



# Promotion Benchmarks for Senior Officers with Joint and Acquisition Service

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## Preface

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The Goldwater–Nichols Department of Defense Reorganization Act of 1986 (Pub. L. 99-433, 1986; codified at 10 U.S.C. § 662) established objectives for promotion of officers with service in joint assignments. Congress intended the objectives to ensure that officers assigned to joint service were comparable in quality to officers serving in various capacities within the military services. The Office of the Secretary of Defense and the Joint Staff monitor achievement of the objectives using reports of promotion outcomes compiled in accordance with instructions they provide to the services.

An earlier RAND Corporation study of joint officer management (Harrell et al., 1996) noted that “the comparative [Goldwater–Nichols] promotion statistics are complex and hard to comprehend . . . and may not represent a true picture of compliance with Goldwater–Nichols objectives” (p. 22). Some of the concerns raised in that study still exist; the objective of this study is to address those and others that have been identified. Like in that previous study, we analyzed whether the current statutory and policy objectives are working as intended, identified concerns with the calculation methodologies used to determine compliance, and developed suitable alternatives. Additionally, we addressed how Acquisition Corps officers are compared with line and equivalent officers in the same service, as prescribed in the Defense Acquisition Workforce Improvement Act (Pub. L. 101-510, 1990, Title XII). Service reports regarding joint service and Acquisition Corps promotion comparisons are compiled under a common set of instructions.

Our approach relied heavily on digital data provided by the services and augmented by the Defense Manpower Data Center to confirm the services’ promotion-outcome reporting procedures and to determine how the reports would appear under alternative policies and reporting instructions.

This research was sponsored by the director of Officer and Enlisted Personnel Management in the Office of the Under Secretary of Defense for Personnel and Readiness and conducted within the Forces and Resources Policy Center of the RAND National Defense Research Institute, a federally funded research and development center sponsored by the Office of the Secretary of Defense, the Joint Staff, the Unified Combatant Commands, the Navy, the Marine Corps, the defense agencies, and the defense Intelligence Community.

For more information on the RAND Forces and Resources Policy Center, see [www.rand.org/nsrd/ndri/centers/frp](http://www.rand.org/nsrd/ndri/centers/frp) or contact the director (contact information is provided on the web page).

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## Summary

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The Goldwater–Nichols Department of Defense Reorganization Act of 1986 included requirements, codified at 10 U.S.C. § 662, that the Secretary of Defense ensure that the qualifications of officers assigned to the Joint Staff are such that they will be promoted to the next-higher grade at rates not less than those of officers who have served on their services’ headquarters staffs. U.S. Department of Defense policy extends the same consideration to officers who have served on the Office of the Secretary of Defense (OSD) staff. Similarly, per 10 U.S.C. § 662, joint-qualified officers (JQOs) are expected to be promoted at rates not less than those of all officers in their services, grades, and competitive categories.<sup>1</sup> The Defense Acquisition Workforce Improvement Act, codified at 10 U.S.C. § 1731, indicates that Acquisition Corps officers are expected, like JQOs, to be promoted at rates not less than those of all line (or equivalent) officers in the same armed force.

To implement these benchmarking requirements, the Department of Defense and the Joint Staff have issued instructions for post–promotion board reporting of counts of eligibles, promotion selectees, and comparative selection rates for officers in the various categories of interest. The research underlying this report examined the reporting requirements summarized above as they pertain to promotions to grades O-7 and O-8 to determine whether they continue to meet the objectives for which they were established, to identify any impediments to effective reporting, and to recommend needed changes.<sup>2</sup>

With help from subject-matter experts in OSD and the military services, we reviewed the policies, definitions, and calculations prescribed for post–promotion board reporting, identified problems, and developed suitable alternatives. We tested our recommended alternatives using individual-level data on promotion board eligibles provided by the services and augmented with additional duty history information by the Defense Manpower Data Center.

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<sup>1</sup> JQOs are officers certified to have gained qualifying experience, as specified in 10 U.S.C. § 662, in joint organizations or in other experiences providing exposure to other services’ operations.

<sup>2</sup> O-7 is a military grade designation of brigadier general or Navy rear admiral (lower half). O-8 designates major general or Navy rear admiral (upper half).

A key aspect of the legislation is that its fundamental objective was to influence the quality of officers *assigned to* joint or acquisition duties. Congress established promotion objectives not to influence promotion selections directly but rather to serve as indicators of how officer quality was distributed in earlier assignment decisions. Accordingly, promotion outcomes should be measured broadly to be as representative as possible of the quality of officers assigned at various times in the categories of interest.

Through a review of the current reporting instructions, recent post-promotion board reports, and additional data provided by the services, we identified and evaluated a range of alternatives that might make post-promotion board reporting align more closely with legislative or policy intent. These are

- including data on all eligibles regardless of promotion zone<sup>3</sup>
- requiring services to explicitly define the “most-competitive” zones<sup>4</sup>
- expanding the have-served category to include all service in the current grade<sup>5</sup>
- expanding the have-served category to include all field-grade service
- pooling multiyear data
- providing confidence bounds for rate comparisons<sup>6</sup>
- ensuring that objectives are not mutually exclusive
- basing Acquisition Corps evaluations on the services’ acquisition-community requirements rather than comparison to line-officer selection rates.

To test these alternatives, we used data provided by the services and the Defense Manpower Data Center to calculate alternative post-promotion board benchmarks and comparisons. We found that current reporting instructions are complex and unclear, resulting in many variations in how data are reported, both across services and across different boards by the same service. We also found that current instructions that limit comparisons to officers competing for promotion in service-defined most-competitive

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<sup>3</sup> If a zone of most-competitive promotion opportunity is defined by a service, promotions can occur in zones below, in, or above the most-competitive zone.

<sup>4</sup> The most-competitive zone for eligibles to be considered by an O-7 or O-8 promotion board is the set of parameters by which the services, should they choose to do so, identify the subgroup of eligible officers most likely to be selected for promotion. It can be defined by years of service, number of times previously considered, or other, similar parameters.

<sup>5</sup> *Have served* refers to officers who previously served on a service staff, the OSD staff, or the Joint Staff but were no longer serving on that staff when considered for promotion. Current instructions indicate that officers should be included in post-promotion board comparisons only through the first consideration after leaving a staff.

<sup>6</sup> A confidence bound is a statistical allowance for random differences between a statistic, such as a promotion selection rate, observed in a sample and the same rate observed in a larger population from which the sample is drawn. In this context, the officers meeting a promotion board are a sample of all officers who are in the categories of interest.

zones and only to the first promotion consideration after having completed service in a headquarters staff have, in some cases, hidden persistently unfavorable comparisons.

We concluded that comparative promotion outcomes are valid barometers of the quality of officers in various categories but that zone-of-consideration and have-served policies inappropriately narrow the field of view represented in the data. Moreover, the persistence of some unfavorable comparisons after applying refined policies indicates that continued attention to the quality-sharing objectives in the Goldwater–Nichols Act, the Defense Acquisition Workforce Improvement Act, and OSD policy is warranted.

In addition to a need to simplify and clarify the counts of officers included in various reporting categories, we saw a need to minimize comparisons that appear to be unfavorable but that could be attributable to random distributions of quality in small samples rather than to true quality differences in the larger populations from which they are drawn.<sup>7</sup> Specific recommendations are to

- eliminate zones of promotion consideration and include all eligibles and selectees in reported data
- modify the have-served policy to include all service in the current grade
- base comparisons on five-year pooled data
- base comparisons on confidence bounds that account for random distributions of quality in subsets of officers included in the data
- use service requirements as benchmarks for Acquisition Corps selections.

We developed draft legislative and reporting instruction changes that could be used to implement these recommendations. We also developed alternatives to the Microsoft Excel workbook currently used to capture post-promotion board reporting data and calculate the comparisons, including calculation of the recommended confidence bounds. Finally, we recommend shifting responsibility for issuing post-promotion board reporting instructions and evaluating post-promotion board reports from the Joint Staff to OSD because the latter has greater equities in the policy objectives.

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<sup>7</sup> As discussed at length in Appendix A, the eligibles considered and selected by any one board represent a sample of all officers who have served in the various categories compared with each other in the post-promotion board reports. Statistical methods should be used to account for the margin of error in the sample selection rates. The margin of error, to which we refer as *confidence bound* throughout this document, must be subtracted from the benchmark rate or added to the compared rate before making comparisons.



## Acknowledgments

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## Abbreviations

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CJCSI	Chairman of the Joint Chiefs of Staff instruction
DAWIA	Defense Acquisition Workforce Improvement Act
DoD	U.S. Department of Defense
DoDI	Department of Defense instruction
FY	fiscal year
JDA	joint duty assignment
JOM	joint officer management
JQO	joint-qualified officer
NDAA	National Defense Authorization Act
O-4	military grade designation of major or Navy lieutenant commander
O-5	military grade designation of lieutenant colonel or Navy commander
O-6	military grade designation of colonel or Navy captain
O-7	military grade designation of brigadier general or Navy rear admiral (lower half)
O-8	military grade designation of major general or Navy rear admiral (upper half)
OSD	Office of the Secretary of Defense
S-JDA	standard joint duty assignment



## Introduction

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### Statutory and Regulatory Requirements

The Goldwater–Nichols Act of 1986 included a requirement, currently codified at 10 U.S.C. § 662, that the Secretary of Defense ensure that the qualifications of officers assigned to the Joint Staff are such that, as a group, they will be promoted to the next-higher grade at a rate not less than that of officers with current or previous assignments in their services’ headquarters staffs. It also stipulated that officers assigned to joint duty assignments (since amended to refer to joint-qualified officers [JQOs]) were expected, as a group, to be promoted at rates comparable to those of all officers in their services, grades, and competitive categories. The statute originally required an annual report to Congress on these comparative promotion rates, although this provision was repealed in the National Defense Authorization Act (NDAA) for Fiscal Year (FY) 2015 (Pub. L. 113-291, 2014).

The Defense Acquisition Workforce Improvement Act (DAWIA), originally enacted as part of the NDAA for FY 1991 and currently codified at 10 U.S.C. § 1731, established an Acquisition Corps and requirements for officers selected to be included in it. Those officers are expected, as a group, to be promoted at a rate not less than the rate for all line (or equivalent) officers in the same armed force.

To implement these benchmarking requirements, the U.S. Department of Defense (DoD) and the Joint Staff have issued instructions for the military services to follow. DoD Instruction (DoDI) 1300.19, in addition to providing implementing instructions, extends the statutory provision regarding promotion-rate comparisons of those who have served on the Joint Staff to include a similar comparison for those who have served on the Office of the Secretary of Defense (OSD) staff (Enclosure 10 [“Promotion Selection Boards for ADL and RASL”], ¶ 1c).<sup>1</sup>

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<sup>1</sup> DoDI 1300.19 contains several outdated implementation provisions. It refers to a requirement in 10 U.S.C. § 662 regarding qualifications of “officers assigned to joint duty assignments” (¶ 3j, p. 2). However, the FY 2009 NDAA amended 10 U.S.C. § 662 to substitute “joint-qualified officers” in place of “officers serving in or have served in joint duty assignments.” Additionally, the DoDI (¶ 6, p. 3) refers to a report to Congress regarding promotion comparisons prescribed in 10 U.S.C. Chapter 667. However, the FY 2015 NDAA rescinded this reporting requirement. See Appendix D for recommended changes for reporting instructions.

Two instructions that the Joint Staff issued provide post-promotion board reporting requirements. Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 1330.05 addresses promotions to field-grade ranks (O-4 through O-6) while CJCSI 1331.01D addresses promotions to O-7 and O-8.<sup>2</sup> Our focus in this document is on the latter. It defines and applies key terms, such as *servicing on*, *have served*, *zone of most-competitive promotion opportunity*, and *in zone*. We explain these terms in Chapter Two. CJCSI 1331.01D also prescribes the format for the services to use in reporting their promotion comparisons. The format is implemented in a standardized Excel spreadsheet that automatically calculates key rates based on counts of eligible and selected officers.

## Research Questions

The research underlying this report examined the reporting requirements summarized above to answer three questions: Do they continue to meet the objectives for which they were established? Are there impediments to effective reporting? Are changes needed?

## Methodology

The research involved both qualitative and quantitative examinations.

Qualitatively, we examined pertinent statutory and regulatory material to evaluate its clarity, consistency, and likelihood of achieving desired outcomes. We supplemented these examinations with interviews of subject-matter experts responsible for senior-officer management in OSD, the Joint Staff, and the services.<sup>3</sup>

Quantitatively, we obtained and examined recent post-promotion board reports that the services submitted. These reports cover the statutory and regulatory comparisons discussed above for the five most-recent promotion boards, along with justifications for any unfavorable outcomes. Because these reports are compiled at a very aggregate level, we asked the services to provide supporting files that identified the eligible and selected officers, along with indicators of their past assignments in any of the categories required in the promotion comparisons.<sup>4</sup>

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<sup>2</sup> O-4 is a military grade designation of major or, in the case of the Navy, lieutenant commander. O-5 is a designation of lieutenant colonel or, in the case of the Navy, commander. O-6 is a military grade designation of colonel or, in the case of the Navy, captains.

<sup>3</sup> RAND's Human Subjects Protection Committee determined these interviews to be exempt from review.

<sup>4</sup> To preserve privacy, we stripped the data obtained from the services of individually identifiable data, such as social security numbers, substituting unique, nonpersonal identifiers. We then used these deidentified files for analysis.

Part of our research involved promotion comparisons of those whose past assignments in joint, OSD, and service staffs were in earlier time periods (e.g., all service in current grade or all service as a field-grade officer) than those that the services reported. However, the services' senior-leader management office representatives told us that some of the indicators of these assignments have been hand-compiled and that screening records to find those indicators for earlier periods would be onerous. To avoid that workload, we developed a procedure whereby the Defense Manpower Data Center processed the services' files of promotion eligibles, using archived service personnel records, to append unit and major command codes (from which Joint Staff, OSD staff, and service headquarters staff service could be determined) from earlier periods of service.

Our analysis included optimization modeling to determine whether meeting all of the objectives for joint, OSD, JCO, and Acquisition Corps comparisons is always possible for every board. One of our recommendations introduces the concept of confidence bounds to account for random sampling effects in data used for comparisons; we relied on standard statistical methods to develop and explain the recommended confidence-bound calculations.

## **Previous Research**

Harrell et al., 1996, examines alternatives to enhance the management of joint experience under the Goldwater–Nichols Act, including reporting on promotion objectives. The authors examined issues similar to those we examined in our study but focused primarily on field-grade rather than general- or flag-officer promotions. Their conclusions differed in some ways from ours, primarily because of the differences in scale and structure of the promotion processes for field-grade and general- and flag-officer grades. One notable recommendation from their study that was not implemented and that we carry forward into ours is pooling data across multiple years to “overcome year-to-year variations and randomness, eliminate small cell sizes, and provide a truer picture of service compliance with Goldwater–Nichols objectives” (p. 27).

## **Organization of This Report**

Chapter Two provides our qualitative assessment of the statutory and regulatory reporting requirements. Chapter Three outlines what post–promotion board reporting might look like with alternative policies. Chapter Four provides our summary and recommendations.

We also include five appendixes:

- Appendix A explains confidence bounds in detail.
- Appendix B discusses the feasibility of meeting multiple objectives.
- Appendix C recommends specific changes to legislation.
- Appendix D recommends specific changes to reporting instructions.
- Appendix E illustrates the revised post-promotion board reporting format.

## Statutory and Regulatory Issues and Alternatives

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In this chapter, we first characterize the intent of the original Goldwater–Nichols and DAWIA legislation. We then discuss the particulars of the OSD and Joint Staff implementing instructions. Following that, we provide our assessments of how the implementing instructions conform to or deviate from the legislative intent and provide alternative considerations.

### Legislative Intent

#### The Goldwater–Nichols Act

Reports on hearings of the U.S. Senate Committee on Armed Services and U.S. House of Representatives Committee on Armed Services during the 99th Congress indicate a common perception that the military services had little respect for joint service and that the services typically sent second-rate officers to assignments outside of their own organizations (Schank et al., 1996, p. 45). The committees felt that military effectiveness in joint operations would depend on instilling a joint culture within the officer corps and that the path toward building that culture would lie in exposing those who would eventually serve in senior military positions to joint assignments. The personnel provisions of the Goldwater–Nichols Act were intended to address these and other related concerns. They can be described as an effort to

- increase the quality of officers in joint assignments
- enhance the stability of assignments in joint organizations
- enhance the education and training of officers in joint matters
- ensure that general and flag officers are well rounded in joint matters
- ensure that officers are not disadvantaged by joint service (Schank et al, 1996, p. 46).

The provisions of the act pertinent to our analysis are in 10 U.S.C. § 662:

The Secretary of Defense shall ensure that the qualifications of officers assigned to joint duty assignments are such that—

(1) officers who are serving on, or have served on, the Joint Staff are expected, as a group, to be promoted to the next higher grade at a rate not less than the rate for officers of the same armed force in the same grade and competitive category who are serving on, or have served on, the headquarters staff of their armed force; and

(2) officers in the grade of major (or in the case of the Navy, lieutenant commander) or above who have been designated as a joint qualified officer are expected, as a group, to be promoted to the next higher grade at a rate not less than the rate for all officers of the same armed force in the same grade and competitive category.

Although the act established comparative promotion rates as a tracking and enforcement mechanism, Congress did not intend for the legislation to directly influence promotion selections. Rather, a close reading of the legislative language, to “ensure that the qualifications of officers *assigned to joint duty* are such that” favorable promotion comparisons will later be realized, clarifies the intent. The intent is to influence assignment decisions.

### **The Defense Acquisition Workforce Improvement Act**

DAWIA was a response to criticisms of the defense acquisition enterprise, including President’s Blue Ribbon Commission on Defense Management, 1986, commonly referred to as the Packard Commission report in reference to the commission’s chair, David Packard. The report contained a recommendation to enhance the quality of acquisition personnel (p. 65), including establishment of “an alternate personnel management system” for acquisition personnel, contracting officers, scientists, and engineers—a concept later codified in DAWIA as the Defense Acquisition Corps. Like the Goldwater–Nichols Act, DAWIA prescribes promotion-rate comparisons as a metric to gauge quality. The language of the legislation (10 U.S.C. § 1731[b]) is similar to the Goldwater–Nichols language:

The Secretary of Defense shall ensure that the qualifications of commissioned officers selected for the Acquisition Corps are such that those officers are expected, as a group, to be promoted at a rate not less than the rate for all line (or the equivalent) officers of the same armed force (both in the zone and below the zone) in the same grade.

## Implementing Instructions

The Joint Staff and the Office of the Under Secretary of Defense for Personnel and Readiness have issued two important and complementary implementing instructions (CJCSI 1300.01D and DoDI 1300.19, respectively). For members of the Acquisition Corps, a reporting requirement is also included in an instruction issued by the Assistant Secretary of Defense for Force Management and Personnel and the Under Secretary of Defense for Acquisition (DoDI 5000.55). In this section, we summarize the key elements of these instructions.

### **Department of Defense Instruction 1300.19: DoD Joint Officer Management (JOM) Program**

This instruction covers all aspects of JOM, including an enclosure on promotion objectives and service reporting requirements (pp. 35–36). The enclosure mirrors the objectives of 10 U.S.C. § 662 regarding officers who have served on the Joint Staff and who have been designated as JQOs. Additionally, it adds a provision for officers who have served on the staff of the Secretary of Defense, parallel to that of officers who have served on the Joint Staff. For reporting requirements, the enclosure references Title 10 of the U.S. Code and CJCSI 1330.05, *Joint Officer Management Program Procedures*. CJCSI 1330.05 prescribes reporting on promotion objectives for field-grade officers and refers to a separate document, CJCSI 1331.01D, *Manpower and Personnel Actions Involving General and Flag Officers*, for reporting on O-7 and O-8 promotions.

### **Chairman of the Joint Chiefs of Staff Instruction 1331.01D, Manpower and Personnel Actions Involving General and Flag Officers**

Enclosure E of CJCSI 1331.01D (“Promotion Board Reports”) provides detailed instructions for service post-promotion board reporting, covering all selection-rate comparisons discussed above. The objectives are that

- officers with service on the Joint Staff be promoted at rates not less than officers with service on their services’ headquarters staffs
- officers with service on the OSD staff be promoted at rates not less than officers with service on their services’ headquarters staffs
- JQOs be promoted at rates not less than all line or equivalent officers in their services
- Acquisition Corps members be promoted at rates not less than all line or equivalent officers in their services.

Counts of eligible and selected officers for the most recent board and four previous boards are reported. A standard report format is contained in an Excel workbook, which accepts the counts and automatically computes the rates. Figure 2.1 shows the first tab of the workbook (the data-entry worksheet). Other tabs highlight missed

**Figure 2.1**  
**Post-Promotion Board Reporting: Data-Entry Worksheet**

**PROMOTION BOARD STATISTICS REPORT**  
**FOR (FY, SERVICE, GRADE, COMPETITIVE CATEGORY)**

Promotion Selection Board Data Entry Page

Military Service: \_\_\_\_\_  
 Board Title: \_\_\_\_\_  
 Board Convening Dates: \_\_\_\_\_

	CY-4	CY-3	CY-2	CY-1	Board Convening Year	
	2005	2006	2007	2008	2009	
<b>Number of Eligible Officers</b>						Fill in the highlighted cells based on the eligibles and selects who met this board. The remainder of the cells will be populated automatically.
Total						
Service Headquarters						
Joint Staff						
OSD						
All Joint						
Joint Qualified Officers						
Acquisition Corps						
<b>Number of Selected Officers</b>						
Total						
Service Headquarters						
Joint Staff						
OSD						
All Joint						
Joint Qualified Officers						
Acquisition Corps						
Good of the Service Waivers Requested						
Good of the Service Waivers Approved						
Good of the Service Waivers Enacted						
Adverse						
Recommended with Adverse						

Calculated Data	CY-4	CY-3	CY-2	CY-1	Board Convening Year
	2005	2006	2007	2008	2009
Board Average %	0.0%	0.0%	0.0%	0.0%	0.0%
Service Hq %	0.0%	0.0%	0.0%	0.0%	0.0%
Joint Staff %	0.0%	0.0%	0.0%	0.0%	0.0%
OSD %	0.0%	0.0%	0.0%	0.0%	0.0%
All Joint %	0.0%	0.0%	0.0%	0.0%	0.0%
Joint Qualified Officer %	0.0%	0.0%	0.0%	0.0%	0.0%
Acquisition Corps %	0.0%	0.0%	0.0%	0.0%	0.0%

**Objectives**  
 Note: If objectives are not met, the number of officers required to meet the objective is listed as a negative. If the objective is exceeded, the number of officers in excess of the objective will be listed as a positive.

Joint Staff vs. Service Hq Δ (Statutory)	0	0	0	0	0
OSD vs. Service Hq Δ (Policy)	0	0	0	0	0
All Joint vs. Board Avg Δ (Policy)	0	0	0	0	0
Joint Qualified Officer Δ Board Avg (Statutory; est. 2008)	0	0	0	0	0
Acquisition Corps Δ (Statutory)	0	0	0	0	0

**STATUTORY REQUIREMENTS:** Joint Staff in accordance with (IAW) 10 USCS § 662(a)(1); Joint Qualified Officer IAW 662(a)(2); and Acquisition Corps IAW 10 USCS § 1731.

SOURCE: CJCSI 1331.01D, Enclosure E, Figure 3.  
 NOTE: CY = convening year. Hq = headquarters. Avg = average.  
 RAND RR1447-2.1

objectives and provide spaces for the services to indicate justifications or planned corrective actions.<sup>1</sup>

The instruction contains two sets of provisions that limit the number of eligibles included in the rate comparisons to something less than the full number who met a board. One set of provisions pertains to recency of service in the Joint Staff, OSD staff, or service headquarters staff. The other pertains to zones of promotion consideration that are defined specifically for these rate comparisons. Our recommendations in Chapter Three include changes to both sets of provisions. Accordingly, we describe them in some detail here.

Section 662 of 10 U.S.C. refers to “officers who are serving on, or have served on” the respective staffs being compared. CJCSI 1331.01D provides definitions for *serving on* and *have served*. *Serving on* includes officers serving on a staff when a board convenes. *Have served* includes those who have previously served on a staff but are no longer assigned when the board convenes. For this category, the instruction provides two incompatible subparagraphs specifying how long have-served officers must be tracked and included in the rate comparisons. One subparagraph specifies that they be tracked through their next promotion consideration following reassignment from the staff (a first-look policy). Another subparagraph specifies that they be tracked through the board of their “most competitive promotion opportunity.” Each service may designate its zones of most-competitive opportunity in a unique way or may decline to designate zones. When zones are not designated, the instruction indicates, *in zone* (the zone of most-competitive opportunity) refers to the first time an officer is considered for the next-higher rank. Table 2.1 summarizes the services’ designations of their zones of most-competitive opportunity.

**Table 2.1**  
**Zones of Most-Competitive Promotion Opportunity**

Service	Promotion to O-7	Promotion to O-8
Army	Not designated; thus, in zone = first consideration	Not designated; thus, in zone = first consideration
Navy	2nd or 3rd consideration	2nd or 3rd consideration
Air Force	23–25 years of service	Not designated; thus, in zone = first consideration
Marine Corps	In zone is designated separately for each board	In zone is designated separately for each board

SOURCE: CJCSI 1331.01D, Enclosure E, Appendix A (“Example of Nomination Package”).

<sup>1</sup> Appendix E provides a more complete description of the workbook, including alternative formatting of the data-entry worksheet recommended in this report.

These zone-of-consideration and have-served provisions seem, at first glance, to be inconsistent with each other. On closer inspection, they can be interpreted by viewing them as joined either conjunctively (someone is included in the reported data only if both conditions are true) or disjunctively (someone is included in the reported data if either condition is true). If viewed conjunctively, the provisions would mean that a have-served officer is included in the statistics only for the next promotion consideration and only if that consideration occurs in or before the zone of most-competitive opportunity. If viewed disjunctively, the provisions would mean that a have-served officer is included in the comparison statistics for all considerations through the zone of most-competitive opportunity *and* included if the first consideration after having served occurs after the zone of most-competitive opportunity.

Another source of ambiguity in service reports is the procedure prescribed in CJCSI 1331.01D regarding officers selected from a zone other than the most-competitive opportunity for the officer to be promoted. The instruction indicates that these selectees are to be added to the have-served statistics before making calculations. The instruction does not specify whether the person should be added to both the numerator and the denominator of a selection-rate calculation, but, either way, this process inappropriately elevates the apparent selection rate.<sup>2</sup>

In practice, the services appear to have varied in how they interpret these provisions among themselves, between the two different grades within a service, and within the same grade in different years. We obtained recent post-promotion board reports from each of the services and also listings of people eligible for consideration and selected by the boards represented in the reports. From the data presented, we inferred how the services interpreted and applied the zone-of-consideration and have-served policies found in CJCSI 1331.01D. Table 2.2 shows our findings. We did not have sufficient granularity in the data to determine how selections from out of the zone of most-competitive selection opportunity might have been treated.<sup>3</sup>

The confusion and inconsistency created by have-served and zone-of-consideration policies are significant impediments to the objective of comparing the quality of officers in the categories included in post-promotion board reports. As illustrated in recent Army data examined in Chapter Three, adherence to the policies can result in a narrowed focus on sets of eligibles from which no selections are typically made. To avoid

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<sup>2</sup> If a selectee is added to a numerator (count of selectees) but not the denominator (count of eligibles) in a selection-rate computation, clearly the rate will be elevated. If a selectee is added to both the numerator and the denominator, the resulting rate will still be elevated but by a lesser amount. This is the equivalent of finding the average selection rate across two groups, one of which (selectees from outside the zone of most-competitive opportunity) is considered to have a 100-percent selection rate.

<sup>3</sup> The services provided individual-level data on the eligibles considered by each board, including such characteristics as the promotion zones in which they were considered. In many cases, we could not precisely reconcile aggregate data in the post-promotion board reports with our recomputations of the individual-level data. Thus, we could not infer how the services treated selections of officers above the zone of most-competitive opportunity.

**Table 2.2**  
**Service Applications of Zone-of-Consideration and Have-Served Policies**

Service	O-7 Boards		O-8 Boards	
	Zones of Consideration	Have-Served Officers	Zones of Consideration	Have-Served Officers
Army	Zones not defined (first look is considered in zone)	Mostly first look	Zones not defined (first look is considered in zone)	Mostly first look
Navy	Most likely in and below zone	All looks	Most likely in and below zone	All looks
Air Force	Mostly all zones	Mostly all looks	All zones	All looks
Marine Corps	Most likely in and below zone	Could not determine	Most likely in and below zone	Could not determine

SOURCE: Authors' determinations based on CJCSI 1331.01D.

the complexity of the current provisions, some of the services appear to have opted not to restrict the eligibles and selectees included in their reporting according to these policies. Instead, they have included all officers regardless of zone or number of looks since leaving the staff. Many of the alternatives we considered and recommendations we make in this report are intended to produce simpler, more-straightforward reporting instructions, resulting in post-promotion board comparisons that are broader and more representative of the quality of officers in the various categories.

Additionally, the zone-of-consideration and have-served policies, if followed, would not appear to make promotion comparisons more representative of the true quality of officers in various categories. For the service headquarters, Joint Staff, and OSD staff comparisons, they introduce the timing of staff job completions as a factor in the reported selection rates. The quality of officers whom these policies include and exclude from the data could differ, either systematically or randomly. If the quality differs systematically, we see no theoretical basis for assuming that the officers included in the data are *more* representative of officers in the various categories than those excluded from the data. If the quality differs randomly, the smallness of the sample sizes resulting from the restrictions tends to widen the random variations in reported rates (see “Providing Confidence Bounds for Rate Comparisons,” below).

#### **Department of Defense Instruction 5000.55: Reporting Management Information on DoD Military and Civilian Acquisition Personnel and Positions**

This instruction contains a requirement for directors of acquisition career management within the services to collect and report comparative promotion data to the Under Secretary of Defense for Acquisition (now the Under Secretary of Defense for Acquisition, Technology and Logistics). The required data provide the DAWIA-mandated compari-

son between Acquisition Corps officers and line or equivalent officers for promotions to grades O-5 through O-8. The reporting format is in Enclosure E of the instruction.

## **Comparison to Field-Grade Reporting Requirements**

Field-grade post-promotion board reporting procedures, specified in CJCSI 1330.05, avoid some but not all of the impediments we encountered in the general-officer post-promotion board reporting procedures. Zones of promotion eligibility are well defined within a statutory and policy framework for field-grade promotions (10 U.S.C. § 623 and DoDI 1320.04). Rather than being reported for only in-zone eligibles and selectees, data are reported for each promotion zone (in, below, and above the zone) (p. L-B-1). In addition to the aggregate numbers, the field-grade submission requires a by-name listing of the individual officers included in the report (p. L-C-1) with indicators of the promotion zones and the reporting categories in which they are included. The listing facilitates reconstruction or validation of the reported aggregate data.

The field-grade instructions include a have-served definition that appears similar to the one provided in general-officer reporting instructions but is in fact much less problematic. A have-served officer is included in the data for all below-the-zone considerations and the first in-zone consideration after assignment from the relevant staff. Because there is only one in-zone consideration in field-grade officer promotions, all have-served officers are included in data for in- and below-zone promotions. There is a separate provision for a first-look-only inclusion of have-served officers who are above the zone when they complete their staff tours (pp. GL-II-4, L-5). This would have the same drawbacks discussed above for the first-look provision in the general-officer reporting instructions, but selections of field-grade officers above the zone are very limited. Thus, the have-served provisions for field-grade reporting present no significant impediment to gauging the quality of officers in various categories.

## **Alternatives Considered**

A key consideration in matching reporting requirements to legislative intent is that the primary objective of the legislation was to influence the quality of officers selected for assignment to joint or acquisition duties. Promotion objectives are established not to influence promotion selections directly but rather to serve as indicators of how officer quality was distributed in past assignment decisions. Accordingly, to be as representative as possible of the quality of officers in various categories, promotion outcomes should be measured in a way that broadly includes the multiple cohorts of officers assigned over time to the various headquarters staffs rather than only narrow subsets of officers within the eligibles considered by a single board.

Through a review of the current reporting instructions, recent post-promotion board reports, and additional data that the services provided, we identified and evaluated a range of alternatives that might make post-promotion board reporting align more closely with legislative or policy intent. These are

- including data on all eligibles, regardless of promotion zone
- requiring services to explicitly define most-competitive zones
- expanding the have-served category to include all service in the current grade
- expanding the have-served category to include all field-grade service
- pooling multiyear data
- providing confidence bounds for rate comparisons
- ensuring that objectives are not mutually exclusive
- basing Acquisition Corps evaluations on service requirements rather than comparison to line-officer selection rates.

In the remainder of this section, we discuss each of these alternatives.

#### **Including Data on All Eligibles, Regardless of Promotion Zone**

As discussed above, CJCSI 1331.01D provides a rate-distorting method for including selections from above a service's defined zone of most-competitive opportunity. Instructions for the comparable reports for field-grade promotions avoid this problem by prescribing separate reporting of eligibles; selectees; and rates for in-, below-, and above-the-zone considerations (CJCSI 1330.05, p. L-B-1).

For general-officer reports, we see two alternatives to avoiding the rate distortions introduced by the current instruction: Either report each zone separately, as in the field-grade reports, or combine data for all zones. Of these, we believe that the second alternative is preferable. Zones of consideration for general-officer promotions lack the crispness provided by the year-group management structure that governs field-grade promotions. In several cases, the services have not defined zones of most-competitive consideration. In those cases, the services either fall back on the default definition provided in CJCSI 1331.01D (first promotion consideration, at which few selections are made) or combine data for all zones, which does not conform to the instruction but provides more-meaningful comparisons.

#### **Explicitly Defining Most-Competitive Zones**

We believe that eliminating separate zones of consideration is the better solution to avoiding rate distortions and providing a truer representation of the quality of officers in various reporting categories. However, if the zone structure is retained, the services should be required to define a zone of most-competitive promotion opportunity for each grade such that a relatively large proportion of total selections occurs within the defined zone. If the zone is too narrowly defined, selection rates within it are not rep-

representative of the quality of officers in various reporting categories. The zone could be defined using time in service, time in grade, number of considerations, or other parameters that the services consider pertinent. If a service declines to define a zone, the default should be inclusion of all eligibles rather than only first-look eligibles.

### **Expanding the Have-Served Category**

We evaluated two possible modifications of the have-served category. The current prescription, as documented above, is a confusing combination of tracking through the next promotion consideration and tracking through the zone of most-competitive promotion consideration. The alternatives we evaluated are tracking all service in the current grade and tracking all field-grade service. Either alternative expands the pool of officers whose promotion outcomes are being compared, lessening the chances of spuriously unfavorable comparisons arising from the smaller numbers of eligibles and selectees that are observed if the current reporting instructions are followed.

Additionally, either alternative reduces the complexity of report generation by service staffs. To compile post-promotion board reports, the services must tag officers who are serving or have served on their services' headquarters staffs, the Joint Staff, and the OSD staff. They must then untag any officer who has been previously considered for promotion since being tagged or who has passed through the zone of most-competitive consideration, depending on how the service interprets the have-served definitions in CJCSI 1331.01D. If all field-grade service is considered, no untagging is required. If all service in the current grade is considered, officers need to be untagged only if selected for promotion from O-6 to O-7.

Of the two alternatives considered, we recommend tracking service in the current grade. This corresponds most closely to the plain language of 10 U.S.C. § 662, which states, "Officers who are serving on, or have served on, the Joint Staff are expected, as a group, to be *promoted to the next higher grade*" (emphasis added). It will also be easier for the services to compile reporting data, especially if it is done visually (by scanning duty histories) rather than by using automated processes. If all field-grade service is tracked, scanning must extend deeper into duty histories, beyond the assignments controlled by the office doing the scanning, and it introduces the possibility that service headquarters, Joint Staff, or OSD staff service might not be recognized. Finally, legislative and policy intent, to ensure assignment of comparably qualified officers to the various staffs, seems best met by considering service in the current grade; officers with earlier field-grade experience on the relevant staffs might have since lost their competitiveness.

### **Pooling Multiyear Data**

CJCSI 1331.01D calls for reporting on the most-recent and four previous promotion cycles. Comparisons between the selection rates for the various staffs are made on each year's data independently of adjacent years. Thus, even if quality is comparable among

those who have served on the various staffs, normal variations in quality from year to year among promotion eligibles can cause spuriously unfavorable comparisons.<sup>4</sup> Pooling data across the five years contained in a report washes out some of these unfavorable comparisons with no prejudice to legislative or policy intent.<sup>5</sup> The intent is to ensure comparable quality in cohorts of officers selected for assignment to various staffs. The officers within a cohort will not reach promotion consideration at the same time, and any promotion board will consider officers assigned to staffs in multiple cohorts. Thus, comparable quality, both within a single assignment cohort and across all cohorts, is better gauged by pooling across multiple promotion boards.

### **Providing Confidence Bounds for Rate Comparisons**

Even with data pooled over five years, there is still a possibility that unfavorable rate comparisons can arise through chance alone. That is, if exactly equal quality distributions have been assigned consistently to the various staffs (in which case, we would not expect there to be long-run differences in selection rates), differences in selection rates between the groups are expected in the short term (e.g., five years). To elaborate, when quality distributions are equal, one rate will be greater than another rate by chance about half of the time. As a result, the services are required to provide analysis and justification for many apparently unfavorable comparisons that might be unrelated to true quality differences. To minimize this, rate comparisons should be based on confidence bounds that take into consideration chance variation in quality among the eligibles considered by promotion boards.

Numerically, we express the chance variation as a confidence bound around the selection rates for the benchmark category (service headquarters or overall line and equivalent officers).<sup>6</sup> An unfavorable comparison is identified only if the rate for a target category (Joint Staff, OSD staff, JQO, or Acquisition Corps) falls below the rate for the benchmark category by more than the margin of error. Therefore, the confidence bound is set as being equal to the benchmark rate minus the margin of error. The objective is considered met if the rate for the target category is above the lower

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<sup>4</sup> As elaborated in other parts of this text, the eligibles considered by any one board represent a sample of all officers who have served in a category included in the selection-rate comparisons. To the extent possible, the reporting instructions should minimize the cases in which a category's selection rate falls below the benchmark rate because of chance variation in the sample rather than true quality differences among all officers who have served in a category.

<sup>5</sup> Pooling would be accomplished by summing eligibles and selections over the five years of board results currently reported. Dividing the five-year total of selections by the five-year total of eligibles yields a pooled five-year selection rate.

<sup>6</sup> As described in Appendix A, the confidence bound is calculated as the standard error of the difference between the selection rates of the two groups being compared, which is sensitive to the sizes of the two groups. Once the standard error is calculated, it is treated as a confidence bound, which can be added and subtracted from either selection rate for comparison to the other selection rate.

limit of the confidence bound.<sup>7</sup> The margin of error is sensitive to the sample size—rates that are based on a larger number of eligibles are calculated with a larger amount of information and will therefore have smaller margins of error. Therefore, margins of error for O-8 boards, in which the number of total eligibles considered by each board is generally less than 100, will be proportionally larger, relative to the selection rate, than margins of error for O-7 boards, in which the number of total eligibles generally exceeds 1,000.

Appendix A provides information on the technical issues entailed in calculating the appropriate confidence bounds. Service staffs do not need to perform the calculations. As with other computations used in the post-promotion board reports, these can be embedded in the standard Excel workbook used for the reports. As part of the work for this project, we have provided a redesigned Excel workbook that pools the data over five years, calculates confidence bounds, and identifies unfavorable comparisons as needed.

Using pooled five-year data increases the counts of eligibles used in calculating selection and thus reduces the margins of error used in calculation of the confidence bounds. However, using the five-year pooled data also introduces a complexity in determining the confidence bounds. Many officers will be considered more than once in a five-year period. In theory, the confidence bounds we recommend should take this into consideration, but doing so would be burdensome for those compiling post-promotion board reports and would, according to our analysis, make very little practical difference in the confidence bounds.<sup>8</sup> Therefore, our suggested approach, as embedded in the Excel file, is to use pooled, multiyear counts of eligibles that do not account for repeat eligibles. We suggest this approach because it avoids requiring the services to determine the unique eligibles in the pooled data. Without imposing additional data entry or processing tasks on the part of service staffs, it provides a major improvement over the current process in which, given equal quality among officers who have served on various staffs, the expected rate of false positives would be 50 percent.<sup>9</sup>

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<sup>7</sup> See, for example, Figure 3.2 and other figures in Chapter Three.

<sup>8</sup> Because many officers are eligible in more than one board during a five-year period, the true count of unique eligibles in a five-year sample is less than the simple sum of eligible counts across five boards. Our calculations provide 95-percent confidence bounds (meaning that false positives—apparently unfavorable comparisons that are attributable to chance alone—will occur only 5 percent of the time) based on a simple sum of eligibles. Because the number of unique eligibles is less than the simple sum, the true confidence bounds would be larger, meaning that false positives will occur somewhat more than 5 percent of the time. We performed sensitivity analyses that enumerated all unique eligibles in a five-year period and that indicate that this increase in the rate of false positives is minimal.

<sup>9</sup> One risk associated with using pooled data is that there could be systematic differences between the timing of assignments, relative to promotion considerations, to a service staff versus the OSD staff or Joint Staff. Officers assigned to one type of staff might be systematically exposed to a greater number of promotion considerations than officers assigned to a different type of staff. Additionally, if this alternative is implemented, the services might find some way to “game” their staff assignments to obscure differences in the quality of officers assigned

### **Ensuring That Objectives Are Not Mutually Exclusive**

We examined a hypothesis that the four objectives contained in post-promotion board comparisons (Joint Staff versus service headquarters staff, OSD staff versus service headquarters staff, JQOs versus line or equivalent officers, and Acquisition Corps members versus line or equivalent officers in and below the zone) might be mutually exclusive—that all four of the objectives could not be met simultaneously. To test this hypothesis, we used five years of data that the services provided on eligibles, selectees, and their relevant characteristics to model alternative selections. For each of the services and in each of the five years (20 cases in all), we found that modest deviations from the order of merit (i.e., a promotion board's ranking of eligibles based on their overall suitability for promotion) represented in the actual selectees would have permitted all four objectives to be met for almost every case.<sup>10</sup> We found four infeasible cases when examining in- and below-zone outcomes and one infeasible case when considering all zones. Appendix B shows the results of these analyses. Because almost all objectives could be met simultaneously when considering all zones, we conclude that the narrow definition of in and below zone is problematic. We also note that, because of the small number of in- and below-zone eligibles with Acquisition Corps experience, in many cases, every eligible Acquisition Corps officer must be selected in order to meet the promotion objective.

### **Basing Acquisition Corps Evaluations on Service Requirements**

In their selections for promotion to O-7 and O-8, the services naturally favor officers whose backgrounds and competencies mirror their core operational requirements. This is consistent with the distribution of general- and flag-officer job requirements, which also tend to require concentrations of officers with core operational experience. It is likely that, at general- and flag-officer grades, the ratio of operational job requirements to qualified promotion eligibles is higher than the ratio of acquisition job requirements to Acquisition Corps members.<sup>11</sup> If that is the case, overall organizational effectiveness requires a higher selection rate among eligibles with operational experience than among those with only acquisition experience.

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to the various types of staffs. We judged the advantages of pooled reporting to outweigh this risk, but continued scrutiny would be advisable.

<sup>10</sup> In our modeling, we used a first-look policy for have-served officers (i.e., we counted officers in the have-served category, in accordance with current policy, only on the first promotion consideration after leaving the service headquarters staff, Joint Staff, or OSD staff). We also used an in-and-below-zone policy in our initial analysis, which yielded the data shown in Appendix B. We then repeated the analysis using an all-zones policy, finding only one infeasibility.

<sup>11</sup> This possibility cannot be tested with readily available data. General- and flag-officer positions are not differentiated by occupational codes, so the need for operational or other functional experience must be inferred from job titles or provided by service subject-matter experts. Developing those data was beyond the scope of this project.

The services' promotion processes generally try to balance best-in-show considerations (selecting the officers with the greatest leadership and management potential, regardless of occupational experience) with best-in-breed considerations that conform more closely to job requirements. They achieve this through service secretaries' occupational guidance to promotion boards that is used sparingly—only when the service staffs anticipate that critical requirements will not be met through best-in-show selections.

Acquisition experience is one of the critical occupational requirements that is frequently found in secretarial guidance to promotion boards. Table 2.3 indicates the number of acquisition-experienced officers called for in secretarial guidance to each of the services' most-recent promotion boards.

The numbers called for in this guidance might be greater or less than the number required to meet the DAWIA standard, which calls for Acquisition Corps officers to be promoted at the same rate as all line or equivalent officers. Table 2.4 shows how secretarial guidance for selection of officers with acquisition experience compares to the selection rates that the services reported in accordance with the DAWIA-directed comparison.<sup>12</sup> Selection rates needed to comply with secretarial guidance, contained in the far right column of the table, are, in some cases, much greater than the benchmark selection rates for line or equivalent officers and, in other cases, much less than line or equivalent rates.

We would characterize the DAWIA-directed comparison as a best-in-show standard because it sets a benchmark for selecting Acquisition Corps officers without regard for functional requirements. On the other hand, meeting secretarial guidance regarding functional requirements shifts the selection criterion from best in show to best in breed. For the purpose of matching available general- and flag-officer talent to job requirements, and consistently with the Secretary of Defense's recent "Force of the Future" emphasis on matching human capital to requirements (Carter, 2015), we believe that best-in-breed requirements are a more-appropriate basis for evaluat-

**Table 2.3**  
**Secretarial Guidance on the Number of Selectees with Acquisition Experience**

Service	Board Year	Promotion to O-7	Promotion to O-8
Army	FY 2014	3	3
Navy	FY 2015 and FY 2014	2	2
Air Force	FY 2014	No guidance	No guidance
Marine Corps	FY 2014	1	No guidance

<sup>12</sup> These data are based on service interpretations of have-served and zone-of-consideration policies and might not be representative of outcomes in which clarified policies are applied with greater consistency.

**Table 2.4**  
**Comparison of Line-Officer Selectees, Acquisition Corps Selectees, and Secretarial Guidance for Selectees with Acquisition Experience**

Board	Service	Fiscal Year	Line or Equivalent			Acquisition Corps			Acquisition Experience Targets (Secretarial Guidance)	
			Eligibles	Selectees	Rate (%)	Eligibles	Selectees	Rate (%)	Desired Selections	Rate (%)
O-7	Army	2014	387	0 <sup>a</sup>	0	24	0 <sup>a</sup>	0	3	12.5
	Navy	2015	1,072	22	2.1	298	7	2.3	2	0.7
	Air Force	2014	1,436	38	2.6	193	6	3.1	No guidance	
	Marine Corps	2014	165	5	3.0	8	0	0	1	12.5
O-8	Army	2014	39	24	62	3	2	67	3	100
	Navy	2014	39	20	51	10	6	60	2	20
	Air Force	2014	75	26	35	7	3	43	No guidance	
	Marine Corps	2014	14	5	36	1	0	0	No guidance	

<sup>a</sup> The Army does not define zones of most-competitive selection opportunity, using the default definition provided in CJCSI 1331.01D: First consideration is the in-zone consideration. Officers are rarely selected for promotion to O-7 on first consideration.

ing Acquisition Corps selectees for promotion to O-7 and O-8 than a best-in-show standard.

## **Summary of Alternatives**

Given the considerations reviewed above, we concluded that the most-useful and -practical policies for promotion comparisons would do the following:

- Delete references to zones of consideration and include all eligibles and selectees in rate comparisons.
- For have-served comparisons, include all service in the current grade.
- Pool data for the most-recent and four previous promotion boards.
- Use confidence bounds when making comparisons.
- Use service requirements rather than promotion-rate comparisons as benchmarks for Acquisition Corps selections.

In Chapter Three, we examine how post-promotion board reports would look if these policies were in effect.

## Post–Promotion Board Reporting Using Alternative Policies

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In this chapter, we illustrate how alternative reporting policies—reporting on all zones of consideration, all have-served completions in the current grade, multiyear pooling, and confidence bounds—would affect reporting outcomes. We present, in a graphical form, data from recent sets of service reports and depictions of how the reporting would look under alternative policies.

To construct these comparisons, we asked the services to provide lists of individual eligibles and selectees for the five boards covered in their most-recent post-promotion board reporting. We asked the services to include indicators of zone of consideration and whether or not the person was included in the various reporting categories. To generate promotion rates for all zones and all have-served completions in the current grade, we forwarded these files to the Defense Manpower Data Center, where an analyst used service personnel files to assemble monthly duty listings for each member, consisting of major command and unit of assignment. Then, using the major command codes or unit-of-assignment codes that the services identified as indicators of duty on the service headquarters staff, Joint Staff, or OSD staff, we created our own counters to estimate what the post-promotion board reporting would look like encompassing all zones of consideration and all have-served completions in the current grade.

In our discussions with representatives from service senior-leader management offices, we learned that they do not rely exclusively on computerized processes to compile their post-promotion board reporting data, believing that identifying jobs held in service headquarters, the Joint Staff, and the OSD staff, as well as their understanding of zone-of-consideration and first-look policies, are best done in some or all cases by visually scanning individual records and manually compiling the data.

As we processed the data we received, we were able to generally reconcile data from our automated processes with data appearing in Army and Air Force post-promotion board reports. Unfortunately, we could not reconcile our data with Navy and Marine Corps data.

In the Navy data, multiple competitive categories presented an issue. The Navy has established some 17 competitive categories (most listed together in a “line” grouping, but also several in a “staff” grouping) for various occupations that are all included in the Army and Air Force’s single line competitive category. A Navy representative

told us that the Navy has, in recent years, varied which of these competitive categories were included in their post-promotion board reports. Because these variations were difficult to observe and process and we were not certain that all line-equivalent competitive categories were included in the data files provided to us, we did not attempt to compile alternative reporting outcomes for the Navy.

In the Marine Corps, service in the Marine Corps headquarters staff, the Joint Staff, and the OSD staff must be identified by a combination of major command and unit identification codes, neither of which appears by itself to uniquely identify these staffs; the two codes must be used in combination. Processing of our data indicated that we had not identified all of the relevant combinations, resulting in incomplete identification of have-served eligibles and selectees. Thus, we were also unable to construct alternative reporting outcomes for the Marine Corps.

The Air Force has apparently applied all-zones and all-looks policies for O-8 post-promotion board reporting. For O-7 post-promotion board reporting, data for most years appeared to include all zones and all looks, but, in a few years, either the zones or the looks were more limited.

Accordingly, the data presented in this chapter provide comparisons between current zone-limited reporting and alternative reporting for the Army. For the Air Force, because there were few differences between currently available reports and our calculations based on all zones of consideration and all looks in grade, we show only our calculations expanded to include multiyear pooling and confidence-bound results. We believe that the advantages of applying the alternative policies, as observed in the Army and Air Force cases, are generalizable to the Navy and Marine Corps cases.

For Joint Staff and OSD staff comparisons to service headquarters rates, our figures show the overall board selection rate, the benchmark service headquarters selection rate, and the Joint Staff and OSD staff selection rates. In our alternative figures, we include a five-year average (the result of pooling multiyear data). Using horizontal red lines in the five-year Joint Staff and OSD staff columns, we also show the confidence bounds that provide the appropriate benchmarks for the five-year Joint Staff and OSD staff rates.<sup>1</sup> Under the proposed policies, objectives are met if the five-year Joint Staff and OSD staff bars rise above these red lines.

Similarly, for JQO and Acquisition Corps comparisons to overall line-officer selection rates, we provide current reporting results and our alternative calculations, including five-year pooled data and confidence bounds. The have-served policy does not apply to JQO and Acquisition Corps selection-rate comparisons, but the services have sometimes applied variations on the zone-of-consideration policies in their

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<sup>1</sup> As discussed in Appendix A, the confidence bounds are slightly different for Joint Staff and OSD staff comparisons because the counts of eligibles and selectees who have served in the Joint Staff and OSD staff are different. The confidence-bound calculations are sensitive to these counts.

reported data. Our figures for the Army thus show current reporting compared with our alternatives that include all zones.

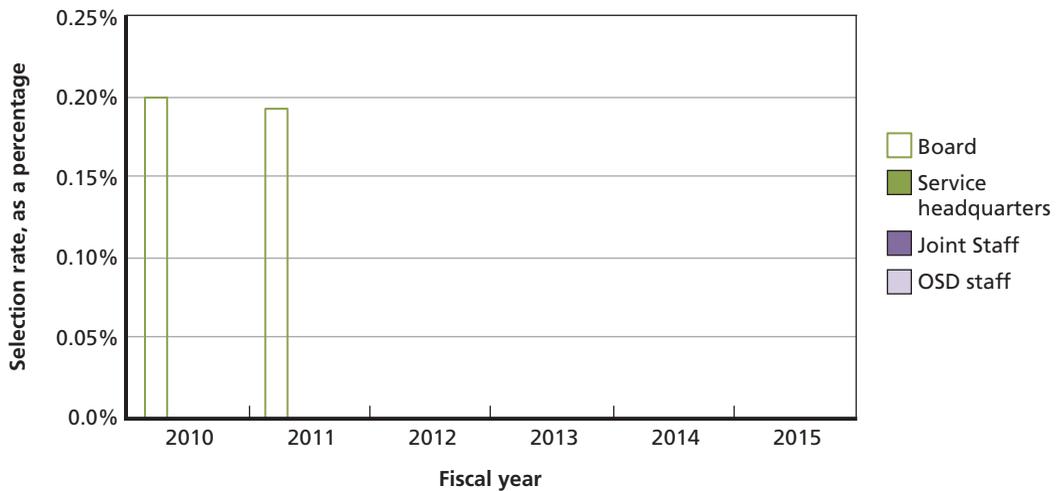
## Army Results

### O-7 Promotions

Figure 3.1, providing current Army reporting of Joint Staff and OSD staff comparisons for O-7 promotions, depicts the selection rates for officers in four categories—all officers considered by the board, those serving on or having served in the Army headquarters, those serving on or having served on the Joint Staff, and those serving on or having served on the OSD staff. Consistently with current reporting instructions, the Army chose not to define a zone of most-competitive promotion opportunity and therefore defaulted to reporting only officers being considered for promotion to O-7 for the first time. Because very few officers are selected on their first consideration, the Army reports zero or near-zero selection rates in almost all cases. Compare these results with those in Figure 3.2, which we compiled using data on all promotion eligibles and in which selection rates for the four categories mentioned above are all shown.

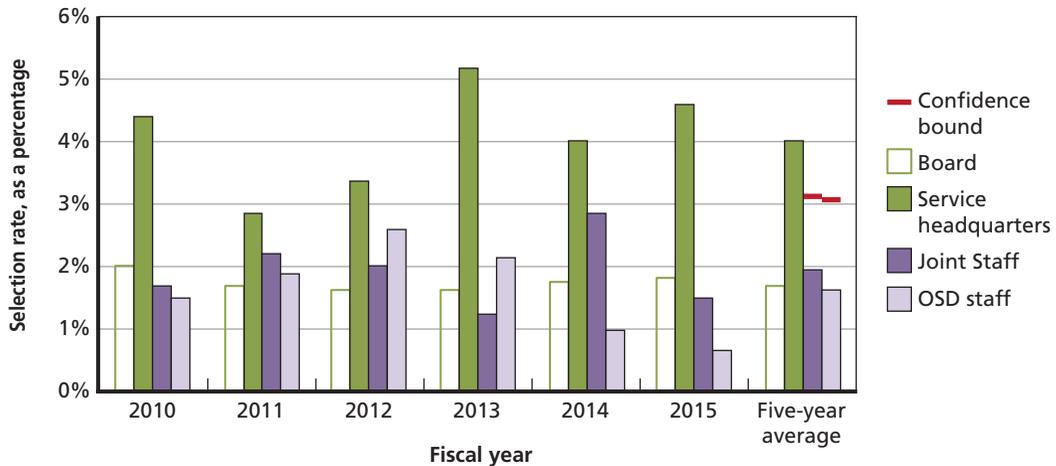
Figure 3.2, compiled using the proposed policies, shows that promotion rates to O-7 for officers who have served on the Joint Staff or OSD staff have lagged behind rates for officers who have served on the Army headquarters staff (the conventional

**Figure 3.1**  
**Army O-7 Joint Staff and Office of the Secretary of Defense Staff Comparisons: Reported Results**



NOTE: Board = all line or equivalent officers considered and selected in a specified year. For services with multiple line or equivalent competitive categories, this can actually include data from separate boards held for their various competitive categories.

**Figure 3.2**  
**Army O-7 Joint Staff and Office of the Secretary of Defense Staff Comparisons: Alternative Results with Five-Year Pooled Data and Confidence Bounds**



NOTE: Five-year average = weighted average of the five years of data (sum of the numerators [selectees] divided by sum of the denominators [eligibles]). Board = all line or equivalent officers considered and selected in a specified year. For services with multiple line or equivalent competitive categories, this can actually include data from separate boards held for their various competitive categories.

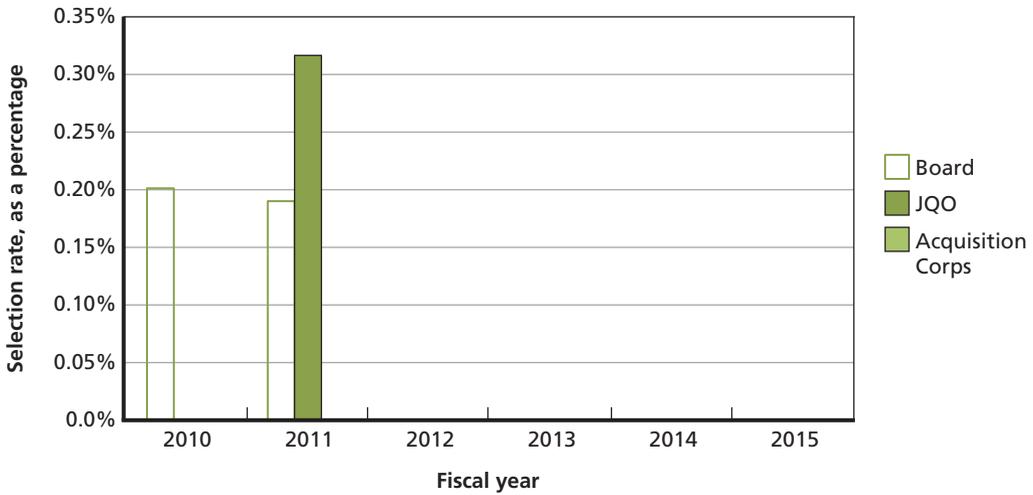
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benchmark for officers who have served on the Joint Staff or OSD staff). The unfavorable comparison remains even after considering confidence bounds around five-year pooled data. This suggests that the Army has consistently provided lower quality to the Joint Staff and OSD staff than to its headquarters staff, but the trend was unobserved because of the narrow definition of in-zone consideration permitted by CJCSI 1331.01D.<sup>2</sup> It provides compelling evidence that the Goldwater–Nichols benchmarks are still needed in order to achieve the quality-sharing intent of the legislation and that the proposed policy changes are needed to make the quality comparisons meaningful.

Figure 3.3, providing Army JQO and Acquisition Corps comparisons as currently reported, shows the same sparsity of data as in Figure 3.1, preventing any meaningful analysis. In our alternative calculations, shown in Figure 3.4, yearly rates miss their benchmark (the board selection rate is the conventional benchmark for these selections) in two cases, but the five-year pooled data show outcomes comfortably above the five-year benchmark and its confidence bounds.

<sup>2</sup> An alternative explanation is that equal quality is provided to the Army staff, Joint Staff, and OSD staff but that promotion boards value service on the Army staff more than service on the other staffs. If so, it suggests that the Army should examine its secretarial guidance to promotion boards.

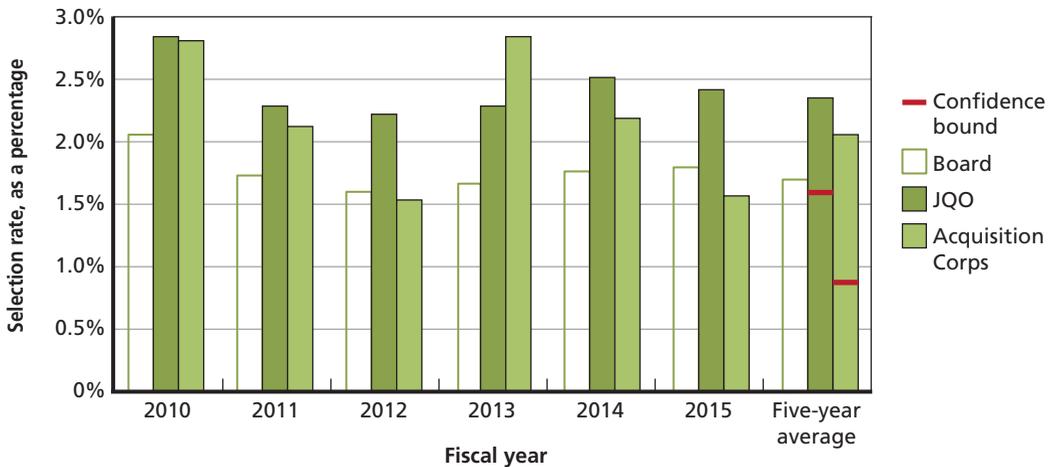
**Figure 3.3**  
**Army O-7 Joint-Qualified Officer and Acquisition Corps Comparisons: Reported Results**



NOTE: Board = all line or equivalent officers considered and selected in a specified year. For services with multiple line or equivalent competitive categories, this can actually include data from separate boards held for their various competitive categories.

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**Figure 3.4**  
**Army O-7 Joint-Qualified Officer and Acquisition Corps Comparisons: Alternative Results with Five-Year Pooled Data and Confidence Bounds**



NOTE: Five-year average = weighted average of the five years of data (sum of the numerators [selectees] divided by sum of the denominators [eligibles]). Board = all line or equivalent officers considered and selected in a specified year. For services with multiple line or equivalent competitive categories, this can actually include data from separate boards held for their various competitive categories.

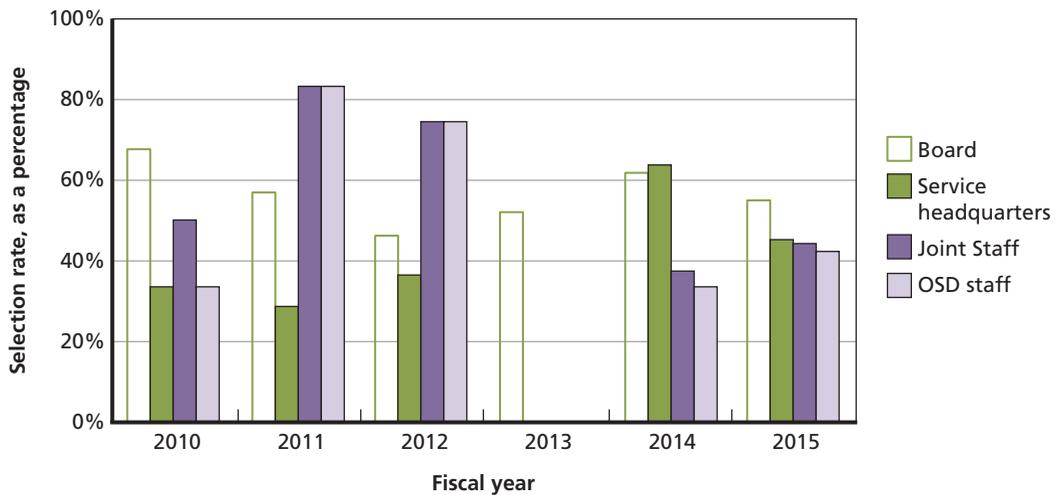
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### O-8 Promotions

As with O-7 promotions, Army O-8 reported results are based on defining the first look as the in-zone look. First-look promotions to O-8 are more common than first-look promotions to O-7, resulting in some selections, and hence some selection rates, in all but one reported year. Figure 3.5 shows that Joint Staff and OSD staff objectives would have been missed in 2014 and 2015 (Joint Staff and OSD rates are below the service headquarters rate in both years). In Figure 3.6, alternative results encompassing all zones indicate only one missed annual objective (Joint Staff in 2015), with five-year pooled results well above the benchmark.

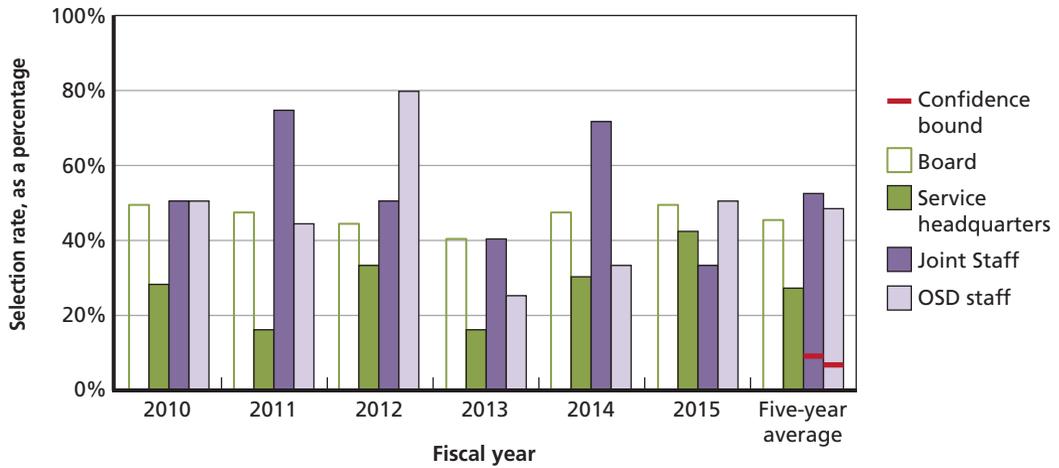
Although data in Figure 3.7 are sparse because of the narrow definition of in-zone consideration, missed objectives are common. In Figure 3.8, expanding the data to include all zones reduces the number of missed objectives in annual data and, overall, shows objectives being met in the five-year pooled data.

**Figure 3.5**  
**Army O-8 Joint Staff and Office of the Secretary of Defense Staff Comparisons: Reported Results**



NOTE: Data for 2013 were missing. Board = all line or equivalent officers considered and selected in a specified year. For services with multiple line or equivalent competitive categories, this can actually include data from separate boards held for their various competitive categories.

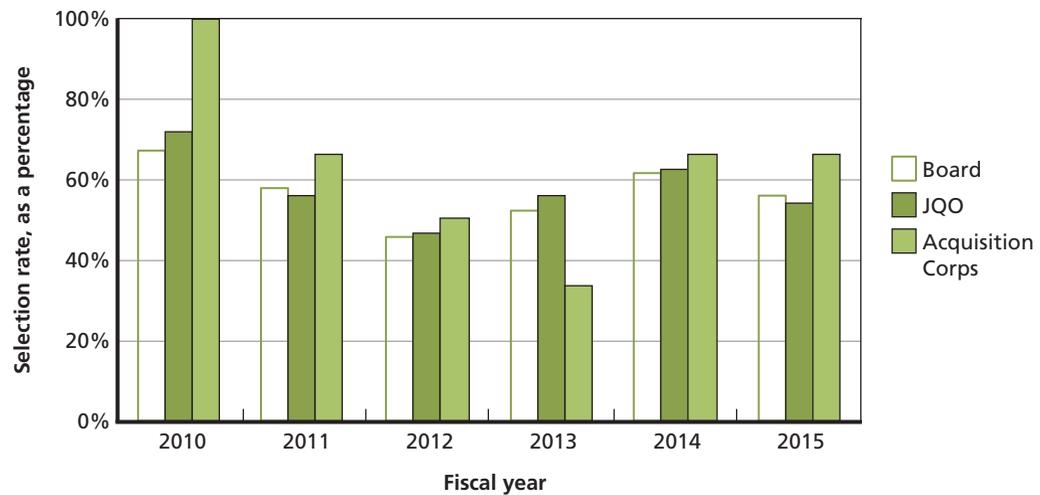
**Figure 3.6**  
**Army O-8 Joint Staff and Office of the Secretary of Defense Staff Comparisons: Alternative Results with Five-Year Pooled Data and Confidence Bounds**



NOTE: Five-year average = weighted average of the five years of data (sum of the numerators [selectees] divided by sum of the denominators [eligibles]). Board = all line or equivalent officers considered and selected in a specified year. For services with multiple line or equivalent competitive categories, this can actually include data from separate boards held for their various competitive categories.

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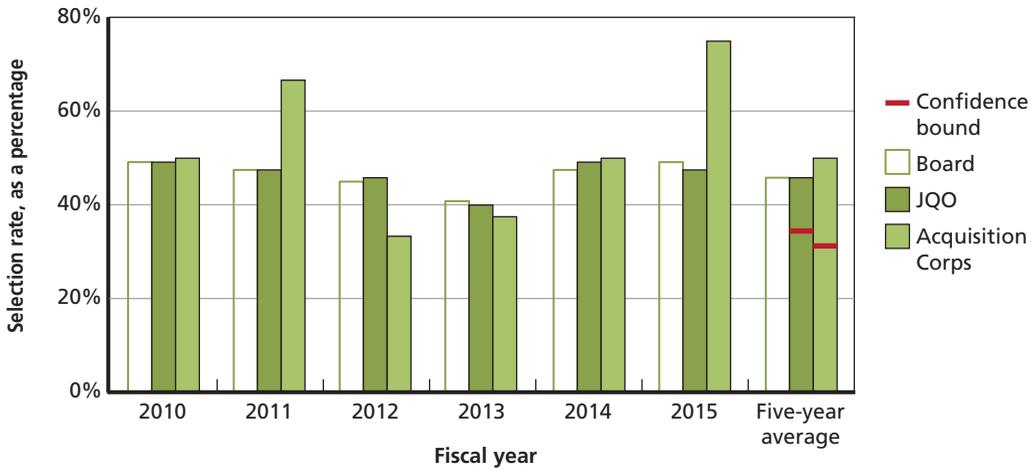
**Figure 3.7**  
**Army O-8 Joint-Qualified Officer and Acquisition Corps Comparisons: Reported Results**



NOTE: Board = all line or equivalent officers considered and selected in a specified year. For services with multiple line or equivalent competitive categories, this can actually include data from separate boards held for their various competitive categories.

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**Figure 3.8**  
**Army O-8 Joint-Qualified Officer and Acquisition Corps Comparisons: Alternative Results with Five-Year Pooled Data and Confidence Bounds**



NOTE: Five-year average = weighted average of the five years of data (sum of the numerators [selectees] divided by sum of the denominators [eligibles]). Board = all line or equivalent officers considered and selected in a specified year. For services with multiple line or equivalent competitive categories, this can actually include data from separate boards held for their various competitive categories.

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## Air Force Results

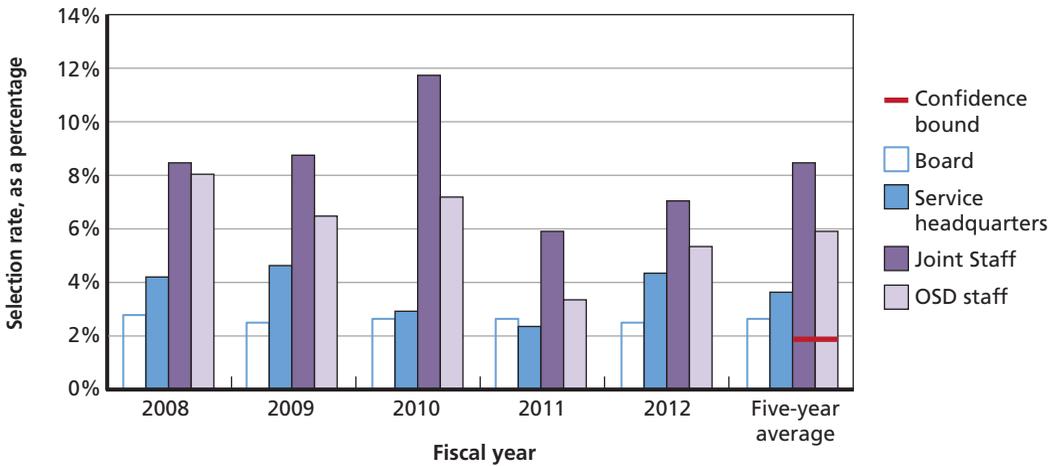
### O-7 Promotions

Figure 3.9 indicates that the quality of Air Force officers serving or having served on the Joint Staff and the OSD staff exceeded the benchmark in all years included in the available data. Similarly, Figure 3.10 indicates that JQO and Acquisition Corps rates exceeded their benchmark lower bounds in the five-year data.

### O-8 Promotions

Figure 3.11 indicates that the Joint Staff and OSD staff rates missed their benchmarks (i.e., the service headquarters rate) in several years but that the pooled five-year data comfortably exceeded their corresponding benchmarks. Figure 3.12 indicates that the Acquisition Corps rates missed their benchmark in one year and the JQO rates missed in several years. When data are pooled across five years, the Acquisition Corps rate meets its benchmark while the JQO rates remain slightly below the benchmark's confidence bound.

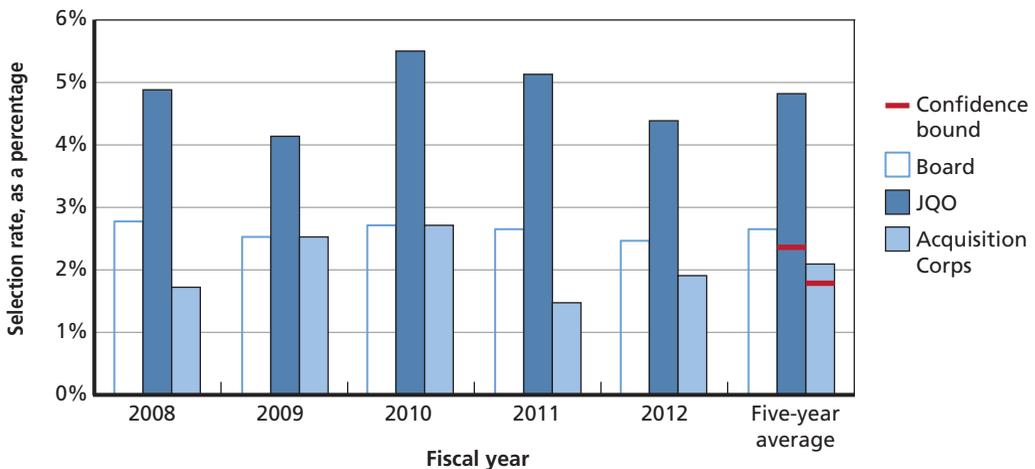
**Figure 3.9**  
**Air Force O-7 Joint Staff and Office of the Secretary of Defense Staff Comparisons with Five-Year Pooled Data and Confidence Bounds**



NOTE: Five-year average = weighted average of the five years of data (sum of the numerators [selectees] divided by sum of the denominators [eligibles]). Board = all line or equivalent officers considered and selected in a specified year. For services with multiple line or equivalent competitive categories, this can actually include data from separate boards held for their various competitive categories.

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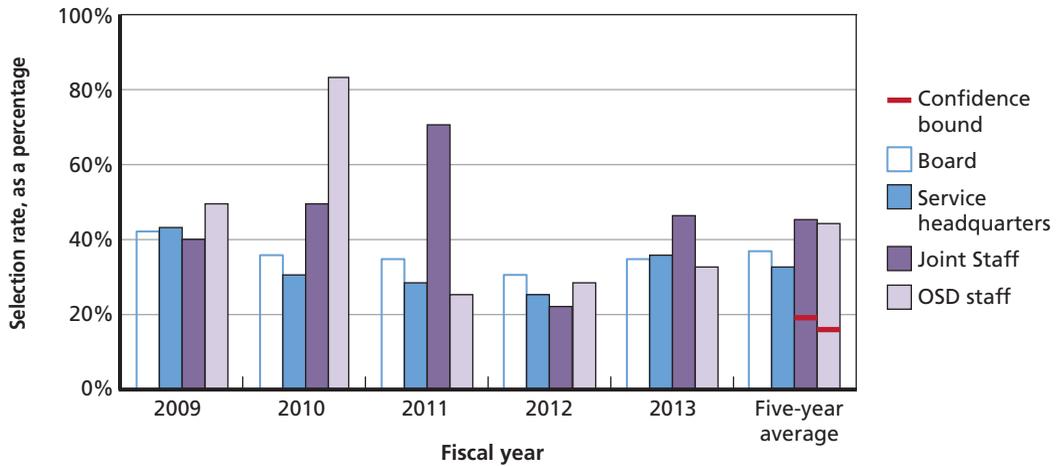
**Figure 3.10**  
**Air Force O-7 Joint-Qualified Officer and Acquisition Corps Comparisons with Five-Year Pooled Data and Confidence Bounds**



NOTE: Five-year average = weighted average of the five years of data (sum of the numerators [selectees] divided by sum of the denominators [eligibles]). Board = all line or equivalent officers considered and selected in a specified year. For services with multiple line or equivalent competitive categories, this can actually include data from separate boards held for their various competitive categories.

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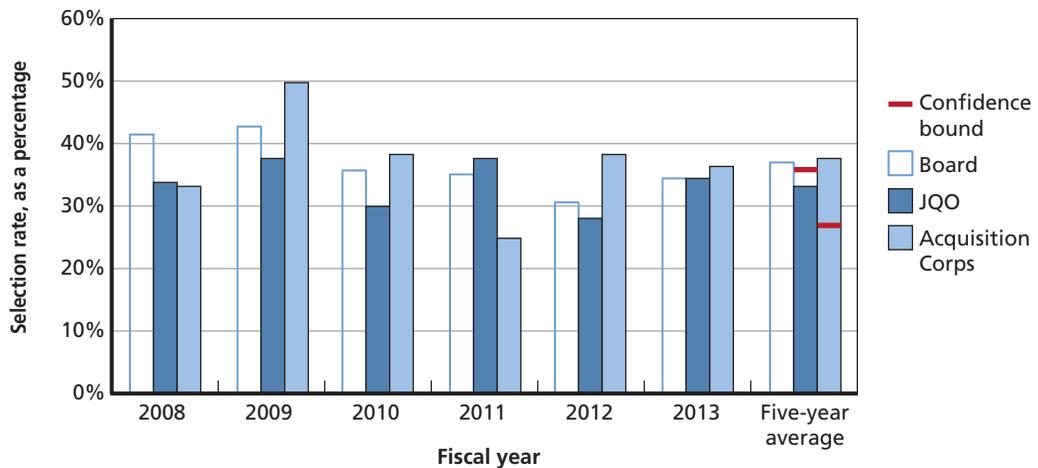
**Figure 3.11**  
**Air Force O-8 Joint Staff and Office of the Secretary of Defense Staff Comparisons with Five-Year Pooled Data and Confidence Bounds**



NOTE: Five-year average = weighted average of the five years of data (sum of the numerators [selectees] divided by sum of the denominators [eligibles]). Board = all line or equivalent officers considered and selected in a specified year. For services with multiple line or equivalent competitive categories, this can actually include data from separate boards held for their various competitive categories.

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**Figure 3.12**  
**Air Force O-8 Joint-Qualified Officer and Acquisition Corps Comparisons with Five-Year Pooled Data and Confidence Bounds**



NOTE: Five-year average = weighted average of the five years of data (sum of the numerators [selectees] divided by sum of the denominators [eligibles]). Board = all line or equivalent officers considered and selected in a specified year. For services with multiple line or equivalent competitive categories, this can actually include data from separate boards held for their various competitive categories.

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## Summary of Observations

Adopting the alternative reporting policies—including all zones of consideration, all have-served completions in the current grade, multiyear pooling, and confidence bounds—will provide a wider view of promotion outcomes that is truer than current policies in providing the quality comparisons envisioned by law and policy. Changes in the zone-of-consideration policy avoid the artificiality of defining promotion zones for general-officer boards and the inadequacy of the default in-zone definition (first consideration) contained in CJCSI 1331.01D. Changes in the have-served policy make the comparisons less subject to the randomness inherent in considering only the most-recent job histories. Pooling the data and using confidence bounds significantly reduce the cases in which the services must justify deviations that are attributable to chance rather than actual quality differences.

An additional advantage of the alternative reporting policies is that they will be easier for the services to apply. Both zone-of-consideration and have-served policies require the services to capture time sequencing of assignment and promotion actions, either in automated or manual compilation of data, that are difficult to define, especially when the two policies are applied simultaneously. The ambiguity of the have-served policy (first look after leaving the relevant staff versus tracking through the zone of most-competitive promotion consideration) exacerbates the difficulties that the services face. Not surprisingly, in many cases, the service staffs appear to have included all eligibles and selectees in their data rather than trying to apply the zone-of-consideration and have-served policies.

When the alternative policies are applied, some quality differences either remain or are revealed. If this were not the case, an argument could be made to eliminate the reporting requirements altogether. Our results suggest that eliminating the reporting requirements now would be premature. On the other hand, we are unaware that missing the benchmarks in the past has had any effect on service senior-leader management practices. With alternative policies that provide more-reliable and -meaningful benchmarks, senior-leader management offices within OSD, the Joint Staff, and the services might look more closely at assignment practices that underlie unfavorable quality comparisons. Service chiefs and secretaries, service deputies for personnel, senior leadership within OSD and the Joint Staff, and Congress should be watching and taking action when reliable benchmarks are consistently missed.



## Conclusions and Recommendations

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This project sought to answer three questions:

- Do post-promotion board reporting requirements continue to meet the objectives for which they were established?
- Are there any impediments to effective reporting?
- Are changes needed?

The answer to the first question is a qualified affirmative. Comparative promotion outcomes seem, on their face, to be valid barometers of the quality of officers in various categories. However, the validity is enhanced when the services do not adhere to the zone-of-consideration and have-served policies that inappropriately narrow the field of view represented in the data. Moreover, the persistence of some unfavorable comparisons after applying refined policies indicates that continued attention is required to the quality-sharing objectives in the Goldwater–Nichols Act, DAWIA, and OSD policy.

The answer to the second question is a clear affirmative. Ill-defined zones of promotion consideration and restrictive and apparently contradictory have-served policies have created a reporting framework that sometimes obscures relevant quality comparisons and virtually ensures inconsistent reporting practices across different services and within the same service for different boards.

The answer to the third question is also a clear affirmative. Changes in the reporting requirements are needed to simplify and clarify the counts of officers included in various reporting categories and to minimize unfavorable comparisons that are attributable to the random distribution of quality in small samples rather than to true quality differences in the larger populations from which they are drawn.

Specific recommendations regarding general- and flag-officer post-promotion board reporting instructions are to

- eliminate zones of promotion consideration and include all eligibles and selectees in reported data
- modify the have-served policy to include all service in the current grade
- base comparisons on five-year pooled data

- base comparisons on confidence bounds that account for random distributions of quality in subsets of officers meeting individual boards
- use service requirements as benchmarks for Acquisition Corps selectees.

Some of these recommendations would require modifications to statutes. Should Congress wish to implement these changes, it would need to modify sections of the U.S. Code related to the Goldwater–Nichols Act (10 U.S.C. § 662) and DAWIA (10 U.S.C. § 1731[b]). These changes would remove requirements for comparing general-officer promotion outcomes by promotion zone or competitive category. For DAWIA language, a more substantive change could be made to substitute service requirements in place of line-officer selection rates as the basis for evaluating general- and flag-officer selectees. Appendix C provides proposed statutory language that Congress could consider.

Specific changes required in DoDI 1300.19, *DoD Joint Officer Management (JOM) Program*, and CJCSI 1331.01D, *Manpower and Personnel Actions Involving General and Flag Officers*, are provided in Appendix D. The CJCSI contains most of the post-promotion board reporting instructions. It prescribes a standard Excel workbook that performs all of the required calculations. We have separately provided revised versions of the workbook. Appendix E gives samples of the revised workbook display and accompanying instructions.

We sense that OSD has greater equities in post-promotion board reporting and greater depth in the management of senior officers than the Joint Staff does. The post-promotion board reporting covers four target categories of officers (Joint Staff, OSD staff, JQOs, and Acquisition Corps). OSD has equities in all four, while the Joint Staff has equities in only two. Accordingly, we believe that it would be advantageous to shift responsibility for issuing post-promotion board reporting instructions and evaluating post-promotion board reports from the Joint Staff to OSD. That would entail moving the entirety of Enclosure E of CJCSI 1331.01D to DoDI 1300.19.<sup>1</sup> Along with this shift, we propose that OSD engage the services in high-level discussion of senior-officer assignment practices when post-promotion board reporting reveals unfavorable comparisons.

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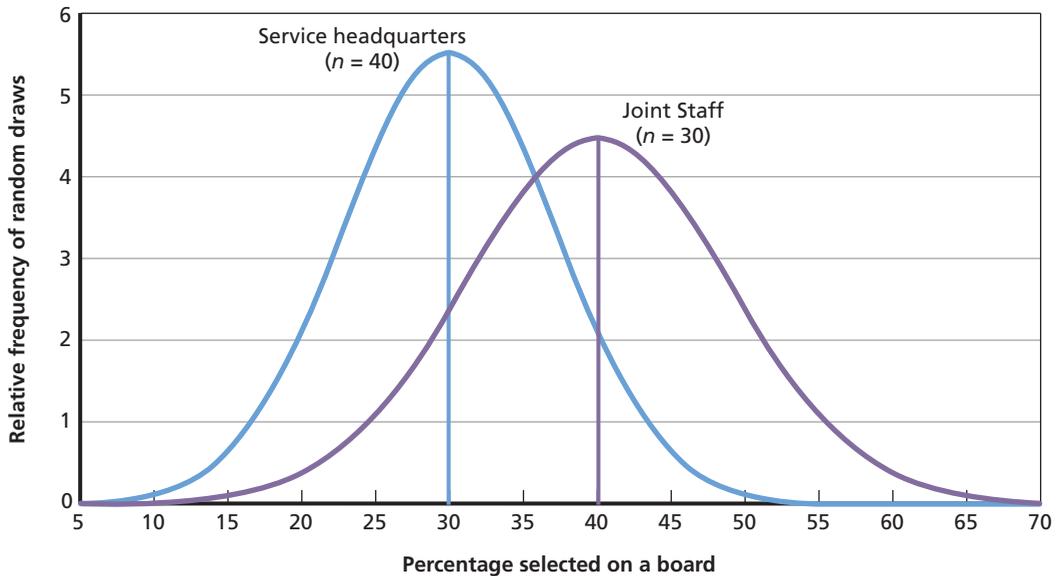
<sup>1</sup> Although it is outside the scope of our analysis, consideration might also be given to shifting reporting instructions for field-grade boards from CJCSI 1330.05, *Joint Officer Management Program Procedures*, to DoDI 1300.19.

## Confidence Bounds

As discussed in Chapter Two, confidence bounds around benchmark selection rates are needed to account for random variations in the quality of officers appearing in the subsets of data included in post-promotion board reports.

Figure A.1 illustrates the need for confidence bounds. Assume that a service consistently, over time, assigns O-7s to the service headquarters staff of such quality that 30 percent of them are eventually selected for promotion to O-8 in the long run. Similarly, a higher-quality mix is assigned to the Joint Staff, such that its eventual selection rate is 40 percent in the long run. Also assume that, in each promotion cycle, the service will consider 40 officers serving in or having served in the service headquarters and 30 serving in or having served in the Joint Staff. The officers considered in any one promotion cycle are random draws from the populations of all officers who serve in

**Figure A.1**  
**Illustrative Quality and Selection-Rate Distributions**



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those staffs over time. With random draws of the sizes in this example, the proportion of officers selected for promotion will cluster around the 30- and 40-percent rates for their populations but, by chance alone, can differ widely from those rates, as indicated by the bell-shaped curves in the figure. Standard probability theory dictates that, so long as the pool of officers eligible for promotion is sufficiently large, the promotion rate will adhere to the bell shape shown in the figure.<sup>1</sup>

As the curves indicate, in any given pair of draws from the service headquarters and Joint Staff populations (i.e., in any one promotion board), there is some chance that the service headquarters draw of eligibles will yield a higher selection rate than the Joint Staff draw. From the statistical properties of these distributions, it can be determined that, in about 20 percent of the promotion boards, the service headquarters selection rate will, by chance, be greater than the Joint Staff selection rate, even though the long-run quality distribution in the Joint Service have-served population is richer by 10 percent than the long-run quality distribution in the service headquarters have-served population.<sup>2</sup>

If the post-promotion board promotion reports do not account for these random possibilities, the services are often required to construct justifications for unfavorable outcomes even if the quality distributions resulting from their assignment practices conform to the intent of law and policy. To minimize the need for unwarranted justifications of unfavorable comparisons, the standard Excel reporting format should embed calculations of confidence bounds around the benchmark selection rates. We recommend constructing the confidence bounds such that unwarranted unfavorable comparisons will occur in only about 5 percent of the cases.

Confidence bounds are sensitive to the selection rates and to the sizes of the samples (i.e., the number of eligibles) from which selections were made. In the example provided above, the long-run difference in the population selection rates was 10 percentage points. As multiple promotion boards are conducted, drawing samples from these populations, the difference between the observed selection rates for those who have served on the service headquarters staff and Joint Staff will be distributed in a predictable way. The mean of the distribution will be the same as the difference between the population means (10 percentage points), and the standard deviation of the distri-

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<sup>1</sup> The common rule for “sufficiently large” implies a need for at least five promoted officers in each comparison group and at least five not-promoted officers in each comparison group in order to use the *z*-test. This assumption is likely to hold in all cases except Acquisition Corps officers competing for O-8 in the Marine Corps.

<sup>2</sup> The standard error of the difference between these proportions is 0.115 with a mean of 0.10. The *z*-score for a difference of 0 is 0.10/0.115, or 0.868, which has a one-tailed cumulative probability of 0.808.

bution will be a statistic referred to as the *standard error of the difference between proportions*. The formula for the standard error of the difference between proportions is

$$SE_{p_1-p_2} = \sqrt{p(1-p)\left(\frac{1}{n_1} + \frac{1}{n_2}\right)},$$

where

$p_1$  is one selection rate (the Joint Staff rate, in our example)

$n_1$  is the number of eligibles who have served on the Joint Staff

$p_2$  is the comparison selection rate (the service headquarters rate, in our example)

$n_2$  is the number of eligibles for comparison (e.g., those who have served on the service headquarters staff)

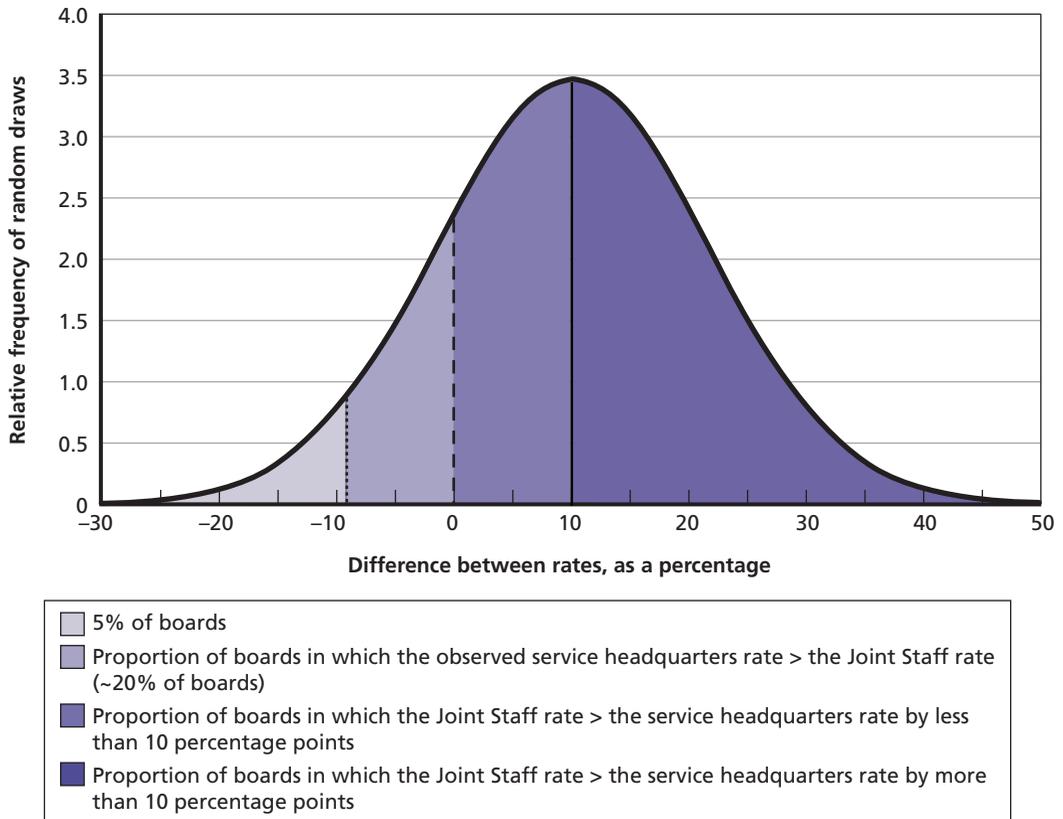
$p$  is the overall selection rate (across the two groups being compared). Note that  $(n_1 + n_2)p = n_1p_1 + n_2p_2$ .

It is worth noting that this standard error imposes the assumption that the two groups have equivalent long-run selection rates.

Figure A.2 shows the resulting distribution, with mean =  $p_1 - p_2$  and standard deviation =  $SE_{p_1-p_2}$ . The area under the right half of the curve represents the proportion of boards in which, by random draw, the Joint Staff rate would exceed the service headquarters rate by more than 10 percentage points. The area under the left half between the dashed vertical line and the solid vertical line represents the proportion of boards in which the Joint Staff rate would exceed the service headquarters rate by less than 10 percentage points. The area to the left of the dashed vertical line represents the proportion of boards in which the observed service headquarters rate would actually exceed the Joint Staff rate. As indicated above, the area to the left of the dashed line is about 20 percent of the total area under the curve, corresponding to our statement that, in about 20 percent of the promotion boards, the service headquarters selection rate will by chance be greater than the Joint Staff selection rate. To the left of the dashed line is a dotted line set so that the area to the left of it is only 5 percent of the area under the curve. The location of this line, at -9 percentage points on the horizontal axis, is knowable from the properties of normal curves. It is 1.645 standard errors to the left of the mean. The interpretation, in our example, is that only when the Joint Staff rate falls more than 9 percentage points below the service headquarters rate can we state with confidence that the Joint Staff rate in the larger population of all have-served officers actually is less than the corresponding service headquarters rate.

For the revised Excel workbooks for reporting post-promotion board results and for the examples provided in Chapter Three, we calculated confidence bounds for the service headquarters staff, Joint Staff, and OSD staff comparisons as described above. The minimum acceptable rates for the Joint Staff and OSD staff are set at the service

**Figure A.2**  
**Illustrative Distribution of Differences Between Proportions**



NOTE: In this example, only when the Joint Staff rate falls more than 9 percentage points below the service headquarters rate can we state with confidence that the Joint Staff rate in the larger population of all have-served officers actually is less than the corresponding service headquarters rate.

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headquarters rate minus a margin of error of 1.645 standard errors. Justification of this choice of confidence bound is shown below.

We wish to test the hypothesis that the two groups being compared (e.g., Joint Staff versus service headquarters) have equivalent long-run selection rates rather than an alternative hypothesis that stipulates that the first group (Joint Staff) has a lower selection rate than the second (service headquarters). Under the notation described above, a commonly used statistic for assessing these hypotheses is

$$z = \frac{\hat{p}_1 - \hat{p}_2}{SE_{\hat{p}_1 - \hat{p}_2}}$$

The hypothesis that rates are equivalent in the long run is rejected in favor of the stated alternative with 95-percent confidence if

$$\frac{p_1 - p_2}{SE_{p_1 - p_2}} < -z_{0.95},$$

where  $z_{0.95} = 1.645$ . For ease of interpretation, this rejection rule is rewritten in terms of minimum acceptable bound for  $p_1$ . That is, the Joint Staff can be assumed to have a lower long-run rate if  $p_1 < p_2 - z_{0.95} \times SE_{p_1 - p_2}$ .

The procedure for JQO and the Acquisition Corps is slightly different because these staffs mandate comparison to line-officer selection rates. Those who have served on the Joint Staff and OSD staff are different from those who have served on the service headquarters staff.<sup>3</sup> However, the JQO and Acquisition Corps eligibles and selectees are subsets of the overall line or equivalent eligibles and selectees with whom they are to be compared. To determine the confidence bounds for these comparisons, we first calculate a selection rate for the non-JQOs and non-Acquisition Corps members and use those as the comparison group. We determine the standard error of the difference, as described above, between the JQO and non-JQO line or equivalent officers and between the Acquisition Corps members and non-Acquisition Corps line or equivalent officers. Using JQOs as an example, let  $e_{jqo}$  be the count of JQO eligibles,  $s_{jqo}$  be the count of JQO selectees,  $e_{line}$  be the count of line eligibles, and  $s_{line}$  be the count of line selectees.<sup>4</sup> We can then calculate  $p_1$  and  $p_2$  for insertion into the formula for  $SE_{p_1 - p_2}$  provided above:

$$p_1 = \frac{s_{jqo}}{e_{jqo}} \quad \text{and} \quad p_2 = \frac{s_{line} - s_{jqo}}{e_{line} - e_{jqo}}.$$

Because we already have a pooled promotion rate (i.e., that of overall line or equivalent officers), we can use a formula that compares  $p_1$  and  $p$ , the overall selection rate (e.g.,  $p = s_{line}/e_{line}$ ), instead of  $p_1$  and  $p_2$ . We can conclude that the selection rate for JQOs (or the Acquisition Corps) is less than the line-officer selection rate if

$$p_1 < p - 1.645 \times \left( \frac{e_{line} - e_{jqo}}{e_{line}} \right) \times SE_{p_1 - p_2}.$$

<sup>3</sup> Although there are overlaps between these categories—officers who have served on the Joint Staff or OSD staff and on their services' headquarters staff—the overlaps are minor enough to allow us to treat the target and benchmark categories as independent.

<sup>4</sup> These counts are readily available in the post-promotion board reporting format. See Appendix E.

The expression

$$\frac{e_{line} - e_{jqo}}{e_{line}}$$

is a correction that allows the JQO rate to be compared with the overall rate and not the non-JQO rate. If comparative rates, as opposed to required numbers, continue to be used as benchmarks for Acquisition Corps selectees, an analogous formula holds; specifically, we replace  $e_{jqo}$  and  $s_{jqo}$  in the above calculations with corresponding terms for the Acquisition Corps.

## Feasibility of Meeting Multiple Objectives

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As indicated in Chapter Two, we examined the feasibility of simultaneously meeting the four objectives contained in post-promotion board comparisons (Joint Staff versus service headquarters staff, OSD staff versus service headquarters staff, JQOs versus line or equivalent officers, and Acquisition Corps members versus line or equivalent officers). To model alternative selections, our analysis used five years of data that the services provided on eligibles, selectees, and their relevant characteristics. For each of the services and each of the five years (20 cases in all), we constructed optimization models that sought to meet all promotion comparison benchmarks while minimizing deviations from the order of merit represented in the actual selectees and minimizing the number of Acquisition Corps officers selected. In our modeling, we used current policies: a first-look policy for have-served officers and a policy for those in and below the zone of most-competitive promotion opportunity. Tables B.1 through B.4 show the results for each of the four services.

In the tables that follow, the cases in which all promotion comparison benchmarks could not be met are identified with the phrase “No feasible solution.” There are four such cases among the 40 cases examined (four services, five years of data, two boards—O-7 and O-8—in each year). We then repeated the analysis to include eligibles in all promotion zones. In the repeated analysis, we found an infeasibility in one case (Marine Corps O-8 promotions in 2015).

**Table B.1**  
**Army Feasibility Model, O-7**

Characteristic	Reported Board Result					Feasible Alternative				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Number of eligible officers										
Total	2,308	2,165	2,421	2,394	2,211	2,308	2,165	2,421	2,394	2,211
Total (in and below zone)	520	445	578	387	480	520	445	578	387	480
Service headquarters staff	291	282	348	295	308	291	282	348	295	308
Joint Staff	72	77	82	72	89	72	77	82	72	89
OSD staff	59	66	72	68	71	59	66	72	68	71
JQO	1,008	1,035	1,191	1,241	1,175	1,008	1,035	1,191	1,241	1,175
Acquisition Corps	141	129	140	137	128	141	129	140	137	128
Acquisition Corps (in and below zone)	31	28	39	24	26	31	28	39	24	26
Number of selected officers										
Total	40	35	40	42	40	40	35	40	42	40
Total (in and below zone)	1	0	0	0	0	4	3	3	3	3
Service headquarters staff	10	9	20	13	15	10	8	20	11	11
Joint Staff	3	4	3	3	6	3	4	5	4	6
OSD staff	3	1	2	1	1	4	2	5	3	3
JQO	30	32	35	38	34	32	31	31	35	32
Acquisition Corps	3	2	4	3	2	6	5	10	6	5
Acquisition Corps (in and below zone)	0	0	0	0	0	3	3	3	3	3

**Table B.1—Continued**

Characteristic	Reported Board Result					Feasible Alternative				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Calculated data, as percentages										
Board average	1.7	1.6	1.7	1.8	1.8	1.7	1.6	1.7	1.8	1.8
Board average (in and below zone)	0.2	0.0	0.0	0.0	0.0	0.8	0.7	0.5	0.8	0.6
Service headquarters staff	3.4	3.2	5.7	4.4	4.9	3.4	2.8	5.7	3.7	3.6
Joint Staff	4.2	5.2	3.7	4.2	6.7	4.2	5.2	6.1	5.6	6.7
OSD staff	5.1	1.5	2.8	1.5	1.4	6.8	3.0	6.9	4.4	4.2
JQO	3.0	3.1	2.9	3.1	2.9	3.2	3.0	2.6	2.8	2.7
Acquisition Corps	2.1	1.6	2.9	2.2	1.6	4.3	3.9	7.1	4.4	3.9
Acquisition Corps (in and below zone)	0.0	0.0	0.0	0.0	0.0	9.7	10.7	7.7	12.5	11.5
Comparison to objectives										
Joint Staff versus service headquarters	0	1	-2	-1	1	0	1	0	1	2
OSD staff versus service headquarters	0	-2	-3	-2	-3	1	0	0	0	0
JQO versus board average	12	15	15	16	12	14	14	11	13	10
Acquisition Corps versus board average	0	-1	1	0	-1	3	2	7	3	2
Acquisition Corps (in and below zone)	-1	0	0	0	0	2	2	2	2	2

**Table B.2**  
**Army Feasibility Model, O-8**

Characteristic	Reported Board Result					Feasible Alternative				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Number of eligible officers										
Total	61	63	67	65	65	61	63	67	65	65
Total (in and below zone)	40	37	42	42	45	40	37	42	42	45
Service headquarters staff	10	20	0	17	17	10	20	0	17	17
Joint Staff	8	8	0	9	10	8	8	0	9	10
OSD staff	1	1	0	4	1	1	1	0	4	1
JQO	45	55	57	61	63	45	55	57	61	63
Acquisition Corps	3	3	8	6	4	3	3	8	6	4
Acquisition Corps (in and below zone)	3	2	6	3	3	3	2	6	3	3
Number of selected officers										
Total	29	28	27	31	32	29	28	27	31	No feasible solution
Total (in and below zone)	23	17	22	26	25	23	19	24	26	
Service headquarters staff	3	8	0	10	9	4	10	0	9	
Joint Staff	6	4	0	4	4	6	4	0	6	
OSD staff	1	0	0	2	1	1	1	0	3	
JQO	22	26	23	30	30	22	26	24	30	
Acquisition Corps	2	1	3	3	3	3	2	4	4	
Acquisition Corps (in and below zone)	2	1	2	2	2	3	2	4	3	

**Table B.2—Continued**

Characteristic	Reported Board Result					Feasible Alternative				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Calculated data, as percentages										
Board average	47.5	44.4	40.3	47.7	49.2	47.5	44.4	40.3	47.7	
Board average (in and below zone)	57.5	45.9	52.4	61.9	55.6	57.5	51.4	57.1	61.9	
Service headquarters staff	30.0	40.0	0.0	58.8	52.9	40.0	50.0	0.0	52.9	
Joint Staff	75.0	50.0	0.0	44.4	40.0	75.0	50.0	0.0	66.7	
OSD staff	100.0	0.0	0.0	50.0	100.0	100.0	100.0	0.0	75.0	
JQO	48.9	47.3	40.4	49.2	47.6	48.9	47.3	42.1	49.2	
Acquisition Corps	66.7	33.3	37.5	50.0	75.0	100.0	66.7	50.0	66.7	
Acquisition Corps (in and below zone)	66.7	50.0	33.3	66.7	66.7	100.0	100.0	66.7	100.0	
Comparison to objectives										
Joint Staff versus service headquarters staff	0	3	0	0	-2	2	0	0	1	
OSD staff versus service headquarters staff	0	0	-1	0	-1	0	0	0	0	
JQO versus board average	0	0	1	0	0	0	1	1	0	
Acquisition Corps versus board average	0	0	-1	-1	0	1	0	0	1	
Acquisition Corps (in and below zone)	0	0	0	-2	0	1	0	0	1	

NOTE: No feasible solution = all promotion comparison benchmarks could not be met.

**Table B.3**  
**Navy Feasibility Model, O-7**

Characteristic	Reported Board Result					Feasible Alternative				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Number of eligible officers										
Total	1,151	1,163	1,287	1,236	1,249	1,151	1,163	1,287	1,236	1,249
Total (in and below zone)	917	906	1,014	1,079	1,042	917	906	1,014	1,079	1,042
Service headquarters staff	280	278	306	284	258	280	278	306	284	258
Joint Staff	59	63	76	80	86	59	63	76	80	86
OSD staff	45	50	54	56	60	45	50	54	56	60
JQO	210	272	306	326	180	210	272	306	326	180
Acquisition Corps	210	216	251	245	256	210	216	251	245	256
Acquisition Corps (in and below zone)	188	184	216	214	222	188	184	216	214	222
Number of selected officers										
Total	34	24	22	26	30	34	24	22	26	30
Total (in and below zone)	22	18	15	17	16	29	19	17	19	17
Service headquarters staff	9	9	7	7	10	8	9	8	6	9
Joint Staff	4	3	3	1	3	4	3	3	2	3
OSD staff	1	3	1	2	2	2	3	2	2	3
JQO	10	10	5	6	4	10	10	6	7	6
Acquisition Corps	7	5	5	7	5	7	6	6	9	8
Acquisition Corps (in and below zone)	5	4	3	2	4	7	5	5	6	7

**Table B.3—Continued**

Characteristic	Reported Board Result					Feasible Alternative				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Calculated data, as percentages										
Board average	3.0	2.1	1.7	2.1	2.4	3.0	2.1	1.7	2.1	2.4
Board average (in and below zone)	2.4	2.0	1.5	1.6	1.5	3.2	2.1	1.7	1.8	1.6
Service headquarters staff	3.2	3.2	2.3	2.5	3.9	2.9	3.2	2.6	2.1	3.5
Joint Staff	6.8	4.8	3.9	1.3	3.5	6.8	4.8	3.9	2.5	3.5
OSD staff	2.2	6.0	1.9	3.6	3.3	4.4	6.0	3.7	3.6	5.0
JQO	4.8	3.7	1.6	1.8	2.2	4.8	3.7	2.0	2.1	3.3
Acquisition Corps	2.7	2.2	1.4	0.9	1.8	3.7	2.7	2.3	2.8	3.2
Acquisition Corps (in and below zone )	3.0	2.1	1.7	2.1	2.4	3.0	2.1	1.7	2.1	2.4
Comparison to objectives										
Joint Staff versus service headquarters staff	2	0	1	-1	-1	2	0	1	0	0
OSD staff versus service headquarters staff	-1	1	-1	0	-1	0	1	0	0	0
JQO versus board average	3	4	-1	-1	-1	3	4	0	0	1
Acquisition Corps versus board average	0	0	0	1	-2	0	1	1	3	1
Acquisition Corps (in and below zone)	0	0	-1	-2	0	1	1	1	2	3

**Table B.4**  
**Navy Feasibility Model, O-8**

Characteristic	Reported Board Result					Feasible Alternative				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Number of eligible officers										
Total	34	34	49	55	44	34	34	49	55	44
Total (in and below zone)	25	29	39	33	16	25	29	39	33	16
Service headquarters staff	16	15	19	17	15	16	15	19	17	15
Joint Staff	3	1	6	9	5	3	1	6	9	5
OSD staff	0	0	0	0	0	0	0	0	0	0
JQO	10	5	11	21	16	10	5	11	21	16
Acquisition Corps	5	8	11	10	8	5	8	11	10	8
Acquisition Corps (in and below zone)	4	7	8	5	2	4	7	8	5	2
Number of selected officers										
Total	24	20	18	18	16	24	20	18	18	16
Total (in and below zone)	22	19	15	13	5	23	19	15	13	8
Service headquarters staff	8	9	7	5	5	8	9	6	5	4
Joint Staff	2	0	1	4	1	2	1	2	4	2
OSD staff	0	0	0	0	0	0	0	0	0	0
JQO	9	4	4	6	8	9	3	5	7	8
Acquisition Corps	4	4	4	6	2	4	5	5	5	3
Acquisition Corps (in and below zone)	3	4	3	4	1	4	5	4	3	2

**Table B.4—Continued**

Characteristic	Reported Board Result					Feasible Alternative				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Calculated data, as percentages										
Board average	70.6	58.8	36.7	32.7	36.4	70.6	58.8	36.7	32.7	36.4
Board average (in and below zone)	88.0	65.5	38.5	39.4	31.3	92.0	65.5	38.5	39.4	50.0
Service headquarters staff	50.0	60.0	36.8	29.4	33.3	50.0	60.0	31.6	29.4	26.7
Joint Staff	66.7	0.0	16.7	44.4	20.0	66.7	100.0	33.3	44.4	40.0
OSD staff	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
JQO	90.0	80.0	36.4	28.6	50.0	90.0	60.0	45.5	33.3	50.0
Acquisition Corps	80.0	50.0	36.4	60.0	25.0	80.0	62.5	45.5	50.0	37.5
Acquisition Corps (in and below zone)	75.0	57.1	37.5	80.0	50.0	100.0	71.4	50.0	60.0	100.0
Comparison to objectives										
Joint Staff versus service headquarters staff	0	-1	-2	1	-1	0	0	0	1	0
OSD staff versus service headquarters staff	0	0	0	0	0	0	0	0	0	0
JQO versus board average	1	1	-1	-1	2	1	0	0	0	2
Acquisition Corps versus board average	0	-1	-1	2	-1	0	0	0	1	0
Acquisition Corps (in and below zone)	-1	-1	-1	2	0	0	0	0	1	1

**Table B.5  
Air Force Feasibility Model, O-7**

Characteristic	Reported Board Result					Feasible Alternative					
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013	
Number of eligible officers											
Total	1,546	1,560	1,417	1,356		1,546	1,560	1,417	1,356		
Total (in and below zone)	1,036	1,078	1,107	1,089		1,036	1,078	1,107	1,089		
Service headquarters staff	287	370	250	257	Data unavailable	287	370	250	257		
Joint Staff	92	106	77	83		92	106	77	83		
OSD staff	42	25	62	74		42	25	62	74		
JQO	675	710	704	708		675	710	704	708		
Acquisition Corps	237	222	201	210		237	222	201	210		
Acquisition Corps (in and below zone)	167	155	156	160		167	155	156	160		
Number of selected officers											
Total	39	42	38	33				42	38	33	
Total (in and below zone)	37	42	38	33			42	38	33		
Service headquarters staff	8	12	6	16			12	6	16		
Joint Staff	3	11	6	6			11	6	6		
OSD staff	0	2	4	5			2	4	5		
JQO	28	39	36	31			39	36	31		
Acquisition Corps	6	6	3	4			7	6	5		
Acquisition Corps (in and below zone)	6	6	3	4			7	6	5		

No feasible solution

**Table B.5—Continued**

Characteristic	Reported Board Result					Feasible Alternative				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Calculated data, as percentages										
Board average	2.5	2.7	2.7	2.4		2.7	2.7	2.4		
Board average (in and below zone)	3.6	3.9	3.4	3.0		3.9	3.4	3.0		
Service headquarters staff	2.8	3.2	2.4	6.2		3.2	2.4	6.2		
Joint Staff	3.3	10.4	7.8	7.2		10.4	7.8	7.2		
OSD staff	0.0	8.0	6.5	6.8		8.0	6.5	6.8		
JQO	4.1	5.5	5.1	4.4		5.5	5.1	4.4		
Acquisition Corps	2.5	2.7	1.5	1.9		3.2	3.0	2.4		
Acquisition Corps (in and below zone)	3.6	3.9	1.9	2.5		4.5	3.8	3.1		
Comparison to objectives										
Joint Staff versus service headquarters staff	0	7	4	0		7	4	0		
OSD staff versus service headquarters staff	-2	1	2	0		1	2	0		
JQO versus board average	10	19	17	13		19	17	13		
Acquisition Corps versus board average	0	0	-2	-1		1	0	-1 <sup>a</sup>		
Acquisition Corps (in and below zone)	0	-1	-3	-1		0	0	0		

<sup>a</sup> We did not include this objective in the optimization model. The model sought to satisfy only the in- and below-zone acquisition benchmarks. No feasible solution = all promotion comparison benchmarks could not be met.

**Table B.6**  
**Air Force Feasibility Model, O-8**

Characteristic	Reported Board Result					Feasible Alternative				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Number of eligible officers										
Total	68	90	77	81	75	68	90	77	81	75
Total (in and below zone)	35	56	33	41	32	35	56	33	41	32
Service headquarters staff	9	24	12	19	17	9	24	12	19	17
Joint Staff	5	9	6	9	8	5	9	6	9	8
OSD staff	0	3	4	4	3	0	3	4	4	3
JQO	50	76	66	74	72	50	76	66	74	72
Acquisition Corps	12	13	12	13	11	12	13	12	13	11
Acquisition Corps (in and below zone)	5	9	5	6	4	5	9	5	6	4
Number of selected officers										
Total	29	32	27	25	26	29	32		25	26
Total (in and below zone)	12	16	6	6	5	15	18		8	8
Service headquarters staff	3	8	3	4	4	5	9	No feasible solution	3	4
Joint Staff	2	4	3	2	3	3	5		2	3
OSD staff	0	2	0	1	1	0	2		1	1
JQO	19	23	25	21	25	22	28		23	25
Acquisition Corps	6	5	3	5	4	7	8		6	4
Acquisition Corps (in and below zone)	3	2	0	1	1	5	6		4	4

**Table B.6—Continued**

Characteristic	Reported Board Result					Feasible Alternative				
	2009	2010	2011	2012	2013	2009	2010	2011	2012	2013
Calculated data, as percentages										
Board average	42.6	35.6	35.1	30.9	34.7	42.6	35.6		30.9	34.7
Board average (in and below zone)	34.3	28.6	18.2	14.6	15.6	42.9	32.1		19.5	25.0
Service headquarters staff	33.3	33.3	25.0	21.1	23.5	55.6	37.5		15.8	23.5
Joint Staff	40.0	44.4	50.0	22.2	37.5	60.0	55.6		22.2	37.5
OSD staff	0.0	66.7	0.0	25.0	33.3	0.0	66.7		25.0	33.3
JQO	38.0	30.3	37.9	28.4	34.7	44.0	36.8		31.1	34.7
Acquisition Corps	50.0	38.5	25.0	38.5	36.4	58.3	61.5		46.2	36.4
Acquisition Corps (in and below zone)	60.0	22.2	0.0	16.7	25.0	100.0	66.7		66.7	100.0
Comparison to objectives										
Joint Staff versus service headquarters staff	0	1	1	0	1	0	1		0	1
OSD staff versus service headquarters staff	0	1	-1	0	0	0	0		0	0
JQO versus board average	-3	-5	1	-2	0	0	0		0	0
Acquisition Corps versus board average	0	0	-1	1	0	1	3		2	0
Acquisition Corps (in and below zone)	1	-1	-1	0	0	2	3		2	3

NOTE: No feasible solution = all promotion comparison benchmarks could not be met.

**Table B.7**  
**Marine Corps Feasibility Model, O-7**

Characteristic	Reported Board Result					Feasible Alternative				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
Number of eligible officers										
Total	443	450	242	367	371	443	450	242	367	371
Total (in and below zone)	225	217	96	179	165	225	217	96	179	165
Service headquarters staff	86	78	40	60	62	86	78	40	60	62
Joint Staff	30	13	4	19	31	30	13	4	19	31
OSD staff	13	7	43	18	17	13	7	43	18	17
JQO	196	228	240	228	255	196	228	240	228	255
Acquisition Corps	32	32	13	22	26	32	32	13	22	26
Acquisition Corps (in and below zone)	17	21	5	7	8	17	21	5	7	8
Number of selected officers										
Total	6	6	9	10		6	6	9	10	5
Total (in and below zone)	1	5	3	3		2	5	4	5	4
Service headquarters staff	0	1	5	3		0	0	2	1	2
Joint Staff	2	1	0	2		2	1	1	1	1
OSD staff	0	0	0	0		0	0	3	1	2
JQO	3	6	9	9		3	6	9	9	5
Acquisition Corps	0	0	2	1		1	1	3	2	1
Acquisition Corps (in and below zone)	0	0	0	0		1	1	1	1	1

Data unavailable

**Table B.7—Continued**

Characteristic	Reported Board Result					Feasible Alternative				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
Calculated data, as percentages										
Board average	1.4	1.3	3.7	2.7		1.4	1.3	3.7	2.7	1.3
Board average (in and below zone)	0.4	2.3	3.1	1.7		0.9	2.3	4.2	2.8	2.4
Service headquarters staff	0.0	1.3	12.5	5.0		0.0	0.0	5.0	1.7	3.2
Joint Staff	6.7	7.7	0.0	10.5		6.7	7.7	25.0	5.3	3.2
OSD staff	0.0	0.0	0.0	0.0		0.0	0.0	7.0	5.6	11.8
JQO	1.5	2.6	3.8	3.9		1.5	2.6	3.8	3.9	2.0
Acquisition Corps	0.0	0.0	15.4	4.5		3.1	3.1	23.1	9.1	3.8
Acquisition Corps (in and below zone)	0.0	0.0	0.0	0.0		5.9	4.8	20.0	14.3	12.5
Comparison to objectives										
Joint Staff versus service headquarters staff	2	0	-1	1		2	1	0	0	0
OSD staff versus service headquarters staff	0	-1	-6	-1		0	0	0	0	1
JQO versus board average	0	2	0	2		0	2	0	2	1
Acquisition Corps versus board average	-1	-1	1	0		0	0	2	1	0
Acquisition Corps (in and below zone)	-1	-1	-1	-1		0	0	0	0	0

**Table B.8**  
**Marine Corps Feasibility Model, O-8**

Characteristic	Reported Board Result					Feasible Alternative				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
Number of eligible officers										
Total	22	25	19	18	16	22	25	19	18	16
Total (in and below zone)	0	0	0	0	14	0	0	0	0	14
Service headquarters staff	3	1	4	0	5	3	1	4	0	5
Joint Staff	1	2	3	0	2	1	2	3	0	2
OSD staff	2	0	2	0	1	2	0	2	0	1
JQO	8	8	18	17	15	8	8	18	17	15
Acquisition Corps	2	0	0	0	0	2	0	0	0	0
Acquisition Corps (in and below zone)	1	0	0	0	0	1	0	0	0	0
Number of selected officers										
Total	11	7	7	7	5	11	7	7		5
Total (in and below zone)	11	7	6	6	5	11	7	7		5
Service headquarters staff	1	0	3	0	3	1	0	1	No feasible solution	2
Joint Staff	1	2	0	0	1	1	2	1		1
OSD staff	1	0	0	0	0	1	0	1		1
JQO	7	5	7	7	5	7	5	7		5
Acquisition Corps	1	0	0	0	0	1	0	0		0
Acquisition Corps (in and below zone)	1	0	0	0	0	1	0	0		0

**Table B.8—Continued**

Characteristic	Reported Board Result					Feasible Alternative				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
Calculated data, as percentages										
Board average	50.0	28.0	36.8	38.9	31.3	50.0	28.0	36.8		31.3
Board average (in and below zone)	0.0	0.0	0.0	0.0	35.7	0.0	0.0	0.0		35.7
Service headquarters staff	33.3	0.0	75.0	0.0	60.0	33.3	0.0	25.0		40.0
Joint Staff	100.0	100.0	0.0	0.0	50.0	100.0	100.0	33.3		50.0
OSD staff	50.0	0.0	0.0	0.0	0.0	50.0	0.0	50.0		100.0
JQO	87.5	62.5	38.9	41.2	33.3	87.5	62.5	38.9		33.3
Acquisition Corps	50.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0		0.0
Acquisition Corps (in and below zone)	100.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0		0.0
Comparison to objectives										
Joint Staff versus service headquarters staff	0	2	-3	0	-1	0	2	0		0
OSD staff versus service headquarters staff	0	0	-2	0	-1	0	0	0		0
JQO versus board average	3	2	0	0	0	3	2	0		0
Acquisition Corps versus board average	0	0	0	0	-1	0	0	0		0
Acquisition Corps (in and below zone)	1	0	0	0	-1	0	0	0		0

NOTE: No feasible solution = all promotion comparison benchmarks could not be met.



## Recommended Legislative Changes

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Our research leads us to recommend some legislative changes that Congress could consider to help better achieve the objectives of Goldwater–Nichols and DAWIA.

### **Title 10, U.S. Code, Section 662: Goldwater–Nichols Act Officer-Quality Objectives**

Congress could consider a minor change in 10 U.S.C. § 662 to accommodate the multiple competitive categories that the Navy uses. In those promotions, particularly among O-7s competing for promotion to O-8, the number eligible in many categories will be quite small, resulting in no meaningful comparison of target to benchmark categories in many categories. To parallel the “line (or equivalent)” construct used in 10 U.S.C. § 1731(b), Congress could choose to amend the statute. One approach, with proposed additions shown in italics and deletions shown in strikethrough, could be as follows:

The Secretary of Defense shall ensure that the qualifications of officers assigned to joint duty assignments are such that—

(1) *line (or equivalent)* officers who are serving on, or have served on, the Joint Staff are expected, as a group, to be promoted to the next higher grade at a rate not less than the rate for *line (or equivalent)* officers of the same armed force in the same grade ~~and competitive category~~ who are serving on, or have served on, the headquarters staff of their armed force; and

(2) *line (or equivalent)* officers in the grade of major (or in the case of the Navy, lieutenant commander) or above who have been designated as a *joint-qualified* officer are expected, as a group, to be promoted to the next higher grade at a rate not less than the rate for *line (or equivalent)* officers of the same armed force in the same grade ~~and competitive category~~.

This change would not preclude reporting by competitive category, as is currently done for post-promotion board reporting on promotions to field grades. However, it would permit combining line-equivalent competitive categories for post-promotion board reporting on promotions to general- and flag-officer grades.

### **Title 10, U.S. Code, Section 1731(b): DAWIA Officer-Quality Objectives**

Congress could also consider a minor change in 10 U.S.C. § 1731(b) to eliminate references to zones of consideration for general- and flag-officer comparisons. One approach could be as follows:

The Secretary of Defense shall ensure that the qualifications of commissioned officers selected for the Acquisition Corps are such that those officers are expected, as a group, to be promoted at a rate not less than the rate for all line (or the equivalent) officers of the same armed force ~~(both in the zone and below the zone)~~ in the same grade, *with separate comparisons for those in the zone, below the zone, and above the zone for promotions to grades below brigadier general, or in the case of the Navy, rear admiral (lower half).*

Alternatively, the language could be amended to substitute service requirements in place of parity with line or equivalent officers. One such proposal could be as follows:

The Secretary of Defense shall ensure that the qualifications of commissioned officers selected for the Acquisition Corps are such that those officers, *when competing for promotions to grades below brigadier general or, in the case of the Navy, rear admiral (lower half),* are expected, as a group, to be promoted at a rate not less than the rate for all line (or the equivalent) officers of the same armed force ~~(both in the zone and below the zone)~~ in the same grade *with separate comparisons for those in the zone, below the zone, and above the zone. For promotions to grades at or above brigadier general or, in the case of the Navy, rear admiral (lower half), Acquisition Corps officers are expected to be available in the numbers and quality required to meet service requirements.*

### **Department of Defense Instruction 5000.55: Reporting Management Information on DoD Military and Civilian Acquisition Personnel and Positions**

Changes to reflect comparison with requirements rather than comparison with line or equivalent officers, for promotions to grades O-7 and O-8, are required in paragraphs 4.4, 5.1.3, and 6.16.1.12. Department of Defense Form 2603, depicted in

Enclosure 30, should be redesigned so that O-7 and O-8 outcomes for Acquisition Corps eligibles are compared with requirements.



## Recommended Reporting Instruction Changes

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### Department of Defense Instruction 1300.19: DoD Joint Officer Management (JOM) Program

#### Promotion Objectives

This instruction requires minor revisions to restore consistency with 10 U.S.C. § 662. Paragraph 3j includes the following as DoD policy:

To assign quality officers to S-JDAs [standard joint duty assignments]. The qualifications of officers assigned to S-JDAs should be such that the promotion rates of those officers meet the objectives in section 662 of Reference (c) [Title 10 of U.S. Code].

An earlier version of 10 U.S.C. § 662 referred to promotion objectives for “officers serving in or [who] have served in joint duty assignments.” The FY 2009 NDAA amended 10 U.S.C. § 662 to substitute “joint-qualified officers” in place of that phrase (Pub. L. 110-417, 2008, § 523). To restore consistency with the underlying legislation, we recommend the following wording for paragraph 3j (additions shown in italics and deletions in strikethrough):

To ~~assign~~ *designate* quality officers ~~to S-JDAs~~ *as JQOs*. The qualifications of officers ~~assigned to S-JDAs~~ *designated as JQOs* should be such that the promotion rates of those officers meet the objectives in section 662 of Reference (c).

If Congress chooses to make the legislative changes described in Appendix C, parallel changes should be made in paragraph 1, Enclosure 10 (“Promotion Selection Boards for ADL [Active Duty List] and RASL [Reserve Active Status List]”), which restates the promotion objectives.

## Joint Officer Management Report to Congress

Paragraph 6 refers to a congressional reporting requirement:

Information Collection Requirements. The JOM Annual Report to Congress, referred to in paragraph 4a of Enclosure 10 and section 1 of Enclosure 12 [“Report Requirements”] of this instruction, is submitted to Congress in accordance with section 667 of Reference (c) and is coordinated with the Assistant Secretary of Defense for Legislative Affairs in accordance with the procedures in DoD Instruction 5545.02 (Reference [e]).

The requirement for a JOM report to Congress was previously included in 10 U.S.C. § 667 but was repealed in the FY 2015 NDAA (Pub. L. 113-291, 2014, § 505). OSD and the Joint Staff should evaluate the need for the reporting requirements contained in Enclosure 12. At a minimum, paragraph 6, paragraph 4a of Enclosure 10, and all of Enclosure 12 should be revised to delete reference to an annual JOM report to Congress. If the report does not serve a management need within OSD or the Joint Staff, the reporting requirement itself should be deleted.

## Chairman of the Joint Chiefs of Staff Instruction 1331.01D: Manpower and Personnel Actions Involving General and Flag Officers

This instruction prescribes the detailed reporting requirements that were the focus of our analysis and, accordingly, must be significantly revised if our recommendations are adopted.

### Enclosure E: Promotion Board Reports

Enclosure E includes reporting instructions for four target categories of officers (Joint Staff, OSD staff, JQO, and Acquisition Corps). Paragraph 2 restates the objectives for the two joint categories in this list (Joint Staff and JQO). For consistency, it should also restate the objectives for the OSD staff and the Acquisition Corps. With respect to JQOs, it should be amended to restore consistency with 10 U.S.C. § 662:

#### 2. Promotion Policy Objectives for ~~Joint Officers (10 USC 662)~~

*a. Joint Staff and JQOs.* Per 10 USC 662, officers who are serving in or have served on the Joint Staff are expected, as a group, to be promoted to the next higher grade at a rate not less than the rate for officers of the same armed force in the same grade and competitive category who are serving on, or have served on, the headquarters staff of their armed force; and officers ~~who are serving in or have served in joint duty assignments designated as JQOs~~ are expected, as a group, to be promoted to the next higher grade at a rate not less than the rate for all *line (or equivalent)* officers of the same armed force in the same grade ~~and competitive category~~.

*b. OSD Staff. Per DoDI 1300.19, officers who are serving in or have served on the OSD staff are expected, as a group, to be promoted to the next higher grade at a rate not less than the rate for officers of the same armed force in the same grade and competitive category who are serving on, or have served on, the headquarters staff of their armed force.*

*c. Acquisition Corps. Per 10 USC 1731, officers selected for the Acquisition Corps are expected to be promoted at a rate not less than that of line (or equivalent) officers of the same armed force in the same grade.*

With these changes to paragraph 2, paragraphs 4a and 4b can be deleted. Significant changes to the remaining paragraphs are needed to eliminate flawed definitions of *have served* and zone-of-consideration definitions. Old paragraph 4e should be deleted. Figure 2 should be deleted. Paragraphs 4c and 4d should be renumbered as paragraphs 4a and 4b, respectively, and revised as follows:

#### 4. Promotion Categories

*a. Serving-in. This category reflects officers presently serving, regardless of duration, in a joint duty assignment Joint Staff, OSD staff, or Service headquarters position.*

*b. Have-served. This category represents officers who are no longer assigned to a JDA [joint duty assignment] the Joint Staff, OSD staff, or Service headquarters when the board convenes. (1) Every officer must be tracked and reported through their next promotion consideration following reassignment from the JDA all promotion considerations while in the grade held when they left their Joint Staff, OSD staff, or Service headquarters tour.*

~~(2) This category will also include officers selected for promotion to their current grade (O-6) who served as O-6 selects and left their joint assignment without being promoted to O-6.~~

~~(3) Statistics should reflect the date of each officer's selection board and not the date of rank.~~

~~(4) Officers who "have served" (HS) are tracked for each promotion board from leaving the JDA or headquarters assignment through the board of their most competitive promotion opportunity. See Appendix A to Enclosure E for definitions of zones. The following charts are provided for amplification:~~

Paragraph 9 refers to an example of a promotion board package in Appendix A. It should refer to current Appendix D, which, per the following paragraph, will be renumbered as Appendix C.

Appendix A should be deleted in its entirety and the subsequent appendixes relabeled. Old Appendix B (to be Appendix A), including both the figure and its accompanying notes, should be replaced with the material in Appendix E of this report.

## Revised Post–Promotion Board Reporting Format

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Post–promotion board reporting from the services to OSD and the Joint Staff is standardized using an Excel workbook. Most data entries (counts of eligibles and selectees in various categories) are made on the data-entry worksheet. Comparisons to benchmarks are made on the joint statistics sheet, which requires no entries, deriving all of its required information from the data-entry worksheet. Similarly, a good-of-the-service waiver sheet and an adverse statistics sheet, both focusing on issues not directly related to promotion benchmarks, require no additional entries. The final sheet, justification, requires narrative entries that provide service perspectives on missed promotion objectives.

Two versions of a revised data-entry worksheet are provided here. The first (Figure E.1) maintains a conventional approach to Acquisition Corps benchmarks—a comparison of the Acquisition Corps promotion rate and that of line or equivalent officers. The second (Figure E.2) illustrates our recommended alternative of using numeric service requirements as the benchmark for Acquisition Corps promotions.

Both versions differ from the current format (depicted in Figure 2.1 in Chapter Two) in the following ways:

- Five-year totals are calculated for all counts and rates.
- Ninety-five-percent confidence bounds are provided for all rate comparisons, built up from pooled selection rates, standard errors, and required margins.
- Numeric comparisons of target categories and benchmark categories are shown both with and without confidence bounds.

In the redesigned workbook we provided as part of this project, the evaluations on the joint statistics sheet use the data with confidence bounds as depicted in the revised data-entry worksheets.

**Figure E.1**  
**Alternative Data-Entry Worksheet with Conventional Acquisition Corps Benchmark**

Military Service:														
Board Title:														
Board Convening Dates:														
						Board Convening Year								
		CY-4	CY-3	CY-2	CY-1	2015						5-year Total		
<b>Number of Eligible Officers</b>		2011	2012	2013	2014	2015	Fill in the highlighted cells based on the eligibles and selects who met this board.  The remainder of the cells will be populated automatically.							
Total													0	
Service Headquarters													0	
Joint Staff													0	
OSD													0	
Joint Qualified Officers													0	
Acquisition Corps													0	
<b>Number of Selected Officers</b>														
Total													0	
Service Headquarters													0	
Joint Staff												0		
OSD												0		
Joint Qualified Officers												0		
Acquisition Corps												0		
Good of the Service Waivers Requested												0		
Good of the Service Waivers Approved												0		
Good of the Service Waivers Enacted												0		
Adverse												0		
Recommended with Adverse												0		
<b>Calculated Data</b>														
Board Average %		0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	Pooled	Std		Conf		
Service Hq %		0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	%	Error	Margin	Bound		
Joint Staff %		0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
OSD %		0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Joint Qualified Officer %		0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Acquisition Corps %		0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
<b>Objectives</b>														
Note: If objectives are not met, the number of officers required to meet the objective is listed as a negative. If the objective is exceeded, the number of officers in excess of the objective will be listed as a positive. Objectives are considered met if the 5-year total with confidence bounds is positive.														
Joint Staff vs. Service Hq (Statutory)		0	0	0	0	0			5-Year Total Without Confidence Bound			5-Year Total With Confidence Bound		
OSD vs. Service Hq (Policy)		0	0	0	0	0			0			0		
Joint Qualified Officer Board Avg (Statutory; est. 2008)		0	0	0	0	0			0			0		
Acquisition Corps (Statutory)		0	0	0	0	0			0			0		
<b>STATUTORY REQUIREMENTS:</b> Joint Staff in accordance with (IAW) 10 USCS § 662(a)(1); <b>POLICY REQUIREMENTS:</b> OSD IAW DoDI 1300.19, E10.1.1 & All Joint IAW DoDI 1300.19, E10.1.2.														

**Figure E.2**  
**Alternative Data-Entry Worksheet with Recommended Numeric Acquisition Corps Benchmark**

Military Service:														
Board Title:														
Board Convening Dates:														
						<b>Board Convening Year</b>								
		<b>CY-4</b>	<b>CY-3</b>	<b>CY-2</b>	<b>CY-1</b>	<b>2015</b>						<b>5-year Total</b>		
<b>Number of Eligible Officers</b>		2011	2012	2013	2014	2015	Fill in the highlighted cells based on the eligibles and selects who met this board.  The remainder of the cells will be populated automatically.							
Total													0	
Service Headquarters													0	
Joint Staff													0	
OSD													0	
Joint Qualified Officers													0	
Acquisition Corps													0	
<b>Number of Selected Officers</b>														
Total													0	
Service Headquarters													0	
Joint Staff												0		
OSD												0		
Joint Qualified Officers												0		
Acquisition Corps												0		
Good of the Service Waivers Requested												0		
Good of the Service Waivers Approved												0		
Good of the Service Waivers Enacted												0		
Adverse												0		
Recommended with Adverse												0		
<b>Acquisition Requirements</b>														
Note: These are numbers of promotions of officers with acquisition experience called for in Service Secretary instructions to boards.														
Total recommended													0	
<b>Calculated Data</b>														
Board Average %		0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	Pooled %	Std Error	Margin	Conf Bound		
Service Hq %		0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%		
Joint Staff %		0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%		
OSD %		0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%		
Joint Qualified Officer %		0.0%	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%	0.0%		
<b>Objectives</b>														
Note: If objectives are not met, the number of officers required to meet the objective is listed as a negative. If the objective is exceeded, the number of officers in excess of the objective will be listed as a positive. Objectives are considered met if the 5-year total with confidence bounds is positive.														
												5-Year Total Without Confidence Bound	5-Year Total With Confidence Bound	
Joint Staff vs. Service Hq (Statutory)		0	0	0	0	0						0	0	
OSD vs. Service Hq (Policy)		0	0	0	0	0						0	0	
Joint Qualified Officer Board Avg (Statutory; est. 2008)		0	0	0	0	0						0	0	
Acquisition Corps (Statutory)		0	0	0	0	0						0	N/A	
<b>STATUTORY REQUIREMENTS:</b> Joint Staff in accordance with (IAW) 10 USCS § 662(a)(1);														
<b>POLICY REQUIREMENTS:</b> OSD IAW DoDI 1300.19, E10.1.1 & All Joint IAW DoDI 1300.19, E10.1.2.														



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Congress and the Office of the Secretary of Defense (OSD) have established statutory and policy benchmarks to gauge the quality of officers selected for service on the Joint Staff or OSD staff or for designation as joint-qualified officers or Acquisition Corps members. Officers with service on the Joint Staff or OSD staff are expected to be promoted at a rate no less than that of officers with service on their service headquarters staff. Joint-qualified officers and Acquisition Corps members are expected to be promoted at a rate no less than that of line or equivalent officers in their services. This report examines alternative policies and practices to better align post-promotion board reporting with these objectives.



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