-employment tax, and any amount not spent directly on housing is considered fully taxable. SMEs report that church congregations are responsible for reporting to the IRS which personnel are eligible for the tax exemption and that ministers are responsible for documenting and reporting housing allowance information when they file their annual returns. If the IRS determines that the allowance is too high, the church is not penalized, but the

minister must pay back taxes. One SME noted that it is common for the IRS to audit tax returns for ministers in large congregations with large housing allowances.

Implications for switching to an SSS. If the military moves to an SSS, compensation of servicemembers likely would no longer include BAH. As a result, the current taxable portion of compensation (basic pay) would need to increase in order to provide servicemembers with enough pay to cover the costs of housing. However, because servicemembers must forfeit a portion of this increase as tax, the increase in taxable income would need to be greater than the current BAH in order to keep the servicemember whole. In the absence of new income tax laws for military members, this means that a switch to an SSS would likely result in higher payroll costs for the services.

If the same laws that apply to parsonage could apply to military members, this might be a reasonable alternative to BAH. Current BAH values could be preserved for the various localities, but, instead of a cash transfer, could serve as a maximum possible amount a military member could spend on housing without paying income taxes. It may then be the case that the basic pay that a military member currently receives would have to be increased by his or her current BAH amount (i.e., preserve the BAH amount but pay as income, not an allowance). The military member still could receive that entire amount, tax free, but would not be able to pocket any unspent amount without paying taxes. While this would reduce the potential take-home income awarded to servicemembers, it would more properly align the housing transfer as one intended to compensate for housing. Servicemembers still could find housing for less than the current BAH value and pocket the difference. However, the difference would now be taxed as income. Moreover, the laws surrounding parsonage payments make no mention of the number of dependents. If the services did not base this type of payment on dependency status, they could address some of the standing equity concerns that surround pay that varies by dependency status.

In addition, DOD will need to determine how to ensure that servicemembers have adequate support for frequent location and housing changes in a variety of settings. Options could include locality pay adjustments or an overseas adjustment (similar to OCP in the Foreign Service). The services still could benefit from the tax advantages associated with OHA, though incorporating this into an SSS may present some administrative challenges. Under the current system, the services withhold BAH when a servicemember resides in government-provided housing. Under an SSS, however, compensation intended to cover housing would be incorporated into total pay. Thus, the services would need to find a way to reduce a servicemember's singular salary while he or she resided in government-provided housing in order to avoid simultaneously paying both costs. Such a situation would likely introduce new administrative challenges that could further raise the cost of transitioning to an SSS.

Food allowances

BAS. The second largest allowance for military members is the basic allowance for subsistence. BAS is a cash allowance given to military members to offset the cost of subsistence (food) while they serve in the US military. Unlike BAH, BAS does not cover family members and, thus, does not vary by dependent status. Similarly, annual adjustments to BAS are determined by changes in food prices and are not subject to locality adjustments. BAS is a cash transfer that does not require documentation of purchases and is not subject to tax. Servicemembers who live in the barracks on a military base do not receive BAS, but instead receive food as a nontaxed, in-kind benefit from a mess hall or a galley.

Public-sector food allowances. By far the most common approach to supporting employee food costs in the public sector is through per diem reimbursement. According to federal tax law, any payments an employee receives as reimbursement for expenses incurred during travel—particularly food—is not subject to taxation, as long as it is within the federally determined per diem rate. The next closest parallel to the BAS is the Cost-of-Living Adjustment (COLA) for FS officers when stationed at a post abroad. COLA is a tax-free allowance intended to compensate the employee when the cost of a typical basket of goods is at least 3 percent higher in a foreign location than in Washington, DC. The standard basket of goods includes clothing, personal care items, furnishings, household goods, medical services, recreation, public transportation, vehicle-related expenses, and alcohol and tobacco.

While COLA is a tax-free payment intended to cover the cost of food (among other things), it differs from BAS in that the amount of COLA received can depend on family size if the officer's family is also stationed abroad because the COLA amount is determined not only by the cost of the market basket but also by the officer's calculated "spendable income." Spendable income is measured as the proportion of salary used to purchase the goods and services in the standard basket of goods. This is determined by the combination of annual base salary and, if the officer's family is also stationed abroad, family size [88]. Thus, unlike BAS, COLA varies by location and family size.

The intent of COLA is to compensate the FS officer for the *additional* cost of goods and services in a foreign location. Consequently, only those FS officers in foreign posts where costs are higher (typically remote locations) receive the COLA. Currently, 161 of the 796 registered posts receive no COLA. For those that receive COLA, the total allowance is determined by multiplying a person's spendable income by the post allowance (the percentage of spendable income people at that post receive, in addition to their salary). Post allowances vary significantly by post, but they are typically 10 to 30 percent (meaning someone would receive an allowance equal to, for instance, 30 percent of his or her spendable income). As of 2018, Bermuda has the highest post allowance, 60 percent. These percentages are then multiplied by *spendable* income, which varies by base salary and the number of family members also stationed abroad.

The spendable income for someone stationed without any family who earns a salary in the top bracket (annual base salary greater than \$139,000) is \$44,700. Since the typical post allowance is closer to 20 percent, most COLAs are in the range of \$2,000 to \$8,000, annually [47, 89].

Private-sector food allowances. As with payments for housing, food-specific payments are rare outside the military. In the private sector, only about 16 percent of people or employers have access to an onsite cafeteria that is at least partially subsidized. In these cases, employees do not have the option to receive a tax-free allowance in lieu of company-provided food. Per diem meal allowances are slightly more common for oil and gas employees stationed abroad: almost 19 percent of oil and gas employees report receiving a meal allowance. Such allowances are typically subject to taxation. While some oil and gas companies offer additional payment to the employee to offset the additional tax that comes from the receipt of the meal allowance, that additional pay is at the cost of the company [90]. Alternatively, SMEs report that sailors on merchant ships and employees stationed on oil rigs have access to onsite cafeterias and galleys at no cost to the employee. These in-kind benefits do not create a tax liability for the employee.

Implications for switching to an SSS. Very few tax-free food allowances exist in the civilian sector. Should the military switch to an SSS, it would forfeit the tax benefits associated with the current pay plus allowances system. To switch to an SSS while keeping constant take-home pay for servicemembers, the services would have to increase the out-of-pocket payment to servicemembers to make up for the increased tax burden. While the services may be able to take advantage of the tax breaks associated with COLA, at present, these payments cover only additional costs and can be paid only while someone is stationed in an eligible foreign post. Moreover, because BAS does not vary by dependency status, ending BAS does not affect current equity concerns surrounding pay variation by dependent status, but it still increases the cost of subsistence-related compensation to the services.

Federal income tax advantage

A substantial but often overlooked aspect of military pay is built-in tax advantages that come with the BAH and BAS. In addition to being exempt from federal and state taxes, these allowances also are excluded from Social Security taxes. BAS and BAH together average over 30 percent of a member's total regular cash pay, so the tax saving from this exemption can be significant.

For an E-8 with 18 YOS and 3 dependents in Arlington, Virginia, the annual tax saving is over \$5,000. This saving means not only that the servicemember takes home more of his or her paycheck than an equivalently salaried civilian, but also that the out-of-pocket cost to the services is lower than it would be if the entirety of compensation were taxable. For example, an O-5 with 18 YOS and 2 dependents currently costs the services \$147,395 (the sum of basic

pay, BAH, and BAS before tax) and takes home \$105,520 after paying taxes. Under an SSS where all pay is taxable, the services would need to distribute \$159,283 to that servicemember to preserve his or her take-home pay at \$105,520 per year.²² In other words, under an SSS that does not use tax-free allowances, the military would have to spend an additional \$11,888 per year on that servicemember to keep his or her take-home pay constant [37]. Table 1 gives selected examples for servicemembers of various ranks, YOS, and dependents. The last column of Table 1 indicates the amount by which the military would need to increase the denoted servicemember's total pay to preserve his or her current take-home pay if the military moved to an SSS.

Table 1. Basic pay, BAH, BAS, and tax advantage examples

Rank	YOS	Dependents	Basic pay	BAH	BAS	Tax advantage
Enlisted						
E-2	2	0	22,035	21,348	4,433	3,516
E-6	10	1	42,764	32,472	4,433	4,101
E-8	18	3	61,196	33,876	4,433	5,224
Officer						
O-2	2	0	48,935	28,080	3,053	4,245
O-5	18	2	105,246	39,096	3,053	11,888
O-8	28	4	171,220	39,780	3,053	12,081

Note: All examples are based on a servicemember who lives in Arlington, Virginia. Dependents of 1 or more assume married and filing jointly. Pay, allowances, and tax advantage are determined by the Regular Military Compensation Calculator [37].

The kinds of tax advantages offered by BAH and BAS are increasingly rare in the civilian sector, although the overseas COLA and LQA for FS workers and uniform allowances for federal civilian workers are tax exempt. Beyond those allowances, pay differentials and bonuses for public-sector workers based on specific circumstances (e.g., location, hard-to-fill positions, or hazardous duty) are almost always considered part of an employee's gross income and, therefore, subject to income tax.

Similarly, salary bonuses in the private sector, such as for taking a position in a dangerous location, are typically considered taxable income. One exception is hazard pay earned in a designated combat zone by federal civilian employees. Such pay is deemed tax exempt in the same way that hazardous duty pay in a combat zone is tax free for servicemembers. The only other exception we encountered was the tax-deductible housing allowance for church ministers, which is technically part of the minister's compensation package. The tax deduction

²² Examples assume that the servicemember lives in Arlington, Virginia, and is filing jointly with a spouse.

occurs at the end of the year when the minister files income taxes, and the amount of the deduction is based on the market rental value of the home.

Tax-free allowances of other kinds for military personnel also are increasingly rare. In 1995, a COLA was authorized for servicemembers assigned to high-cost areas in the continental US (CONUS). The CONUS COLA became the first taxable allowance for military members due to a law change that mandated that allowances created after 1986 would be taxable [4, 38].²³

These comparisons suggest a couple of approaches that might be taken in integrating allowances into an SSS for the military. If it can be applied to military members, the housing tax advantage used by ministers could provide significant tax savings in an SSS, though a law change would be required to apply to military members the current tax exemption. Tax exemptions for servicemembers would be limited to the total amount of money *spent* on housing (as opposed to total BAH, regardless of spending), but total military compensation could be dispersed as a single salary. The military also could take advantage of the existing situational tax-exempt allowances that apply to all federal employees, such as COLA, LQA, and hazard pay in designated combat zones. Though these allowances are limited in scope, they stand as currently usable allowances that apply to multiple situations often experienced by military members.

Special and incentive pays

Special military pay

In addition to basic pay and allowances, the military offers a variety of special pays granted when servicemembers serve in specific roles and environments. Pay of this type is intended to compensate servicemembers for working in unfavorable conditions or difficult-to-staff positions and is typically used to incentivize participation in such situations. Examples of special pays include special duty pays, family separation pay, hardship pay, and hazardous duty pay. Servicemembers required to serve in dangerous circumstances are eligible to receive hazardous duty pay, which is an increase to basic pay. Any pay earned under such conditions, including basic pay and hazardous duty pay, is not subject to taxation.

Public-sector performance awards

OPM allows agencies to allocate performance awards at their discretion, as long as the award does not exceed the biweekly rate of a grade 15, step 10 employee. Guidelines also stipulate that larger awards must be allocated to employees with higher performance ratings within

²³ Military.com, a membership organization for military servicemembers and veterans, observes that this law has not been closely followed; the CONUS COLA is currently the only taxable allowance. The website lists the full range of allowances and indicates which ones are taxable [91].

their same performance pool. Beyond these requirements, agencies may grant performance bonuses at sizes and intervals that are deemed appropriate by that agency. No restrictions are placed on the appraisal formula or the way in which performance money is allocated across each level of performance [92].

Public-sector hazard pay

Hazard or hardship pay in the federal civilian sector is available for both FS officers and domestic employees. FS workers may be entitled to both a post hardship differential and danger pay. The post hardship differential is provided for assignments to posts in areas with identified hardships in several categories, including climate, medical, environmental education, import restrictions, crime, social isolation (e.g., gender discrimination), political violence, terrorism, and harassment. The differential is paid as a percentage of basic compensation in 5, 10, 15, 20, 25, 30, and 35 percent increments, and it is included in gross income for federal income tax purposes [41].

The danger pay allowance for FS workers is additional compensation for service at designated danger pay posts because of civil insurrections, civil war, terrorism, or wartime conditions that threaten the employee's safety. The amount is 15, 25, or 35 percent of basic pay, depending on the level of danger. The danger pay allowance is in lieu of that part of the hardship post differential that applies to political violence and terrorism. Consequently, the post hardship differential rate may be reduced when danger pay is in effect. Like the hardship differential, danger pay is part of taxable income [93].

Hazard pay is also available to domestic federal civilian workers in hazardous occupations. OPM guidelines establish activities eligible for hazard pay, including exposure to hazardous weather or terrain, work with fuel storage tanks, and firefighting. Federal employees receive a hazard pay wage increase (up to 25 percent) for all hours worked under the circumstances outlined by OPM. Like the post hardship differential and danger pay in FS, hazard pay received by domestic federal civilians is subject to tax. When earned in a designated combat zone, hazard pay is not subject to taxation [41]. Occupations in which hazardous duty is inherent to the occupations (such as law enforcement) are not eligible for hazardous duty pay. Instead, such occupations typically offer higher base salaries than the GS scale.

Private-sector hazard pay

SMEs with experience in the private sector report that some occupations with locations in dangerous areas—typically abroad—usually offer a salary premium to attract and retain personnel in those locations. The amount of the premium is often related to the security rating applied to that country by the US government. This sort of premium pay is a percentage increase to the base salary, and is subject to income taxes.

Implications for switching to an SSS

The current OPM regulations stipulate that any federal employee who works under conditions deemed to incur hazard or hardship is eligible for increased basic pay while working under those conditions. In addition, if hazard pay is earned in a location designated as a combat zone, it is not subject to taxation. If the military switched to an SSS, the current process of hazard pay would be unaffected.

Retirement benefits

Because military retirement benefits are linked to base pay, any changes in base pay will affect military servicemembers' retirement accrual and annuities. Specifically, the military's Blended Retirement System, implemented in 2018, has three components, each of which is connected to base pay:²⁴

1. Defined benefit component: 2 percent times the number of YOS, with payment of 40 percent of final base pay at 20 years and 60 percent at 30 years.
2. Defined contribution: A Thrift Savings Plan (TSP) in which servicemembers are automatically enrolled with a 3 percent base pay contribution, which they can increase, decrease, or terminate. The government contributes 1 percent of the member's base pay to the TSP for every 1 percent contributed by the servicemember, up to 3 percent of base pay. The government contributes 0.5 percent for each additional percent of base pay (beyond the initial 3 percent) that the servicemember contributes, up to 5 percent of his or her base pay. Together, these government contributions can add up to 4 percent of a servicemember's base pay.
3. Continuation pay: Bonus equal to 2.5 months of base pay for active duty servicemembers with 12 years of service who commit to an additional four years [30].

As the foregoing description illustrates, retirement contributions and annuities are connected to base pay; allowances are not part of the formula. Consequently, if the military switches to an SSS that rolls allowances into base pay, both the servicemember's and the government's retirement contributions will increase. While these increases could be beneficial to servicemembers' retirement annuities, if funds are insufficient to support the government contribution, adjustments to BRS may be needed. For instance, DOD has the flexibility to reduce or eliminate continuation pay; it can also request a change to the formula for government contributions to BRS.

²⁴ Starting in 2018, all new servicemembers are automatically enrolled in BRS. Servicemembers with less than 12 years of service were given the option to have BRS or continue with the traditional defined benefit. Those with more than 12 years of service continued with the traditional defined benefit plan.

Private-sector trends

SMEs who provide compensation services to private-sector firms report on three compensation trends in private industry that may have some relevance: simplifying compensation, developing compensation components to attract and retain young adults, and structuring compensation around specific tasks or assignments. We discuss each trend next:

- **Simplify compensation.** Like the military, private-sector SMEs report a trend toward simplifying compensation to reduce company costs and administrative burdens. The goal is to offer attractive packages with fewer components. For example, while private industry does not tend to use allowances, some companies have contracted with relocation companies to help employees move. A recent trend is to instead reimburse employees for relocation expenses.
- **Offer compensation incentives to attract younger employees.** Private-sector SMEs described several trends in private industry designed to attract and retain young adults—a key audience for the military. The trends are personalizing benefits, offering recruitment incentives for young adults just out of college, and using temporary assignments over permanent relocation:
 - *Personalizing benefits.* The SME at a private-sector consulting firm noted that young adults are accustomed to more tailored approaches (akin to online sales companies tailoring recommendations to each customer’s past purchases). Similarly, companies are tailoring compensation packages to employee circumstances, such as including among health plan options high-deductible plans with catastrophic coverage, or offering a core set of benefits along with an allocation that employees may apply to a range of options, such as professional development funds or tuition reimbursement. Companies also may offer benefit options that employees pay for but at a group rate negotiated by the company. Examples include pet insurance, automobile or homeowners’ insurance, and choice-based health plans.
 - *Recruitment incentives.* Two types of recruitment incentives were mentioned to attract young adults just out of college, particularly in the field of technology: student loan repayment and compensating parents whose children come to work for the company.
 - *Increase in temporary assignments* rather than permanent relocation to accommodate employees who are reluctant to permanently relocate careers and families. In some cases, companies offer temporary, short-term housing arrangements for these assignments.

- **Structure compensation around specific tasks or assignments.** Private-sector companies are more frequently structuring compensation around specific tasks or assignments. In the past, these assignments might have gone to consultants, but the new approach is to establish a “contingency workforce”—a pool of employees who are paid contingent on completing the work. Companies develop task descriptions with appropriate compensation, and employees bid on or choose the tasks for which they are qualified and interested. Performance awards are based not on tenure but on task performance. One SME described this approach as “democratizing the work.” A related trend involves contracting with an entire family to complete a specified task, with the family receiving compensation when the work is complete. These approaches are reportedly popular in the UK, Middle East, Equatorial Africa, and Hong Kong, as well as in new product development and marketing. This approach may represent a way to offer extra compensation to servicemembers in lieu of BAH and BAS.

As noted above, simplifying the military compensation system could offer the opportunity for à la carte options that military servicemembers could choose to enhance their own compensation and benefits. Increasing members’ salaries to compensate for the loss of BAH and BAS also may provide increased income flexibility for members to use on personalized pay and benefits options. Offering compensation for specific tasks also may provide an opportunity for servicemembers (or their families) to earn additional compensation. Such approaches could be an attractive recruitment tool for young adults and servicemembers with families.

Advantages and disadvantages of compensation systems

Several iterations of the Quadrennial Review of Military Compensation have identified a consistent set of issues regarding potential advantages and disadvantages of various compensation systems related to transparency, equity and fairness, incentives, and cost and administrative efficiencies. In this subsection, we share SME perspectives on these issues.

Transparency

A potential downside to the current military compensation system is that the numerous allowances and tax advantages may make the system so complex that servicemembers do not understand the full value of their compensation, and military decision-makers do not understand personnel costs. In discussing this issue with SMEs, a clear distinction emerged between transparency issues in the public versus the private sector. In the public sector, transparency is about making sure employees understand the full value of their compensation package and possibilities for future earnings. In the private sector, where pay is more tightly

linked to employee performance, transparency focuses on ensuring that employees understand the basis for merit pay increases—an issue that may become increasingly important if the military builds more performance-based approaches into the new salary system. Also, SMEs in both the public and private sectors emphasize the importance of messaging and accessible information when changes are made to the compensation system.

Public sector

SMEs at government agencies generally agreed that a single-salary approach is relatively transparent to employees. For example, the GS system's job grades and steps are based primarily on job responsibilities and years of experience, with locality adjustments for certain geographic areas. Salary schedules are updated and published annually so employees can see what they are currently earning and predict future earnings. While government contributions to benefits, such as health and life insurance, are less transparent, some agencies list these benefits on annual employee statements. For instance, a large state law enforcement agency provides each employee with an annual personal benefits statement that includes information on earnings, leave, benefits, and retirement forecasts.

At the same time, transparency in the federal government can be affected by the bureaucratic structure and how information is shared. Similarly, public-sector SMEs discussed the importance of communication and information so that employees can quickly and easily access clear information about their compensation and benefits. The SME at a large state law enforcement agency described several ways in which the agency shares information, including a policy manual with information on merit increases and a website that includes information about the salary range for each career and level, competency proficiency markers required to move to the next level, and benefits.

Private sector

In the private sector, transparency is an issue relative to employees understanding how to achieve performance targets that lead to salary increases or bonuses. While companies typically have a structure to determine merit increases, managers may take other issues into consideration that are not necessarily part of the design, such as current performance, need to retain employees with critical skills, and potential for future performance. Private-sector SMEs emphasize the importance of companies providing as much information as possible about what employees must do to earn salary increases and bonuses.

In addition, private-sector SMEs emphasized that, when changes are made to the compensation system, messaging should focus on the philosophy behind the new system rather than simply its elements so that employees understand the rationale. Employees also are more likely to understand and accept the new system if it flows from and is connected to the overall company culture and values. One SME provided contrasting examples of a company whose philosophy of recruiting did not match its philosophy of retention. At this company, compensation

incentives for new hires resulted in “salary compression” in which new hires sometimes made more money than experienced, tenured employees did. The lack of transparency, communication, and philosophical alignment ultimately led to the company’s failure. In contrast, a university’s transition from the tenure system to employing faculty on a contract basis went smoothly both because the new system was more lucrative for faculty members and because there was strong communication and transparency about the rationale and benefits of the new system.

Churches

Discussions with SMEs that consult with churches about compensation for ministers noted that pastors typically have a good grasp of their total compensation package, including housing, pay, benefits, and retirement. They attributed this to the fact that church budget committees have to establish these parameters and sometimes share the information with their congregations. Here again, making detailed information available is the key.

Implications for military compensation

Information from SMEs supports the view that an SSS is more transparent than a system with multiple components. At the same time, SMEs emphasized the importance of sharing clear, readily accessible information in a variety of formats to help employees understand their full compensation package. SMEs emphasized the importance of sharing information on the rationale behind compensation systems, especially when changes are made to those systems. In addition, if SSSs incorporate more performance-based components, information on the competency and proficiency markers needed to advance in the system also must be clear. A simplified system may make it easier to be transparent about performance-based promotion requirements.

Equity and fairness

A consistent concern expressed about the current military compensation system is that, because the housing allowance varies based on dependent status, the system favors servicemembers with families over those who are single, even when they do the same kinds of work. In addition, the tax advantages may favor some individuals based on tax bracket. Consequently, we asked SMEs whether equity and fairness issues are a concern with their compensation systems. Responses differed thematically between public- and private-sector SMEs. On one hand, SMEs in government agencies spoke about the need to offer equal compensation for equal work across government agencies and when compared with the private sector. Private-sector SMEs, on the other hand, spoke of the need to define and balance approaches to equity, fairness, and efficiency.

Public sector

Public-sector SMEs emphasized the need to ensure external equity with the private sector, individual equity in terms of rewarding strong performance, and equitable approaches to compensation for personnel working in similar circumstances. The first two themes emerged in discussions of the GS and related pay systems used by federal civilian agencies. As with the military compensation system, there has been interest for some time in modernizing the federal pay system to make it more market-based and performance-oriented, in line with private-sector compensation systems. A 2002 OPM White Paper concluded that the system is too focused on *internal equity* to reflect an employee's relative place in a hierarchy of positions; it leaves little room for *external equity* to accommodate changes in labor market rates for different occupations, as well as *individual equity* to reward excellent performance [7]. Federal civilian agency SMEs concur that there is a perception among employees that the GS system overcompensates some positions and undercompensates others, and that pay increases are not tied to performance to an extent that is viewed as fair.

Public-sector SMEs raised the issue of ensuring that federal civilians within and across agencies working in similar conditions received the same pay, and that civilian pay is comparable to military pay for similar work. In the public sector, special rates, differentials, and locality pay can raise issues of equity. For instance, special rates typically are established to relieve staffing difficulties in particular locations (e.g., rural and remote areas). Inequities may be present or may be perceived if, for example, an Air Force installation requests and receives a special rate for an airplane mechanic, but a nearby National Guard installation does not offer the rate. (In such cases, military components may be added to the special rate through an amended request.) Similarly, locality pay reflects pay levels of nonfederal workers in a given area, often resulting in higher salaries in metropolitan than in rural areas. These disparate rates can result in perceptions of inequity when locations are nearby, such as a federal prison in an urban area that is within 100 miles of a more rural facility.

SMEs reported that different approaches to compensation and benefits between Civil Service and Foreign Service workers can create perceptions of inequity. For instance, the Foreign Service has a mandatory retirement age of 65, but the Civil Service does not. Similarly, the *grade in position* approach used for the Civil Service and the *grade in person* approach for FS employees creates potential inequities. If a Civil Service desk officer works alongside an FS desk officer, the FS officer operates under an up-and-out system (like the military), and can advance based on performance. The Civil Service worker, however, would have to move to a different position to advance on the salary schedule.

Similar concerns about equity arise when military servicemembers work alongside civilian employees. For instance, military police may work alongside civilian law enforcement officers at military installations. If both groups are called on to work overtime, civilian police are

entitled to overtime pay, whereas military police are considered to be on duty all the time and, consequently, do not receive extra pay. One SME noted that several “copycat” allowances have been offered to FS officers who work alongside the military (in embassies, for instance) to make allowances equivalent. These include a *temporary separate maintenance allowance (TSMA)*, which allows family members to transition to accommodations when the employee moves from a company post to an unaccompanied assignment, and *imminent danger pay* for civilians working alongside military personnel in the same environments. The FS LQA also was expanded to incorporate the equivalent of the military’s *extraordinary quarters allowance*, which compensates military members in foreign posts to move to temporary quarters when post quarters are under renovation. The creation of these copycat allowances illustrates the importance placed on ensuring equitable compensation for government employees working under the same circumstances.

Private sector

Equity issues raised by SMEs who consult with private-sector companies were related to balancing equity, fairness, and efficiency. World at Work, a membership organization for human resources professionals, notes on its website that companies must balance market competitiveness, internal equity, organizational performance, and individual performance—and that issues of fairness underlie all of these areas. In particular, reward policies and practices that are not perceived as fair will not attract or retain employees [94]. An SME at one consulting firm commented that perceptions of fairness are promoted through transparency and openness so that employees understand the rationale for reward policies. The SME for another firm defined *equity* as related to equal, nondiscriminatory treatment of employees, which has been driven by social movements and legislation (e.g., greater representation of women and minorities in the workforce). *Efficiency*, however, emphasizes minimizing costs to the company by providing only the level of benefits needed to meet recruiting, retention, and performance goals. The pressure is on companies to be both equitable and efficient, which means identifying critical skill sets the company needs and outsourcing work when possible. Then, once employees are hired, companies must ensure equitable treatment of those employees who are in the same job.

Implications for military compensation

Varying compensation based on dependent status is a nearly nonexistent practice in the private and nonprofit sectors, where there seems to be no expectation of such accommodation. Absorbing BAH into an SSS would eliminate the inequity perceived by some that results when a servicemember with dependents receives a higher BAH—moving the military system toward more of an equal-pay-for-equal-work approach. At the same time, eliminating this advantage could remove an important recruitment and retention incentive for servicemembers with families. The military will need to consider what standard of equity it wishes to apply and how

to message this particular aspect as it transitions to an SSS. Consideration also should be given to the importance of ensuring equitable compensation approaches for government employees working in similar circumstances.

Incentives

Past reviews of military compensation have considered whether military pay should be more closely linked to a servicemember's performance. Consequently, our SME discussions explored the kinds of incentives built into various compensation approaches. Four themes emerged from these discussions:

- SSSs in the public sector are much more heavily weighted toward tenure and job classification than performance.
- The up-and-out system of the military and the Foreign Service is a promotion-based incentive linked to performance.
- Private-sector compensation and salary increases are more tightly linked to job performance.
- Public-sector agencies recognize the need to move to more performance-based systems.

Public-sector tenure-based systems

SMEs in the public sector noted that the GS pay system and similar approaches base compensation primarily on job classification and years of experience. Within the GS system, step increases are based not only on time in the job grade but also on acceptable performance. Employees may receive a maximum of one quality step increase (QSI) per year for strong performance, but the SME in one agency reported that such increases are rare, constituting about 0.14 percent of the payroll and awarded to fewer than 5 percent of employees. Another federal agency SME reported more frequent use of QSI, noting that the agency can recognize up to 10 percent of its workforce through QSIs, although the number recognized often is driven by the budget. The perspectives of DOD civilian employees, as reported on the 2018 Federal Employee Viewpoints survey, indicate that performance-based increases are not the norm: only 27 percent of employees agreed that pay raises in their agencies depend on how well employees perform their jobs, while 43 percent disagreed and 30 percent were neutral [22].

One way in which government agencies that use SSSs compete with the private sector is through special rates and hardship differentials that help agencies to recruit and retain personnel in hard-to-fill positions. The SME at a large state law enforcement agency reported an incentive to make salaries for state law enforcement officers competitive with city police officers—namely, building into officers' salaries an automatic 10 hours of overtime pay each pay period.

Up-or-out promotion systems

Exceptions to the tenure-based approaches in the public sector were described for FS personnel, whose promotions are modeled on the military's up-or-out system. In effect, FS workers can be in the same grade for only a specified time. Failure to be promoted during that time leads to mandatory retirement. Promotions are determined through review boards that categorize promotion candidates as promotable, mid-ranked, or low-ranked. These selection boards produce rank-ordered lists of candidates recommended for promotion, and a cut line is determined based on the number of available promotion slots. Similarly, performance standards boards assess low-ranked candidates for possible separation from service [95]. The SMEs we consulted expressed the view that this system acts as a motivator to perform, and they noted that FS officers structure their careers to work toward advancement. The system is not without detractors, however, as evidenced by online commentaries suggesting that the up-or-out system harms both the military and the Foreign Service by forcing out valuable, experienced personnel, sometimes because of the limited number of promotion slots available [96-97].

Private-sector performance-based systems

Private-sector SMEs reported that the criteria for pay increases and promotions are weighted more toward performance than tenure. In this meritocratic approach, private-sector companies typically establish an initial pay scale for specific jobs, which is paid to new college hires regardless of their alma mater. From that point forward, increases in pay and time to promotion vary based on employee performance. For personnel in upper management levels, salary bonuses also may be contingent on overall company performance. At larger companies, performance-based incentives may exist alongside across-the-board annual increases linked to the company's prior-year performance, as well as more tenure-based approaches for some employees.

Implication for military compensation

While the military's up-or-out approach to promotion is more strongly based on performance than approaches used in the public sector, the BAH and BAS components of the system are not linked to performance. Absorbing these non-performance-based components into an SSS could provide more opportunity to link compensation to performance, but military decision-makers will need to consider how to structure the system to do so. As noted earlier, survey data from federal civilian employees in the GS system indicate that employees do not perceive a strong link between employee performance and compensation. Moreover, an SSS similar to the GS pay system could suffer from the same limitations as the military's current basic pay table, which does not differentiate compensation according to the nature of the job. As recent CNA reports note, this approach limits DOD's ability to offer salaries that are competitive with the civilian sector, a particular need for some high-demand, highly skilled jobs. Possible approaches to

build into an SSS include pay banding or establishing different compensation tables for select communities that require high levels of technical skill or experience [16-17].

Cost and administrative efficiencies

Public-sector SMEs generally agreed that an SSS is more efficient in terms of administration and costs; one SME attributed this to the “economy of scale.” An example was provided by an SME who reported that overhead costs for administering the GS pay system to one million employees is smaller than collecting cost-of-living data in allowance areas with fewer than 50,000 employees. One SME also pointed out that administering pay-for-performance approaches will add overhead costs to government agencies. This observation raises the question of whether moving to an SSS would allow resources to be repurposed to manage a more performance-based, flexible compensation and personnel system.

Conclusion: Civilian compensation systems

The information shared in this appendix suggests a number of implications for military decision-makers to consider as they consider a transition to an SSS. Key considerations include (1) uniqueness of military circumstances, (2) parity and fairness, (3) the importance of transparency, messaging, and communication, and (4) possible repurposing of resources.

Uniqueness of military circumstances

SMEs in both the public and private sectors cautioned that the military operates in unique circumstances that do not always parallel those of the civilian sector. The following circumstances are particularly notable:

- **Demographics.** The demographic composition of the military does not mirror that of the civilian labor force. While women represent about half of civilian employees, only about 15 percent of servicemembers are women. The age profile of labor also differs significantly across the military and civilian labor markets. On average, the number of contracted servicemembers declines as age increases because not all servicemembers sign new service contracts when their prior ones expire. The opposite, however, is true in the civilian workforce, where labor participation typically increases with age between 18 and 40 as more people enter the labor market. Average education by age also differs significantly for civilian and military personnel, particularly when focusing on enlisted members. These differences mean that civilian-wide trends and averages in compensation structures may not be entirely representative of what the military would look like if it adopted similar compensation policies. Moreover, what works for

an industry that employs more women and a larger distribution of ages may not work as efficiently for military servicemembers.

- **Occupational specialties.** Civilian and military pay structures can be difficult to compare because some military occupational specialties (MOSs), ratings, and designators do not have a clear civilian equivalent. Because military occupations, such as a nuclear submarine technician or tank gunner, do not appear in the civilian workforce, descriptions of the typical civilian pay structure may not appropriately translate to potential options for the military. In addition, comparable labor market data on which to base pay scales may not be available for some MOSs. As a result, pay structures employed in civilian positions may not always be appropriate for the recruitment and retention of people in all military occupations [50].
- **Frequent relocation.** Few other professions expect employees to relocate every 18 to 24 months, which BAH is meant to accommodate. Some SMEs expressed the view that it will be difficult to get away from BAH, which is an important incentive in the military services.

Parity and fairness

Public-sector SMEs noted that federal employees already are highly attuned to disparities in pay and benefits when employees from the Civil Service, the Foreign Service, and/or the military work alongside one another. Consequently, the Foreign Service has created some so-called copycat benefits for employees who work with military servicemembers in the same jobs and/or circumstances. These examples suggest that ensuring parity and fairness across the public sectors should be central to any compensation reform efforts.

Importance of transparency, messaging, and communication

This theme emerged from discussions with SMEs across the government and the private and nonprofit sectors. If DOD transitions from a long-standing form of military compensation to an SSS, it will be extremely important to help servicemembers understand the rationale for the changes and to highlight their benefits. These benefits may include increased income, more flexibility in how to spend their income, more fairness in terms of equal pay for equal work, and increased contributions to their retirement plans.

Repurposing resources obtained by simplifying the system

While it is unclear whether the reduced administrative costs of moving to an SSS system will offset potential increased costs from absorbing allowances into base salary, some consideration may be given to how any additional resources might be used to further enhance

the personnel and compensation system. For instance, resources might be used to manage a more performance-based, flexible compensation approach and/or offer more special pays, bonuses, and similar incentives.

In conclusion, this appendix provides information on compensation systems in the public and private sector to inform QRMC deliberations. Information gathered from public- and private-sector SMEs, literature, and documentation suggests that key issues to consider are the loss of tax advantages, possible increased costs to the services due to base pay and retirement contribution increases, the need to account for unique military circumstances (such as frequent relocation), building in performance-based incentives, and ensuring transparency and effective messaging if changes are made to the current system. Emerging private-sector compensation trends may also be of interest as QRMC considers compensation reform. The success of a transition to an SSS will largely depend on the way that DOD handles the challenges outlined in this appendix.

Appendix C: Foreign Military Compensation Systems

The purpose of this appendix is to inform the decision about whether DOD should move to an SSS by reviewing the compensation practices of three foreign militaries: the United Kingdom, Canada, and Australia. We focus on these three because they are relatively comparable to the US military in terms of grade structure and other characteristics (e.g., all are all-volunteer forces) and because all three already have a compensation system that is more focused on a salary component than is the current US system of regular military compensation.

Appendix C is organized as follows. We describe the basic military compensation structure of the three foreign militaries, looking at the salary/basic pay component, how geographic differences are accounted for, how housing and food expenses are handled, whether there are tax advantaged-components of the compensation system, and the link between retirement benefits and other pay components. We also include a brief discussion of the recent history and evolution of the three militaries' compensation systems, with an eye to understanding their implications for the implementation challenges entailed by compensation system changes. The appendix concludes with a comparison of the three militaries' pay structures—with each other, and with that of the US—and a summary of the lessons for compensation reform.

Some of the key conclusions of our review of foreign military compensation systems follow:

- **Pay comparability and salary benchmarking.** All three foreign militaries we studied (the UK, Canada, and Australia) explicitly benchmark the salary component of military compensation to pay levels of sectors outside the military to ensure pay comparability with the civilian sector.
- **Compensation for unique nature of military service.** All three foreign military pay systems add to base salary a component intended to compensate members for the unique aspects of military service that conventional benchmarking does not capture (the UK's "X-Factor," Canada's "military factor," and Australia's service allowance).
- **Skill-based pay differentials.** The base pay scales of the three foreign militaries each include skill differentials—higher pay for members in certain occupations requiring high levels of experience or technical competence, or in high demand in the civilian sector.
- **Housing benefit.** The level of housing benefit offered differs across the three foreign militaries. Canada provides a location-related allowance for its members, the UK provides subsidized housing to some of its members, and Australia provides a range

of housing benefits designed to ensure that members pay about the same amount out of pocket regardless of where they are stationed.

- **Tax advantages.** Tax advantages play a limited role in the compensation systems of the foreign militaries we studied.
- **Pay and dependent status.** The relationship between pay and dependent status also differs across the three foreign militaries. In the UK, almost no military compensation is tied to dependent status. In Canada, some relocation benefits are a function of the number of dependents, but little else. Australia, by contrast, offers a range of benefits (including housing, assisted leave travel, and district allowances) that are tied to the makeup of a member's family.
- **Compensation structure.** The percentage of a member's pay that comes from base pay (salary) differs between the US and the three foreign militaries, especially for enlisted members. For US E-4s, about 50 percent of pay is basic pay, with the other half coming from BAH, BAS, and the tax advantage. For equivalent ranks in the UK and Canada, base salary makes up about 75 percent of total pay. In Australia, because of the larger value of housing benefits, E-4 equivalents earn about 60 percent of their compensation from base pay. For US officers (O-4s), basic pay makes up about 70 percent of total pay, which is about the same as equivalent ranks in Australia, and somewhat lower than equivalent ranks in the UK and Canada.

Basic pay

United Kingdom

The primary goal of the British Armed Forces pay system is to retain a sufficient number of qualified personnel. There are two pay structures, one for officers and one for other ranks (equivalent to US enlisted personnel in the United States). A priority of the Armed Services pay system is to ensure that military pay is analogous to what servicemembers would receive in a comparable civilian role. Therefore, an independent Armed Forces Pay Review Body (AFPRB) conducts an annual review of military pay and recommends revisions as necessary. The AFPRB review process is described in detail later.

Basic offer of pay

Most servicemembers are paid using the basic offer of pay, which includes base pay, the Trade Score (for other ranks—equivalent to the US enlisted ranks), and the X-Factor components.

Base pay. Servicemembers in the UK receive base pay that increases incrementally as they gain experience in rank. The current incremental pay system, known as Pay 16, was implemented in 2016. Under Pay 16, base pay is primarily a function of rank and time in rank (step

increments). Base military pay in the UK is taxable and pensionable (meaning that it is one of the pay components that determines a member's retirement pay) [13].

Trade Score for other ranks. For other ranks (enlisted) servicemembers, Pay 16 is made up of a single core pay spine with four pay supplements, referred to as Trade Scores. Each military trade is placed into one of the supplements, designed to achieve pay comparability with the civilian labor force [13]. The determination of a Trade Score is based on a detailed Job Evaluation process, conducted by a joint services Job Evaluation Team with a civilian lead and several military analysts. The process considers six factors: (1) necessary knowledge and experience, (2) job complexity, (3) decision-making and the impact of the job's output on the organization's success, (4) use of resources and the level of supervision undertaken, (5) the level of internal and external communication and their significance, and (6) working conditions, health, and safety. Each factor has a predetermined weight in a scoring rubric [98]. Most trades (representing approximately 70 percent of servicemembers) receive one of the two lower Trade Score supplements [12]. Note that, in some respects, the US military's enlistment and reenlistment bonuses play a similar role to these Trade Score pay supplements in the UK military.

X-Factor. The X-Factor is a pensionable and taxable component of the basic offer of pay that recognizes the relative disadvantages of life in the armed forces (i.e., those aspects of service life that cannot be evaluated when assessing pay comparability with the civilian labor force). The X-Factor is made up of 13 elements, including danger, separation from family, and hours worked. The X-Factor has been a component of the basic offer of pay since 1970 with the introduction of the military salary system. Regular servicemembers, full-time reservists, and part-time reservists who are called up receive an X-Factor payment of 14.5 percent of their base salary, which includes the Trade Score supplement. Part-time reservists and full-time reservists with a limited commitment receive a 5 percent X-Factor payment. Servicemembers receive the full X-Factor payment up to and including the ranks of commander/lieutenant colonel/wing commander. The X-Factor tapers off between these ranks and up to the ranks of vice admiral/lieutenant general/air marshals. Admirals, generals, and air chief marshals do not receive X-Factor payments.

The AFPRB reviews and, if necessary, recommends changes to the X-Factor every three years. The AFPRB reviews each X-Factor component to assess its sustainability for making comparisons between modern civilian and military life. In addition, the assessment examines whether there should be changes in the salary percentage of the X-Factor payment. In 2015, the AFPRB review resulted in a half percentage-point increase in the X-Factor payment to Regular servicemembers, full-time reservists with a full commitment, and part-time reservists when called up. In addition, it reduced the number of X-Factor components from 18 to 13 [13].

Bespoke pay spines

While most servicemembers are paid using the basic offer, some occupations within the military are eligible for bespoke (customized) pay spines, or higher pay that acknowledges recruitment and retention challenges. These bespoke pay spines are referred to as Tailored Offers and are offered to servicemembers in the following occupations: pilots, special forces, divers, chaplains, doctors and dentists, nurses, veterinarians, and officers commissioned from the ranks [13].

The AFPRB and the annual pay round process

The AFPRB was established in 1971, shortly after the establishment of the military salary system. It advises the British government on the level of pay for all servicemembers, up to and including one-star brigadier generals and the equivalent. Pay adjustments for senior officers (two-stars and above) are handled through a similar process but a different independent committee. The AFPRB is an independent body composed of a chair and seven members appointed by the Prime Minister and the Secretary of State. The purpose of the AFPRB is to ensure that military pay is sufficient to recruit, retain, and motivate qualified personnel. A priority is to achieve broad pay comparability between military pay and the civilian labor market. This requirement is unique among public civilian pay review bodies in the UK. The AFPRB reviews basic pay and other aspects of compensation described in this appendix, including pensions, compensatory allowances, and accommodation and food charges.

The AFPRB undertakes the same in-depth pay review process annually. After receiving briefings from the Chief of Defence Personnel and the three Principal Personnel Officers (PPOs) from the three military service branches, the AFPRB conducts a series of visits to 20 military units between April and July. The visits involve discussions with 3,000 to 4,000 military personnel. In the fall, the AFPRB receives written evidence from the Ministry of Defence and the three services. In addition, the AFPRB Secretariat from the Office of Manpower Economics (part of the UK's Department for Business, Innovation, and Skills) provides information on pay comparability. Later in the fall, the AFPRB hears additional testimony from the three PPOs, the Secretary of State, the Chief of Defence Staff, and the Permanent Secretary. Early in the new calendar year, the AFPRB submits pay recommendations to the Prime Minister and the Secretary of State. Throughout the process, evidence submitted to the AFPRB by military officials is regulated through an independent committee focused on public-sector pay that advises the Prime Minister on pay matters, including the recommendation of the AFPRB. In February or March, the government announces the pay rates and any changes, which are subsequently implemented [13].

Canada

The Canadian Armed Forces have established overarching principles of military compensation, including addressing the key manpower requirements of recruiting, retaining, and motivating people with the appropriate skills and abilities to perform military jobs, and recognizing servicemembers' unique contributions to the nation, the special conditions under which they serve, and the impact of service life on their families. Beyond these general principles, two important criteria for development of Canadian military pay structures follow [9] [48]:

- **External relativity.** Ensure pay equity between the CAF and other organizations by anchoring the pay structure with quantifiable salary benchmarks and avoiding force-fitting groups that have high market value in the private sector into main pay structures (these groups should be dealt with separately, or by using add-ons to the main pay structures).
- **Internal relativity.** Ensure pay equity within the CAF by rewarding appropriately leadership (rank), promotion, technical skills, and experience or time in rank, avoiding pay inversions in which members in a lower rank are paid more than those in a higher rank, and providing for annual pay increases through suitable measurement mechanisms.

External relativity is achieved through salary benchmarking linking CAF pay to federal civil service pay, and forms the basic building block of the military pay structure. Internal relativity principles determine relative pay within the CAF based on experience, rank, skill, and job responsibilities. The CAF attempts to balance these criteria through a military compensation system comprised of four major components (all of which are taxable)²⁵ [9]:

1. **Salary benchmark.** Pay for the basic military job is compensated through a pay structure based on salary benchmarking relative to other public-sector jobs and built through pay increments for experience, rank, and skill.
2. **Military factor.** The special conditions of military service are compensated through a “military factor” added to the salary benchmark.
3. **Pay differentials.** There are additional pay differentials for individuals with special technical skills or in high-demand occupations.
4. **Incentive pay,** originally intended to reward exceptional performance, but now in reality a step increase.

²⁵ The only components of Canadian military pay that are not taxable are reimbursements for direct expenses when a member of the CAF is directed to do something (such as job-related travel or training), and pay when assigned to a named, international mission.

CAF members also are eligible for a number of allowances that compensate members for exposure to “austere” living environments or especially risky job conditions. Unlike the other four components, allowances are not pensionable, but they are taxable.²⁶ We describe each of the four components of the Canadian military pay system in turn.

Salary benchmark

In the Canadian military, the largest component of basic pay is established through a system of salary benchmarking, which is a method of generating information about how much other organizations are paying their employees for jobs that are evaluated as similar. Military jobs, both noncommissioned and officer jobs, are benchmarked externally against similar jobs in the Canadian federal civil service (known as the Public Service of Canada, or PS). There are essentially four main pay groups in the Canadian military: (1) non-commissioned members (NCMs), benchmarked to “blue collar” workers, (2) General Service Officers (GSOs), benchmarked to college-educated “white collar” workers, (3) higher level officers (colonels and above), benchmarked to high-level civil service executives, and (4) a specialist group, including members of the medical, dental, and legal professions, whose pay is benchmarked to their private-sector counterparts [48].

For NCMs of the Canadian military (the equivalent to enlisted members or warrant officers in the US military), the pay structure builds on a salary benchmark that, at the lower end, compares military “predominant jobs” at the corporal level (the second-lowest NCM rank) to blue-collar PS occupations at the journeyman level. With the low end of the NCM pay scale determined through benchmarking, the rest of the pay structure is built out through time-in-rank pay increments (1 to 2 percent, awarded annually), promotion pay increments (7 to 9 percent), skill pay differentials (6 to 13 percent depending on rank and occupation) for certain occupations from corporals to master warrant officers (the second-highest rank), and a supervisory differential (4 percent) for those appointed to master corporal [9] [99].

For GSOs (all officers in the ranks of second lieutenant to lieutenant-colonel), there are lower and upper salary benchmarks. At the lower end, second lieutenant jobs are benchmarked against those of degree-holding PS employees. For higher level officers (colonels and generals), there is one benchmark: colonels are benchmarked against the PS Executive Category (EX), typically comparable to a Canadian Public Service Director or Director General (one step below an Assistant or Associate Deputy Minister). There are some differences between pay structures for NCMs and GSOs. There are fewer GSO ranks (5) than NCM ranks (7). Specialist officer groups, including those in the medical, dental, and legal professions, are dealt with completely separately from the main group of GSOs. GSOs also include pilots, who require a pay differential because of competition from the private sector for their services. Because of these differences,

²⁶ We provide more information about the allowances in an addendum at the end of this appendix.

there are fewer constraints on GSO pay-setting relative to NCMs and, thus, greater flexibility to meet or exceed normal pay criteria.

For NCMs, the salary benchmarking process incorporates external relativity by evaluating PS occupations at the journeyman level with predominant jobs at the corporal level. A “predominant job” is the job that most of the corporal journeymen in each trade are doing most of the time. Predominant jobs within a single military occupation are frequently benchmarked to two or more PS occupational groups (or levels within the groups). For example, CAF material technicians are benchmarked against four different PS general labor subgroups and levels, including three distinct PS occupations (sheet metal working, metal machining, and precision working). When this happens, the CAF pay benchmark is a weighted average of the PS jobs. Only predominant jobs in the CAF with strong equivalencies in the PS can be evaluated; military-unique jobs are assumed to be equal to the average value of all evaluated CAF jobs. The process of fully reviewing the salary benchmarks is very manpower intensive and can take up to two years to complete. The last complete reevaluation of the corporal benchmark was conducted in 1988, involving the evaluation of 174 predominant jobs covering 65 of 85 NCM occupations. The benchmarking processes for GSOs and higher level officers works similarly [9] [49]. Table 2 summarizes the benchmarking strategy for various CAF groups.

Table 2. Canadian Armed Forces (CAF) current salary benchmarks

Pay group	Benchmarking strategy and components of base pay
Non-commissioned members (NCMs)	Comparability to Federal Public Service + Military Factor
General Service Officers (GSOs)	Comparability to Federal Public Service + Military Factor
Pilots	Comparability to Federal Public Service + Military Factor + Market Differential
Senior Officers	Comparability to Public Service Executive Group + Military Factor
Legal Officers	Comparability to Dept. of Justice Lawyers + Military Component
Military Judges	Comparability to Provincial Court Judges
Medical and Dental Officers	Net Earnings of Physicians in Private Practice + Military Component

Source: [4].

One of the characteristics of CAF pay that distinguishes it from PS or private-sector organizations is the “team concept.” This team concept, an outgrowth of the internal relativity principle that reflects the cooperative nature of military work, considers the average value of

the work performed by all members of a specific rank level in developing pay for each member. In the PS, by contrast, an individual tends to be paid the evaluated worth for the specific position he or she is filling. The team concept results in most occupations of the same rank inside the CAF being paid the same amount. In general, the team concept tends to inflate pay rates for less-skilled occupations and deflate pay rates for higher skilled occupations (such as pilots or engineers). This pay “flattening” relative to the PS and private sector can hinder recruiting and retention in higher skilled, high-demand occupations. Although there have been several efforts to address this “team concept” constraint on CAF pay, so far success has been limited to specialist occupations, including medical, dental, and law (judges) [9] [48].

Military factor

The military factor pay component compensates members for the unique working conditions of military service, and increases incentives to join the CAF. When established in 1971, the military factor was valued at 3.5 percent, and was later raised to 4 percent in 1974. As of April 1, 2016, the military factor pay is valued at 8.7 percent for NCMs, GSOs, pilots, and all medical and dental officers and at 6.5 percent for higher level officers (colonel and above). Recent increases were in recognition of a higher operational tempo and resulting increases in separations. CAF members are also compensated for being ineligible for overtime pay at a rate of 6 percent of salary for NCMs and 4 percent of salary for GSOs [9] [60].

Skill pay differentials

Another internal relativity principle incorporated into the CAF pay structure is pay for skill. For NCMs, the pay structure includes skill differentials for corporals, sergeants, warrant officers (WOs), and master warrant officers (MWOs). There are two higher skill NCM pay groupings above a Standard level: Specialist 1 and Specialist 2. The Specialist 1 and Specialist 2 sub-groups include trades such as Fire Control Systems Technicians, Flight Engineers, Biomedical Electronics Technicians, and Marine Engineering Artificers. The allocation of an occupation to Standard, Specialist 1, or Specialist 2 levels is based on the Canadian Forces Trade Evaluation Plan (CFTEP).²⁷ Occupations, not individual jobs, are evaluated, and (as with external salary benchmarking) the basic evaluation unit is the “predominant job.” There are currently 43 occupations classified as Specialist 1 and another 6 classified as Specialist 2. Pay differentials for NCMs between Standard and Specialist 1 range from 12 to 13 percent for corporals and sergeants (the ranks at which most technical skills are used), are 9 percent for WO, and are just under 7 percent for MWOs. Differentials for Specialist 2 relative to Specialist

²⁷ CFTEP is a “standard points factor plan” with five factors and a maximum of 1,000 points. The five factors are (i) comprehension and judgment (30 percent), (ii) trades training and experience (30 percent), (iii) responsibility for resources, services, and the safety of others (16 percent), (iv) effort (mental and physical, 12 percent), and (v) working conditions (environment and hazards, 12 percent).

1 occupations range from about 6 percent for corporals and sergeants to 4 percent for WOs and 2 percent for MWOs [9].

For officers, certain occupational groups, including pilots, doctors, dentists, and lawyers, are handled differently within the compensation system (reflecting the principle of not forcing high-market-value groups into main pay structures). Because of the high private-sector demand for their services, GSO pilots require a pay differential similar to the technical skill pay for NCMs (although there is only one differential for pilots, not two). The pilot differential (over the regular GSO pay scale) ranges from about 1 percent for basic-level captains to a maximum of about 18 percent for mid-level captains. From there, the pilot differential gradually decreases to 14 percent for the highest level captains, from 13 percent to 6 percent through the major range, and from 4 percent down to 2 percent for lieutenant colonels. The intent of this differential structure is to reward the people in the ranks who do the most flying [9].

Specialists in the medical, dental, and legal professions are dealt with completely separately from GSOs. They are benchmarked separately (as indicated in Table 2), and only with medical and dental officers does the CAF have a direct private-sector benchmark. Monthly pay for medical and dental officers is roughly 75 percent to 95 percent higher than that for standard GSOs; on top of that, medical officers receive a “special military differential” of C\$20,000 (equivalent to \$14,665) annually, while dental officers receive an additional C\$10,000 (\$7,332) per year. Legal officers receive monthly pay that is 3 to 11 percent higher than GSOs at the rank of captain, and nearly 40 percent higher for high-level majors and lieutenant colonels [9].

Incentive pay (step increases)

Within each rank, there are multiple steps, which the CAF calls incentive pay categories. When a CAF member moves from one category to the next higher category, he or she receives a pay increase of 1 to 2 percent. These step increases are awarded yearly based on time in rank. Each NCM rank has 4 such incentive pay categories (except for privates, who have 3). For GSOs, captains have 10 incentive pay categories, majors have 7, and lieutenant colonels have 4. Higher level officer ranks have 3 categories each [9].

Australia

Permanent Australian servicemembers receive a base salary and a service allowance. Both of these pay components are taxable, except for salary and allowances paid to members deployed overseas in a combat environment, which are not taxed.

Base salary

The specific salary package that Australian Defence Force (ADF) members receive depends on their role and how they entered the ADF (officer or “general entry” schemes). Recruits receive initial employment training (similar to A-School and C-School in the US Navy), and they receive

a salary while in basic training, which increases when they are in initial employment training. Specific salaries depend on rank, pay increment levels, and pay grade. Pay grades (of which there are 10) reflect technical skills and experience, such as flying, submarine, special forces, and special operations skills/experience used on the job. Upon enlistment or appointment, servicemembers usually receive the minimum salary for their rank and pay grade. They may receive more depending on their experience, qualifications, skills, previous relevant military experience, previous reserve experience, or any other experience that is not continuous full-time service. If a member's employment category changes, his or her pay grade may also change. An independent tribunal determines which jobs go into which of the 10 pay grades. Within ranks, pay increment levels (steps—typically three per rank) reflect time in rank. Under the current pay scheme, for example, a noncommissioned soldier in the Australian Army earns about A\$59,500 (\$42,665) annually (including uniform and service allowances). A mid-ranking infantry officer earns about A\$84,000 (\$60,230) (again, including uniform and allowances) [14-15].

Service allowance

Similar to the UK military's X-Factor, and the Canadian military factor, the ADF's service allowance (currently A\$14,271 (\$10,233) per year) compensates personnel for the special demands of military service. Trainees and servicemembers above the rank of major do not receive service allowances. This allowance is taxable, except for members deployed in overseas combat operations [15].

Housing and food expenses

United Kingdom

In the US, servicemembers receive BAH, a tax-free cash subsidy to offset the cost of housing. In the UK, housing is provided for all Regular service personnel. Unlike in the US, British servicemembers pay rent on their housing. The rent is subsidized by the government, at a cost of approximately two-thirds of the market rate. At current UK housing rental rates, the average subsidy would be worth £280 per month. The military deducts the cost of rent from servicemembers' salaries as a charge. Service rank and family size determine whether a servicemember receives a Service Family Accommodation or a Single Living Accommodation. Single Living Accommodations usually are within walking districts of a servicemember's unit, while Service Family Accommodations usually are within a 10-mile radius.

In April 2016, the UK Armed Forces implemented the Combined Accommodation Assessment System (CAAS), a new system for determining rental charges. The CAAS replaced the 4-Tier Grading System, which was determined to be complex and subjective and used an out-of-date methodology to assess housing values. To ensure fair CAAS implementation, servicemembers

whose rental charges decreased were moved to the correct level immediately, while those whose charges increased are being moved incrementally to the higher charge [13].

Early in their careers, most servicemembers live in publicly subsidized rental housing and have a rental charge deducted from their paychecks. Later in their careers, many purchase homes for their families [12]. The military helps servicemembers to purchase homes through the Forces Help to Buy (FHTB) scheme [13].

As with housing, food costs are withdrawn as a charge from the salaries of British service personnel. Servicemembers who use the mess facilities on base, such as trainees, have a daily food charge withdrawn from their salaries. In other cases, servicemembers use a “pay as you dine” program, in which contractors set up dining facilities for military members. Pay-as-you-dine costs are generally comparable to what civilians would pay for food. The AFPRB determines the costs for both the daily food charge and the food charged under the pay-as-you-dine plan. Servicemembers who are away from their normal duty stations on travel can be reimbursed for food expenses [12].

Canada

There is no equivalent of the US military’s BAH or BAS in the Canadian military compensation structure. The closest CAF compensation component that incorporates a geographic differential is the Post Living Differential (PLD), which is a taxable, but not pensionable, monthly allowance paid to CAF members to compensate for the high cost of living (including rental housing costs) in certain areas (typically large cities). Food costs also play a relatively minor role in determining Canadian military compensation. Local variations in food costs do play some role in determining the price indices behind PLD allowance rates, and food costs also affect the level of certain temporary duty allowances (when CAF members are entitled to meals while away from their office or while on tasking/course), which are updated periodically based on the cost of food in Canada [9].

Post Living Differential

Geographical pay differences are handled by the PLD allowance. This allowance, which is taxable, but not pensionable, is intended to compensate CAF members and their families when posted to an area (typically large cities) with a higher than average cost of living (CoL). PLD rates represent the monthly differential between the CoL at the Standard City (the Ottawa/Gatineau area) and that at other established areas. PLD rates are taxable and are set annually based on a Treasury Board-approved methodology using the Canadian consumer price index (CPI), and incorporating items such as rental housing, food, fuel, and other consumables. PLD is supplemented by a Transitional Post Living Differential (TLPD) that is paid monthly to CAF members to help offset CoL fluctuations. PLD rates (by definition) are zero in about half of the areas to which CAF members are posted. In areas where the rates are

positive, they range from C\$62 per month (in Regina and Kitchener) to C\$1,485 per month (in parts of Toronto). The median PLD rate for areas that have them is C\$376 per month in Montreal South Shore (see Table 3) [9, 99].

Table 3. PLD rates

PLD area	Monthly PLD (C\$)
Toronto Area 1	1,485
Toronto Area 5	1,167
Vancouver	1,083
Toronto Area 4	819
Victoria/Esquimalt	816
Calgary	711
Edmonton	684
Halifax	631
Kamloops/Kelowna	525
Toronto Area 3	522
Toronto Area 2	506
Montreal North Shore	505
Aldergrove	418
Hamilton	414
Saskatoon	382
Montreal South Shore	376
Red Deer	327
Cold Lake	319
Moose Jaw	284
Lethbridge	234
Guelph	167
St. John's	149
Medicine Hat	145
Quebec City - Valcartier	117
Sept -îles -DND	107
Stratford - DND	82
Meaford-Owen Sound	77
Nanaimo	75
Cambridge	71
Kitchener, Regina	62

Source: [6].

Australia

For ADF members, housing assistance may be provided to a member who needs suitable accommodation, but does not have a home in the posting location. Some members also are

provided with low-cost meals in ADF dining halls or meal allowances. Table 4 summarizes the housing and meal benefits that are available to ADF members [15].

Table 4. Housing and meal assistance provided to ADF members

Type of assistance	Description
Housing	Living-in accommodation (a barracks or similar kind of residential accommodation that is provided by the Commonwealth and serves primarily members without dependents) and service residences (SR) (residential accommodation provided by the Commonwealth) are made available to ADF members at a charge.
Temporary accommodation allowance	A member who cannot live in suitable accommodation for a short time may be given an allowance to pay for a stay in a serviced apartment or hotel.
Rent allowance (RA)	A member who lives in a rented home may be able to get an allowance to assist with a portion of the rent. The amount of RA is the difference between what the member would pay if in an SR and the rent charged, so that members in an SR or in RA pay the same contribution. RA is not taxed.
Meal costs	A member who has to live in (a barracks) may be provided with low-cost meals in the mess. Some members who live away from their families may be given an allowance to pay for meals (to help with the cost of maintaining two premises).
Utility costs	The Commonwealth may pay part of the cost of utilities, such as water, gas, and electricity.

The housing benefit package is designed so that members pay a similar out-of-pocket amount for housing, no matter where they live, while maintaining a minimum housing standard for all members (roughly equivalent to a three-bedroom house). This means that members living in higher-cost areas (such as Sydney, for example) will receive a higher housing benefit. The value of this benefit can be substantial—on the order of A\$16,000 per year for ADF members—although the amount will vary by location [14].

Tax-advantaged pay and benefits

United Kingdom

Almost all aspects of UK military remuneration are taxed. There are a few exceptions, but none are comparable to the BAH and BAS that US servicemembers receive. According to a compensation subject matter expert from the British Ministry of Defence, “the government insists that everyone pay taxes.” There are a few allowances that are not taxable, but that is because they constitute expense reimbursements. An operations allowance is equivalent to six

months of tax. This allowance, however, serves as a sort of compensation for taxes, rather than tax-free income.

The only other case in which British servicemembers are relieved from paying some taxes is when they are serving overseas. At that time, they do not need to pay the Council Tax, which is analogous to US local property taxes. This is because they are not using the local services for which they would otherwise be paying. This tax relief is only for servicemembers who live away from a military base. There is no Council Tax for service personnel who live on UK military installations [12].

Canada

Most of the elements of Canadian military compensation are taxable. The major exception is the tax-free status that exists for certain overseas operations. The Tax Exemption for Deployed Personnel was introduced in 2004 and created tax exemptions at both the federal and provincial/territorial level for CAF personnel deployed on overseas operations designated as “medium” or “high” risk. In 2017, all CAF personnel deployed on named, international missions became eligible for tax relief. Also, CAF members who are reimbursed for expenses (for example, meals while on travel or training) do not pay taxes on the reimbursed amount. Otherwise, and in contrast with US servicemembers, CAF members do not receive a large portion of their compensation as a tax advantage [9].

Australia

Most forms of ADF pay are taxable. The major exception is pay for members who serve overseas in a combat environment, which is tax exempt. The rent allowance (RA) housing benefit is also not taxed [14-15].

Salary packaging

With salary packaging, ADF members can pay for some items or services from pre- or post-tax income. Members can “salary package” computers, cars, child care, and superannuation (contributions to the pension fund). Members can package up to 100 percent of their salary (including the service allowance, the meal allowance for members who have to work long hours to buy meals when service-provided meals are not available, the parking contribution for a parking space permit for members posted to a specific area, and the separation allowance for spending time away from dependents for service-related reasons) [15].

Retirement benefits

United Kingdom

In the UK, there is one pension scheme for all servicemembers, and it is no contributory. There are no plans to introduce employee contributions in the future. The Ministry of Defence pays the equivalent of 1/47 of each servicemember's salary into the pension pot. Pension payments are based on the final salary (rank) at the point of retirement. The pensionable portion of a UK servicemember's salary includes the base pay (including skill differentials and step increments) and X-Factor components (overall, about 90 to 95 percent of total compensation). Other components of pay (including allowances and any subsidized accommodation benefits) do not factor into the member's pension. The typical pension-eligible age is 60. However, servicemembers can qualify for an early departure payment if they serve as Regulars for at least 20 years and reach the age of 40. If personnel have a break in service of more than 5 years, they must serve an additional 20 years to qualify for the early departure payment [13].

Canada

The Canadian Forces Superannuation Act (CFSA) established that all CAF members in the Regular Forces become Regular Forces Pension Plan contributors when they join the service. Pension benefits are based on rules that depend either on years of pensionable service or CAF service, age, earnings/salary, and circumstance at release. The components of pay that determine a CF member's pension include the salary benchmark, the military factor, the pay differentials for specialist technical skills, and incentive pay (step increments) (about 90 to 95 percent of total compensation). Allowances (such as the environmental allowances or PLD) do not factor into the determination of a CAF member's pension. The annuity formula calls for 2 percent of the member's best five average years' of salary for each year of pensionable service. A retiree with 25 years of service would receive an annual pension benefit equal to 50 percent of the average best five years of earnings; a retiree with 35 years of service would receive 70 percent, and so forth. Member contribution rates as of 2018 are 6.85 percent of earnings up to the yearly maximum pensionable earnings (YMPE) level of \$51,100, and 9.2 percent of earnings above YMPE. In 2012, the Canadian government announced that the pension plan would move to a 50:50 cost-sharing ratio between the government and members (at the time the ratio was about 70:30, government to members). As a result, pension contribution rates for CAF members who contribute under the full-time pension plan have increased annually since 2013 in a move toward that ratio. The vesting period for the plan is 2 years, having been reduced from 10 years in 2007 [9, 100].

Australia

In 2016, ADF moved to a fully funded superannuation (defined-contribution) model for all prospective members. There is currently one scheme available to members who joined the ADF after July 1, 2016. The ADF contributes 16.4 percent of a member's salary to the fund (there is no required member contribution at present, but members may contribute additional funds if they wish). On retirement, the fund pays a lump sum (based on contribution and the rate of return to fund investments) that can be used to purchase an annuity or other type of investment. This system replaced the previous defined-benefit system in which ADF members received an annual pension payment that was a function of years of service and final salary. When the transition from the older defined-benefit system to the new superannuation scheme was made in 2016, the ADF permitted current members to stay in the old system, or switch to the new one. The ADF found that the adoption rate for the new system was relatively low; currently, only about 20 to 25 percent of ADF members are in the new superannuation scheme. Participation is expected to rise to about 50 percent by 2023 [14-15].

Other kinds of compensation

Servicemembers in the UK, Canada, and Australia also qualify for a number of other kinds of compensation. These compensation components are, in most cases, not pensionable and typically equivalent to the US military's special pays (for example, hazardous duty pay, family separation pay, and special pays for hard-to-staff billets). Since these types of pay fall outside the bounds of RMC, and moving to an SSS would likely not change their nature, we omit them from the body of the appendix. For the sake of completeness, however, we describe the most important of these other forms of compensation in an addendum at the end of this appendix.

Conclusion: Foreign military compensation

To conclude, we summarize the similarities and differences among the three foreign military compensation systems, we compare the pay structures of the three systems to that of the US, and we summarize some lessons learned about implementing military compensation reform from the recent histories of military compensation in the UK, Canada, and Australia.

Similarities and differences among foreign military compensation systems

There are several distinct similarities between the military compensation systems of the UK, Canada, and Australia:

- **Salary benchmarking.** Each system explicitly benchmarks the salary component of military compensation to the pay levels of sectors outside the military. The UK military has an explicit policy of ensuring broad pay comparability among civilians, while Canada benchmarks base pay to pay in the federal civil service. Australian military salaries are also benchmarked against occupations outside the military when comparisons are possible.
- **Explicit compensation for disadvantages of service life.** Each of these pay systems has a component—the UK’s “X-Factor,” the Canadian “military factor,” and the Australian service allowance—that explicitly values the arduous nature of military service for most servicemembers and their families, and adds this value to the base salary.
- **Skill differentials.** The pay scales of the three foreign systems also include skill differentials—higher pay for members with valued technical skills or experience.
- **Limited tax advantages.** With a few exceptions (notably, individuals serving overseas in combat environments), none of the three foreign militaries considered has a substantial pay component that is exempt from taxation.

One important difference in the three foreign militaries’ compensation structures is how housing benefits are handled. Military members in Australia are provided with substantial housing benefits, although these do not necessarily take the form of an explicit cash payment along the lines of the US’s BAH. Some UK military personnel also receive subsidized rents (but not those who purchase their own homes, for the most part). Canadian military members (other than those living in military housing) also do not receive as much in terms of housing benefit or subsidized accommodations, although they do receive a location-related pay differential if they live in an area with a high cost of living.

There are also important differences in the relationship between pay and dependent status among these foreign militaries. In the UK, almost no military compensation is tied in any way to whether a member has dependents [12]. In Canada, some relocation benefits are tied to the number of dependents, but little else [8]. In Australia, by contrast, the ADF provides a range of benefits (including housing, assisted leave travel, and district allowances) that all rely on the makeup of a member’s family [14-15].

Comparing US and foreign military compensation

In this subsection, we compare the compensation structures of the US and foreign militaries by looking at the relative importance of the various components of compensation in each military. We compare the pay components of individuals in the US military in the “middle” of the rank structure—that is, E-4 for enlisted members and O-4 for officers to their counterparts in the UK, Canada, and Australia. Table 5 summarizes the comparison ranks for each military and

service. We focus on types of compensation that are equivalent to the components of US RMC, and we omit types that are equivalent to special pays and bonuses.

Table 5. Ranks, by country and service, corresponding to US ranks E-4 and O-4

US rank	Service	US	UK	Canada	Australia
E-4	Air Force	Senior airman	Corporal	Corporal	
	Army/ Marine Corps	Corporal	Corporal	Corporal	Lance corporal
	Navy	Petty officer, 3 rd class	Leading hand	Leading seaman	
O-4	Air Force	Major	Squadron leader	Major	Squadron Leader
	Army/ Marine Corps	Major	Major	Major	Major
	Navy	Lieutenant commander	Lieutenant commander	Lieutenant commander	Lieutenant commander

Enlisted

Table 6, Table 7, Table 8, and Table 9 compare the compensation structures for enlisted ranks comparable to US E-4s for the US, UK, Canada, and Australia. “Experience increment” refers to increases in pay that come from an additional year of service or year in grade. “Skill pay” or “skill increment” refers to increases in pay that come from performing an occupation requiring higher-than-standard levels of skill and/or experience.

Table 6. Components of monthly compensation for US E-4s

Pay component	Amount	Percentage of total pay
Basic pay	\$2,370	49.5%
Step increment	\$120	2.5%
BAH	\$1,698	35.5%
BAS	\$369	7.7%
Tax advantage	\$230	4.8%
Total monthly pay	\$4,788	

Source: [14].

Note: Assumes individual with 3 YOS, married with 1 child, stationed in the Atlanta, Georgia, area.

Table 7. Components of monthly compensation for UK OR-4s

Pay component	Amount		Percentage of total pay
	UK	US	
Base pay	£2,553	\$3,273	76.5%
X-Factor (14.1%)	£360	\$461	10.8%
Trade Score placement	£74	\$95	2.2%
Step increment	£68	\$88	2.0%
Subsidized accommodation	£280	\$358	8.4%
Total monthly pay	£3,335	\$4,276	

Source: [15].

Table 8. Components of monthly compensation for Canadian OR-4s

Pay component	Amount		Percentage of total pay
	Canada	US	
Base salary	C\$5,014	\$3,742	76.1%
Military factor (8.7%)	C\$497	\$371	7.5%
Skill pay	C\$602	\$449	9.1%
Incentive pay (step increment)	C\$98	\$73	1.5%
Post Location Differential	C\$376	\$281	5.7%
Total monthly pay	C\$6,587	\$4,916	

Source: [6].

Note: Assumes individual posted to the Montreal South Shore location.

Table 9. Components of monthly compensation for Australian OR-4s

Pay component	Amount		Percentage of total pay
	Australia	US	
Base salary	A\$4,565	\$3,237	61.6%
Service allowance	A\$1,189	\$843	16.1%
Pay grade (skill) increment	A\$98	\$69	1.3%
Step increment	A\$220	\$156	3.0%
Housing benefit	A\$1,333	\$946	18.0%
Total monthly pay	A\$7,405	\$5,252	

Source: [10].

For E-4s/OR-4s, the compensation structure for US servicemembers differs substantially from those for British, Canadian, and Australian military members. For US enlisted members, basic pay (the salary component of pay) makes up about half of total pay. The other half comes from the allowances and the tax advantage. For military members of equivalent rank in the UK and Canada, the base salary component makes up about 75 percent of total pay. For Australian OR-

4s, a larger proportion of compensation comes from the housing benefits, so the base salary component makes up about 60 percent of total pay.

Officers

Table 10, Table 11, Table 12, and Table 13 compare the compensation structures for enlisted ranks comparable to US O-4s for the US, UK, Canada, and Australia.

Table 10. Components of monthly compensation for US O-4s

Pay component	Amount	Percentage of total pay
Basic pay	\$7,404	71.8%
Step increment	\$244	2.4%
BAH	\$2,091	20.3%
BAS	\$254	2.5%
Tax advantage	\$320	3.1%
Total monthly pay	\$10,313	

Source: [14].

Note: Assumes individual with 3 YOS, married with 1 child, stationed in the Atlanta, Georgia, area.

Table 11. Components of monthly compensation for UK OF-3s

Pay component	Amount		Percentage of total pay
	UK	US	
Base pay	£4,323	\$5,543	80.7%
X-Factor (14.1%)	£610	\$782	11.4%
Step increment	£142	\$183	2.7%
Subsidized accommodation	£280	\$358	5.2%
Total monthly pay	£5,355	\$6,866	

Source: [15].

Table 12. Components of monthly compensation for Canadian OF-3s

Pay component	Amount		Percentage of total pay
	Canada	US	
Base salary	C\$8,919	\$6,656	87.2%
Military factor	C\$776	\$579	7.6%
Incentive pay (step increment)	C\$158	\$118	1.5%
Post Location Differential	C\$376	\$281	3.7%
Total monthly pay	C\$10,229	\$7,634	

Source: [6].

Table 13. Components of monthly compensation for Australian OF-3s

Pay component	Amount		Percentage of total pay
	Australia	US	
Base salary	A\$7,483	\$5,307	70.4%
Service allowance	A\$1,189	\$843	11.2%
Pay grade (skill) increment	A\$254	\$180	2.4%
Step increment	A\$369	\$261	3.5%
Housing benefit	A\$1,333	\$946	12.5%
Total monthly pay	A\$10,628	\$7,538	

Source: [10].

The pay structures for US officers in rank O-4 and their UK, Canadian, and Australian counterparts are more similar compared with E-4s. For US officers in O-4, the basic pay component of compensation is larger relative to BAH and BAS, making up about 70 percent of a typical O-4 pay package. This is relatively close to the 81 and 87 percent of total pay that comes from the salary component for O-4 equivalents in the UK and Canada, respectively, and about the same as Australian OF-3s, who again receive a larger housing benefit than their UK and Canadian counterparts do.

Challenges in implementing compensation reforms

The recent histories of compensation reform in the UK, Canada, and Australia may provide some lessons for attempts to reform the US military compensation system. Examples follow:

- **Transparency.** The UK's attempt to introduce a new pay system (Pay 2000) and the subsequent need to simplify that system (Pay 16) highlight the importance of designing pay systems that are transparent and easy for servicemembers to understand.
- **Equity.** The success of compensation reforms depends on perceptions of equity among servicemembers. Canada's unsuccessful attempts to expand skill pay differentials illustrate this point. Maintaining perceptions of equity may require special policy initiatives, such as the UK's "pay protection" policy, which ensured that no servicemember would receive a pay cut under the new Pay 16 plan for three (subsequently extended to six) years.
- **Low take-up rates.** When current members are given a choice about whether or not to move to a newly implemented compensation system, take-up rates can be low, as Australia's recent introduction of a defined-contribution superannuation retirement scheme shows. Special efforts may be required to provide incentives for members with a choice to adopt the new system.

Addendum: Other kinds of compensation

This addendum discusses other kinds of compensation that are, in most cases, not pensionable and are equivalent to the US military's special pays (for example, hazardous duty pay, family separation pay, and special pays for hard-to-staff billets).

United Kingdom

Other kinds of compensation available to UK military members include allowances and expenses, recruitment and retention payments, and other financial incentives.

Allowances and expenses

Allowances and expenses paid to British servicemembers represent the smallest portion of total compensation funding. The annual cost of allowance and expenses has been reduced from approximately £880 million in FY 2009–2010 to approximately £560 million in FY 2017–2018. These allowances are taxable but not pensionable [13].

UK military allowances fall into two categories: compensatory and contributory. Compensatory allowances are awarded to servicemembers for activities, tasks, or conditions that are considered to be above and beyond those included in the X-Factor payment [13]. For example, there is a living allowance for substandard accommodations, which servicemembers may receive either in the UK or while serving overseas [12]. Contributory allowances provide financial assistance for additional expenses incurred due to the demands of service. The provision of an allowance lets servicemembers decide how and where they spend the cash award, whereas expenses provide refunds for actual expenses incurred during service. Expenses must be preapproved and are not discretionary. Expenses are analogous to US expense reimbursement for travel and per diem. Expenses and both types of allowances are categorized under the following activities: food and accommodation, official travel, community, UK service, overseas service, separation, deployment, relocation, servicemember training and education, education for servicemembers' children, clothing, environmental expenses, and miscellaneous. The AFPRB regularly reviews compensatory allowances. Internal work within the Ministry of Defence determines the value of other allowances and expenses [13].

There is only one allowance based on a servicemember's number of dependents: the children's educational allowance. Military members can apply for an allowance to send their children to boarding school if they are stationed overseas. The allowance helps ensure that children continue their education uninterrupted [12].

Recruitment and retention payments

Select servicemembers receive additional Recruitment and Retention Payments (RRPs). The Ministry of Defence awards RRP to specific groups to assist with recruitment or retention requirements. RRP also are used to address trades in which there may be a shortage of personnel that may affect operations [12]. RRP is taxable income, but it is not pensionable. There are currently 17 categories of RRP. The determination of whether an occupation receives RRP is based on four factors that may lead to recruitment or retention challenges: (1) an adverse or challenging environment, (2) the need to take on additional training or responsibility, (3) high levels of competition from the civilian labor market, such as the demand for nurses, and (4) structural factors, such as a reduced training pipeline. Some servicemembers receive RRP continuously throughout their careers. In other cases, it may be awarded on a noncontinuous basis, during a period when a skill is a secondary task for a person, based on completion of a specific task, or while he or she is called up as a reservist [13].

Other financial incentives

In addition to RRP, the Ministry of Defence uses a variety of stand-alone financial incentives, which are short-term measures to address current or projected manpower shortfalls. These financial incentives are lump-sum payments that, like RRP, are taxable and not pensionable. Financial incentives are used to incentivize recruitment, retention, rejoining the service, transferring to high-demand trades, and committing to additional service [13].

Canada

The Canadian military compensation structure includes a system of allowances that provide eligible members with additional compensation in certain situations. These allowances are taxable, but are not pensionable. The types of allowances are environmental, special, clothing, and payments to dependents of deceased or missing personnel.

Environmental allowances

Environmental allowances compensate members whose military duties involve exposure to adverse conditions that are not normally experienced by other members. These allowances also serve as an incentive to attract and retain members willing to serve under such conditions. There are typically two types of environmental allowance for each activity/condition: one for members continuously undertaking a specific activity or exposed to a specific type of environmental condition when posted to a designated position (paid at a monthly rate), and a second, “casual” type of allowance for members periodically undertaking the activity or exposed to the condition (paid at a daily rate, with a monthly maximum equal to the noncasual monthly rate). Table 14 summarizes the different types of environmental allowances available to Canadian servicemembers (monetary values are in Canadian dollars).

Table 14. Environmental allowances (values are in Canadian dollars)

Allowance title	Description	Monthly rate (continuous)		Daily rate (casual)
		Min.	Max.	
Paratroop Allowance	Perform parachute jumping	267	393	75.71
Rescue Specialist Allowance	Perform rescue specialist duties	518	790	^a
Aircrew Allowance	Exposure to aircrew conditions	327	621	31.13
Land Duty Allowance	Exposure to field conditions	327	822	27.16
Diving Allowance	Perform clearance diving duties	689	689	42.35
	Perform other diving duties	145	260	23.36
Diving Deep Danger Allowance	Clearance divers who dive more than 200 feet underwater in a submersible			31.18
Diving Experimental Saturation Allowance	Divers (clearance, ship, or combat) who participate in an experimental saturation dive and decompression for at least a continuous 24-hour period			^b
Sea Duty Allowance	Perform duties on a ship or vessel	327	822	27.16
Hypobaric Chamber Allowance	Aeromedical training officers and technicians who instruct, or observe, in a hypobaric chamber			15.58
Submarine Allowance	Perform duties on a submarine	475	935	30.52
Exceptional Hazard Allowance	Required to perform disposal procedures on known or suspected explosives or extremely hazardous materials			^c
Special Operations Allowance	Perform command or general support duties for special operations	741	888	22.00
	Perform operational specialist support duties for special operations	1,355	1,621	48.00
	Perform assaulter duties for special operations	2,154	2,503	71.00
Special Operations Assaulter Allowance	Perform assaulter duties for special operations	1,486	3,920	76.22
Submarine Crewing Allowance	Crew or are required for readiness-to-crew submarines	402	402	

Source: [16].

^a The Rescue Specialist Allowance Rate (Casual) is the sum of the amounts that the member would have been entitled to receive under Paratroop Allowance (Casual), Aircrew Allowance (Casual), and Diving Allowance (Casual).

^b The Diving Experimental Saturation Allowance rate ranges from \$40.09 to \$95.39 per day based on the depth of the dive.

^c The Exceptional Hazard Allowance rate is \$190 per incident involving an "extremely hazardous chemical," or \$366 per incident involving an "explosive substance," "improvised explosive device," or "primed charge."

The amount a CAF member earns (within the range of monthly rates) is determined by experience level. Specifically, monthly rates depend on the number of months of eligible service a member has accumulated during his or her career in relation to the allowance in question. Members are awarded “credit points” for experience (one credit point for each month in which the member has completed a minimum of nine consecutive full days of eligible service). Usually, it takes 216 credit points (equivalent to 18 years performing the activity or being exposed to the condition) to reach the highest monthly rates [10].

These environmental allowances are essentially equivalent to the various types of special and incentive pays in the US military. In general, environmental allowances in the Canadian military are much less than the salary provided as part of compensation, although there are rare special cases (e.g., Special Operations Allowance for those with assaulter duties) where allowances can make up a larger percentage of total compensation. For example, for Canadian NCMs and GSOs, the basic salary of a sergeant or a mid-level second lieutenant (who both earn around C\$6,000 a month) eligible for Land Duty or Sea Duty Allowance would be increased by 5 to 14 percent (depending on experience level) because of the allowance [9-10, 101].

Special allowances

Special allowances in the CAF compensate members for a number of different situations. The most important of these allowances are the Post Living Differential (PLD), already discussed, and the Recruitment Allowance (RA).

Recruitment allowance. RA is paid in one or more lump sums to eligible applicants enrolling in understrength military occupations. NCMs are eligible for an allowance of C\$10,000 or \$20,000 if they hold an education or credential that is relevant to an understrength occupation. Officers can earn an RA of C\$40,000 if they have an engineering or science degree related to an understrength occupation. In the medical field, pharmacy officers are eligible for an RA of C\$25,000 to C\$50,000, licensed dental officers can earn C\$25,000, and licensed medical officers are eligible for RAs in the range of C\$40,000 to \$225,000 [9-10].

Other types of allowances. There are a number of other allowances paid out under a variety of circumstances. Some of them include [10]:

- *Allowance - Loss of Operational Allowances (ALOA)* are paid monthly to CAF members to replace allowances related to Special Duty Area or Special Duty Operation (SDA or SDO) that were lost as a result of becoming ill or injured.
- *Maternity and Parental Allowances (MATA/PATA)* are paid to CAF members to supplement their Employment Insurance (or Quebec Parental Insurance Plan) benefits while they are on maternity or parental leave. MATA/PATA pays about 90 percent of the amount of pay and allowances to which the member would ordinarily be entitled.

- *Civilian Dress Assistance Allowance (CDAA)* is paid monthly to CAF members (at the rate of C\$103 to C\$137) required to wear civilian clothing on a continuous basis for at least 70 percent of the member's normal working hours when performing that duty.
- *Payments to Dependents of Missing or Deceased Personnel.* A number of payments are made to the families or estates of CAF members who are killed or missing while serving. These include a Death Gratuity, which is a function of basic pay, and several allowances that convert unused leave into a cash payment that is also a function of basic pay.

Australia

In addition to the service allowance, there is a range of salary-related allowances based on an ADF member's work, location, qualifications and other criteria. These allowances are taxable, except for members serving in overseas combat operations.

Work-related allowances

Among the numerous work-related allowances for performing specific military duties are the following [15]:

- **Allowances to compensate for special demands** of military diving, clearance diving, flying, maritime service (serving at sea), instructing recruits, paratrooper duty, special forces service, submarine escape training/underwater ascents, and working with unpredictable explosive devices
- **Sustainability allowances** – payments to provide incentives to return to sea duty, for special forces members to take postings outside of their parent unit, or to encourage members to join and continue to serve in the submarine workforce
- **Allowances for medical and dental officers**, including the Army Dental Officer professional development scheme, medical residency payments (additional salary for working as a resident medical officer at a civilian hospital), or refresher training for former medical or dental officers
- **Instructor allowances** for fields involving adventurous training or arduous conditions
- **Trainee allowance and trainee's dependent allowance** to make up for the special demands of trainee life and to support the member's dependents while training

Additional allowances are available, such as Airfield Defence Guards annual proficiency bonus, boarding party allowance (for boarding a foreign target vessel), higher duties allowance (for members who are directed to perform duties in a vacant higher level positions), Officer Aviation remuneration structure allowance (seniority-based allowance for an identified

Officer Aviation member of the Permanent Air Force), and additional benefits/allowances for star-based officers.

Location-related allowances

Location-related allowances are not awarded to all members, but are offered under specific circumstances. These allowances include the following [14-15]:

- **Remote locations.** Members stationed in the ADF district, Port Wakefield, or Scherger receive an allowance for serving in remote locations in Australia. These allowances are intended to make up for the isolation, harsh climate, and high cost of living associated with these locations.
- **Antarctic allowance** for being posted in Antarctica.
- **Field allowance.** Members may receive a field allowance if they have to live and work in uncomfortable conditions in the field while on duty. These conditions include infrequent contact with home and working long and/or irregular hours with limited leisure time.

Critical skills bonuses

ADF members may receive bonuses if they serve in the permanent forces or as full-time reservists and have completed an initial period of service (three years of continuous, full-time service). Bonuses are awarded for the following “critical skills” [15]:

- Medical and dental officers and Medical Officers professional development
- Air Force—High Readiness Reserve
- Army—High Readiness Reserve, 1st Recruit Training Battalion recruit instructors, and targeted rank and employment categories
- Navy—Certain members in the Submarine division, Electronics Technical (junior sailor), Marine Technical and Electronics Technical (sailor) and individuals critical to Navy capability

MSBS retention benefit

After 15 years of continuous eligible service, servicemembers may receive the Military Superannuation and Benefits Scheme (MSBS) retention benefit. This payment, equivalent to one year’s salary, serves as an incentive to stay in the military until the completion of 20 years of service. To receive the benefit, officers must have obtained the rank of major and enlisted members the rank of sergeant. Members may receive a pro-rata amount if they can’t complete the last five years of service or are promoted to major or sergeant between 15 and 20 years of service. The payment is taxed as if it were salary. Members may take the benefit in cash or as “salary sacrifice,” paying it into an approved retirement (superannuation) fund [15].

Appendix D: Sources

Compensation preferences

We reviewed military manpower and academic research on individual compensation preferences (for both military and civilian personnel). We consulted numerous sources, including previous CNA studies, and sources archived in the Defense Technical Information Center (DTIC), academic databases (EBSCOHost, ProQuest, JSTOR, and LexisNexis Academic), and Google Scholar. Our sources included academic research from a wide variety of disciplines, drawing from labor economics, human resource management, psychology, and organizational sciences, and using a range of methodologies, including surveys and focus groups, and statistical analysis.

Civilian compensation systems

To learn about civilian compensation structures, we held discussions with subject matter experts (SMEs) from the following sectors:

- Federal civilian agencies (5)
- Law enforcement, large state agencies (2)
- Private sector: Human resources consulting firms (3)
- Nonprofit and church consulting firms (3)

In addition to SME discussions, we gathered information about compensation structures from academic publications, news articles, research surveys and reports, and online government documentation. In some instances, we discovered information about government systems through articles published by private websites and news sources. When possible, we located and referenced regulations, codes, and laws from official government websites and publications to verify the claims made by nongovernment sources. Some additional literature related to compensation structures, both public and private, was provided by SMEs. Where relevant, we cite these sources in the paper.

Data from the Current Population Survey was retrieved from the Integrated Public Use Microdata Series (IPUMS). These data were used to create figures about employment over the past eight years. Examples of COLA and LQA amounts were calculated from tables posted by the US Department of State. When applicable, the websites hosting these tables are cited.

Foreign military compensation systems

Our review of foreign military compensation practices relied on the cooperation of the three foreign militaries we studied. We conducted phone conversations and/or multiple email exchanges with individuals in each of the three militaries, who directed our questions to other members of their organizations when necessary. We also relied on policy documents and briefing materials provided to us.

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Abbreviations

A\$	Australian dollars
ADF	Australian Defence Force
AFPRB	Armed Forces Pay Review Body (UK)
ALOA	Allowance – Loss of Operational Allowances
BAH	basic allowance for housing
BAS	basic allowance for subsistence
BRS	Blended Retirement System
C\$	Canadian dollars
CAAS	Combined Accommodation Assessment System
CAF	Canadian Armed Forces
CDAA	Civilian Dress Assistance Allowance
CEB	Corporate Executive Board
CFSA	Canadian Forces Superannuation Act
CFTEP	Canadian Forces Trade Evaluation Plan
CIVMAR	civil service mariner
CoL	cost of living
COLA	Cost-of-Living Adjustment
CONUS	continental United States
CPI	consumer price index
DOD	Department of Defense
DTIC	Defense Technical Information Center
ECI	employment cost index
EX	PS Executive Category
FHTB	Forces Help to Buy
FS	Foreign Service
FWS	Federal Wage System
GAO	General Accounting Office (before July 7, 2004)
GAO	Government Accountability Office (since July 7, 2004)
GS	General Schedule
GSO	General Service Officer (Canada)
IPUMS	Integrated Public Use Microdata Series
LEO	Law Enforcement Organization
LQA	Living Quarters Allowance
MATA/PATA	Maternity and Parental Allowances

MOS	military occupational specialty
MSBS	Military Superannuation and Benefits Scheme
MSC	Military Sealift Command
MWO	master warrant officer (Canada)
NCM	non-commissioned member (Canada)
NDAA	National Defense Authorization Act
OCP	Overseas Comparability Pay
OHA	Overseas Housing Allowance
OPM	Office of Personnel Management
PLD	Post Living Differential
POC	point of contact
PPO	Principal Personnel Officer
PS	Public Service of Canada
QRMC	Quadrennial Review of Military Compensation
QSI	quality step increase
RA	rent allowance
RMC	regular military compensation
RRP	Recruitment and Retention Payment
SDA	Special Duty Area
SDO	Special Duty Operation
SME	subject matter expert
SRB	Selective Reenlistment Bonus
SSB	Special Separation Benefit
SSS	single-salary system
TPLD	Transitional Post Living Differential
TSMA	temporary separate maintenance allowance
TSP	Thrift Savings Plan
VSI	Voluntary Separation Incentive
WO	warrant officer
YMPE	yearly maximum pensionable earnings
YOS	years of service

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